

Quarantine laws : return to an order of the honourable the House of Commons, dated 18 August 1860, for : abstracts of returns of information on the laws of quarantine which have been obtained by the Board of Trade / Edgar A. Bowring.

Contributors

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QUARANTINE LAWS.

a *GB. Board of Trade* *2*
RETURN to an Order of the Honourable The House of Commons,
dated 18 August 1860;—for,

**ABSTRACTS "of RETURNS of Information on the LAWS of QUARANTINE
which have been obtained by the BOARD of TRADE."***

Board of Trade, }
20 August 1860. }

EDGAR A. BOWRING,
Registrar.

* These Abstracts have not been prepared by the Board of Trade, who are in no way responsible for them, but are presented in the shape in which they have been transmitted to them by the "Quarantine Committee of the National Association for the Promotion of Social Science."

E. A. B.

Sir,

3, Waterloo-place, S. W., 30 July 1860.

I HAVE the honour to transmit, in the name of the "Quarantine Committee of the National Association for the Promotion of Social Science," the accompanying Abstract of Reports, &c., respecting the working and results of quarantine in foreign countries, for the information of the Lords of the Committee of the Privy Council for Trade.

This Abstract is derived from the replies received from Her Majesty's consuls to queries Nos. 4, 8, 9, 10, 11, 16, and to the appended "Observations" in the annexed printed series, and is a complement to the "Abstract of the Regulations respecting Quarantine in force in Foreign Countries," which I had the honour to forward to you on the 16th of May.

I have, &c.

(signed) *Gavin Milroy, M. D.*

The Secretary of the Board of Trade.

**NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL
SCIENCE.**

DEPARTMENT OF PUBLIC HEALTH.

President—The Right Hon. the Earl of Shaftesbury.

Sub-Committee on Quarantine.

B. G. Babington, M.D., F.R.S., President of Epidemiological Society.

Thomas Bazley, Esq., M.P.

Walter Buchanan, Esq., M.P.

A. Bryson, M.D., F.R.S., Inspector of Hospitals and Fleets.

Sir James Clark, Bart., M.D., F.R.S., Physician to the Queen, &c.

John Davy, M.D., F.R.S.L. & E., Inspector General of Army Hospitals, &c.

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J. Gibson, M.D., C.B., Director General, Army Medical Department.

T. B. Horsfall, Esq., M.P.

Sir John Liddell, M.D., F.R.S., Director General Navy Medical Department.

Sir J. Ranald Martin, C.B., F.R.S., Physician to the Secretary of State for India in Council.

J. O. McWilliam, M.D., C.B., F.R.S., Medical Inspector Hon. Board of Customs.

Gavin Milroy, M.D., F.R.C.P., late Medical Commissioner in the West Indies, and in the Crimea.

Richard Owen, F.R.S., Member Institute of France, President of the British Association of Science, &c.

Sir William Pym, M.D., Superintendent General of Quarantine.

T. Southwood Smith, M.D., F.R.C.P., Member of late General Board of Health, &c.

T. Spencer Wells, F.R.C.S., late Surgeon Civil Hospital at Smyrna and Renkioi, &c.

John Wiblin, F.R.C.S., Medical Superintendent of Quarantine at Southampton.

QUERIES, &c., drawn up by the Sub-Committee, for Transmission to Governors of Colonies, British Consuls in Foreign Countries, and others.

I. What, if any, are the countries or ports from which arrivals in the port of are at all times, or in certain seasons of the year, subject to quarantine, whether the bill of health from the place of departure be clean or foul?

II. What are the diseases which render all arrivals, without exception, whether sick or well, from a place or country where such diseases are existing, subject to quarantine in the port of ?

And what are the quarantines imposed?

III. What are the other diseases which, from having occurred during the voyage or transit, render individual arrivals only subject to quarantine, irrespective of the bill of health from the last place of departure?

And what are the quarantines imposed?

IV. Can you procure a tabulated list of all the vessels put in quarantine in the port of during the last three or five years (or, if not for so long a period, during the last 12 months), specifying—

- (a). Whence the vessel came, the length of voyage, and date of arrival.
- (b). The bill of health, whether clean, suspected, or foul.
- (c). The cause of detention in quarantine.
- (d). The length of quarantine imposed.
- (e). The number of crew and passengers on board.
- (f). Cargo, the nature of.
- (g). Whether any, and how many cases of disease, and of what nature, had occurred during the voyage?
- (h). Whether any, and what, disease occurred on board during the detention in quarantine.

V. Is any difference, as to the quarantines imposed, made in favour of vessels having a medical officer on board?

Is any difference made between men-of-war or private yachts and merchant vessels?

And is any exception in the performance of quarantine made on the arrival of Royal personages, ambassadors, or high military and naval authorities, couriers, &c.?

VI. When a disease, which renders all arrivals from an infected or suspected place liable to quarantine, has been officially certified to have ceased, and when clean bills of health are issued by the local authorities, what period, if any, must elapse before free pratique is granted to arrivals from the place in the port of ?

VII. Is there a lazaret at or near to the town or port of ?

Is it floating or on shore? Please to describe its position, distance from the nearest inhabited dwellings, construction and accommodation, its sanitary condition and that of its environs, means of exercise for the inmates, means of supply of food, and other necessary requirements.

Is there a tariff of charges for accommodation, food, &c.?

VIII. State the number of persons received into the lazaret during the last three or five years at least.

IX. Have any diseases occurred among the persons received? If so, what diseases? How many cases, and when?

X. What number of deaths, if any, have occurred in the lazaret among the persons received into it, or among the officials of the quarantine establishment, during the last three or five years; or, if possible, for a much longer period, say 20 or 30 years?

And from what diseases, and when?

XI. Have any instances occurred in recent years of the spreading of a disease from persons, or from goods, undergoing quarantine, to other inmates of the lazaret, or to the officials of the establishment, or to the inhabitants of the nearest dwellings?

If so, please to give the dates and other particulars briefly.

XII. Are cargoes sent to the lazaret? If so, what cargoes or articles of merchandise are considered to be "susceptible"? And what means are used for their purification?

XIII. When sickness occurs in a vessel while undergoing quarantine, and there is no medical officer on board, how is medical assistance provided, or to be obtained? Is medical assistance provided at the public cost?

XIV. When

XIV. When a vessel arrives from a suspected port, or in a sickly condition, rendering her subject to quarantine, is any inspection then made of her state, as regards cleanliness and ventilation? And if found filthy or badly ventilated, what means are taken to remedy such defects? Is any record kept of the sanitary condition of vessels put in quarantine?

XV. When a clean bill of health is given to a vessel on leaving the port of is she previously inspected by any officer to ascertain her sanitary condition, and that of the crew and passengers? And is any certificate of such inspection given to the captain?

XVI. Have any of the diseases for which quarantine is liable to be imposed in the port or town of occurred among the inhabitants of the place or of the neighbourhood during the last 10, 15, or 20 years? If so, under what circumstances?

It is very desirable that the exact dates of the earliest cases, and other authentic particulars respecting the origin or development of the disease, should be stated in a narrative of the circumstances.

XVII. Have instances of the evasion or infraction of quarantine in the town or port of come to your knowledge? Have they been of frequent occurrence? And what penalties have been inflicted for the offence?

XVIII. What, if any, quarantine measures by land, such as sanitary cordons, &c., have been adopted, or are considered advisable, in the town or port of against the introduction of pestilential diseases, or for arresting their progress?

If such measures have been of recent years employed, what have been the results?

OBSERVATIONS.

Please to append a copy of the Quarantine Act and regulations at present in force in the town or port of

Also of any annual or other reports illustrative of the working and results of quarantine there, or containing evidence elucidatory of the importation or non-importation of the diseases for which quarantine is imposed.

And to add any remarks thereon from yourself, and from any resident medical officer or other gentleman acquainted with the subject, with suggestions for the amendment of quarantine regulations and practice in general.

Information is likewise very desirable on the following points:

- (a). The general sanitary state of the town, and of the port or harbour, docks, &c., of , and of the diseases mostly prevalent on shore, and among the shipping.
- (b). The general sanitary state of the vessels frequenting the port of and the hygienic condition of the crews, as to their accommodation on board, their food and drink, &c.
- (c). The average annual number of vessels arriving from abroad in the port of of
- (d). The average amount of dues or fines levied on vessels and individuals while in quarantine, and the estimated annual amount of charges imposed.

ABSTRACT of REPORTS, &c., respecting the Working and Results of QUARANTINE
in FOREIGN COUNTRIES, viz.:

Baltic States.	Two Sicilies.
Hamburg; Holland; Belgium.	Turkey; Black Sea.
France; Algeria.	Egypt; Barbary.
Portugal, and Colonies.	United States.
Spain, and Colonies.	Gulf of Mexico; West Indies.
Sardinia.	Brazil; Monte Video; Chili.

Prepared by the Sub-committee on Quarantine of the National Association for the Promotion of Social Science.

July 1860.

BALTIC STATES.

Baltic States.

No vessels, it would appear, have been subjected to quarantine, even of observation, during the last five years in any of the ports of Russia, Sweden and Norway, or Prussia, with the single exception of three at Christiansand in 1858.

DENMARK.

At Elsinore, during the five years from 1854 to 1858, 14 vessels in all were put in quarantine, viz., two in 1854, two in 1855, nine in 1856, and one in 1858. All had clean bills of health, save one, which had no bill, but which had lost two men from yellow fever during the voyage from Havannah.

The cause of quarantine was in 11 instances the arriving, in 1854, 1855, 1856, and 1858, from ports suspected of plague, viz., Corfu, Brailow, Galatz, Constantinople, Zante, and Aloyatta. The voyages had varied from 58 to 138 days. The quarantine was for four days.

In the other instances, which occurred in 1854 and 1856, the cause of the detention was the existence of yellow fever in the port of departure: the quarantine varied from 4 to 14 days. In one instance only had disease existed on board; and that was in the vessel from Havannah. She was ordered to the lazaret to discharge her cargo, but the order was countermanded by the Government, and the quarantine was reduced to four days of observation. In two other instances the quarantine imposed was either much reduced, or altogether dispensed with, on reference to Government.

No case of sickness occurred in any of the vessels during the period of their detention.

During the last five years, 21 patients have been admitted into the lazaret at Elsinore, all on account of small-pox. No deaths have occurred.

St. Thomas (Island of). See Gulf of Mexico, &c.

SWEDEN.

Since the abolition, in 1855, of quarantine in Swedish ports on account of cholera, no persons have been detained in a lazaret. In 1854, 109, and in 1855, 10 persons were detained at Gotthenburg. None since. Only occasional slight attacks of diarrhoea have occurred among the well persons received into the lazaret there. Between 1850 and 1854, both inclusive, there were three deaths among the sick received; two from cholera in the autumn of 1850, and one from typhus in August 1854. Besides these, a lazaret attendant died of typhus in August 1850, and the principal superintendent of the quarantine establishment died of cholera in July 1853.

Christiansand.—In 1858 three vessels were put in quarantine, two for small-pox on board, and one for yellow fever; the latter occurred in a vessel from Havannah arriving at Bergem: the captain had died of the disease at Havannah, and the mate during the voyage.

In all these three cases, a quarantine of observation for one day only was enforced.

In 1853 five persons were sent to the lazaret, one for small-pox and four for cholera: in 1854 one for typhus and one for cholera: in 1855 and 1856 there were none sent; in 1857 three persons, one with small-pox and two with cholera; in 1858 none; and in 1859 one with small-pox.

No fresh case of any disease has occurred in the lazaret during the last 20 years. Two deaths only occurred during this period; they were from cholera, in 1853.

Highly valuable official reports on the epidemics of cholera in 1850 and in 1853 in Norway have been published.

No instances have occurred, in recent years, of the spreading of a disease from persons or goods undergoing quarantine to other persons in any lazaret in the Baltic States.

Since the first appearance of cholera in Europe in 1831 all the Baltic States have frequently suffered from invasions of the disease, more especially during the last 10 years, and

and all attempts to exclude it by means of quarantine have proved fruitless. Up to the end of 1854 Sweden maintained a rigorous system of exclusion; since then, it has been abandoned. "At Stockholm, cholera has carried off about 500 victims from a population of 100,000 nearly every summer of late years," says Mr. Consul Hunt.

Baltic States.

No case of plague or yellow fever has ever been known to occur in any of the Baltic ports.

Small-pox appears to be generally diffused. From Christiansand it is reported that cases of the disease are occurring every year along the sea coast and the frontiers; it is always attributed to importation either from Russia, Holland, or England, although it is admitted that the disease is never out of the country.

No annual reports of the working of quarantine are made.

Of Gotthenburg it is stated by Mr. Consul Engstrom, "The situation of the town is low and unhealthy, and its sanitary state very bad; its drainage is very imperfect, and the water supply is sufficient only for drinking and culinary purposes; but the latter defects are about to be remedied. The most prevalent diseases are rheumatic in the spring, diarrhoea and dysentery in summer, cholera and dysentery in autumn, inflammation and rheumatism in winter. Typhoid fevers prevail all the year round. The yearly mortality averages 36 per 1,000."

The same remarks doubtless apply to many other Baltic towns. The condition of Copenhagen at the time of the fatal visitation of cholera in 1853 was signally unwholesome.

HAMBURG—HOLLAND—BELGIUM.

For several years past no vessels have been placed in quarantine in these countries, and consequently no persons have been detained on account of sickness, or suspicion of sickness.

Hamburg;
Holland;
Belgium.

As with the Baltic ports, epidemic cholera has repeatedly appeared on the coast as well as inland towns of these countries since its first European invasion. In Holland "cholera is no longer considered infectious by the inhabitants, and that it is brought by ships."

From Antwerp, Consul Grattan reports, that "some decided cases occurred here during the past summer (1859), a period marked by much general sickness at this port. No special measures were adopted by the Government."

This remark applies also to Hamburg and other towns on the German Ocean.

Notwithstanding the large number of arrivals annually from abroad in Hamburg, Amsterdam, Rotterdam, and Antwerp, yellow fever has never, it is believed, been known to be imported; nor during the present century has any instance of the introduction of plague occurred.

It is stated that the sanitary condition of Amsterdam and Rotterdam is far from being satisfactory. "The population of the latter city is increasing materially, but its limits are not undergoing a proportionate development."

Surinam and Curaçoa. See Gulf of Mexico.

After the great fire at Hamburg in 1842, the destroyed portion of the city was rebuilt, with due attention to sanitary requirements. "The improvements," remarks Mr. Grainger, in his Report to the General Board of Health on the epidemic cholera of 1848-49, "have been productive of marked benefit to the public health, as far as the rebuilt part of the city is concerned. All the medical men with whom I conversed coincided in the statement, that during the epidemic of 1848, the severity of the cholera in the new quarter, although still occupied, as before, by numbers of the labouring classes, was much below that of 1832."

F R A N C E.

No record has been kept of the vessels detained in quarantine at Havre, or at any of the other Atlantic ports, except at Brest and at Bourdeaux; and, as the only lazarets are at those two places, no information respecting the importation of disease by vessels arriving from foreign countries, or of the supposed spreading of disease from such arrivals, can be given respecting the other oceanic ports.

France.

The answers returned to Query 16 are simply negative in almost all the replies. Cholera has, it is believed, appeared on more than one occasion in all the sea-ports of France; but the exact dates and other details of the visitations are not known, as no authentic records have been preserved.

"In 1855," says Consul Graham, at Bayonne, "there were several cases of cholera and fever, and many people died; but, with that exception, since my residence here, for 17 years, I have never known the town otherwise than healthy."

BREST.

Consul Sir A. Perrier remarks, "Before the decree of 24th December 1850, quarantine measures were frequent and rigorous at Brest. Ships from all quarters often underwent long and expensive quarantines on slight grounds. Since the reorganization of the sanitary service on its present footing (June 1851), only 15 ships of sundry nations and from divers places have been put in quarantine; viz.:

Name.	Nation.	Whence.	Voyage.	Arrival.	Bill of Health.	Cause.	Quarantine.	Crew.	Passengers.	Cargo.
Armide - -	French - -	Gundaloupe -	Days. 53	30 Sept. 1852	Foul	Yellow fever at departure	Days. 10	160	- 135	Ship of war.
Indefatigable -	ditto - -	Senegal - -	28	23 April 1853	none	Port of departure suspected.	3	88	- 23	- ditto.
Hannibal - -	English - -	Bomarsund -	18	8 Sept. 1854	ditto	- ditto -	5	500	- 305	- ditto.
Dauntless - -	ditto - -	Plymouth -	2	11 Sept. 1854	ditto	- ditto - -	5	320	- 474	- ditto.
Providentia -	Prussian -	Lisbon - -	19	11 Jan. 1855	ditto	- ditto - -	3	8	- —	Grain.
Styx - - -	French - -	Gundaloupe -	34	15 Sept. 1855	Foul	Sporadic yellow fever at departure.	3	82	- 33	Ship of war.
Recherché - -	ditto - -	- ditto - -	41	9 Nov. 1855	ditto	- ditto - -	8	24	- 66	- ditto.
Melbourne -	English -	Honduras -	49	25 Dec. 1855	ditto	Port of departure suspected.	1	21	- —	Mahogany.
Isis - - -	French - -	Guadaloupe -	25	10 May 1856	ditto	Yellow fever at departure.	2	140	- 220	Ship of war.
Fortune - -	ditto - -	- ditto - -	34	4 Sept. 1856	ditto	- ditto - -	35	55	- 103	- ditto.
Africaine - -	ditto - -	- ditto - -	30	4 Sept. 1856	ditto	Port of departure suspected.	4	160	- 95	- ditto.
Harmony - -	English -	Corunna - -	10	15 Jan. 1857	none	Putrid cattle on board.	6	5	- —	36 oxen.
Meuse - - -	French - -	Lisbon - -	6	15 Nov. 1857	Foul	Yellow fever at departure.	5	150	- 186	Ship of war.
Cluny - - -	English -	Honduras -	54	15 Feb. 1858	none	Port of departure suspected.	1	10	- —	Logwood.
Staatsraad-Egerman.	Norwegian -	Rio Grande -	74	16 Feb. 1859	ditto	- ditto - -	1	8	- 2	Buried bones.

"Armide."—Epidemic yellow fever showed itself a few days after leaving the West Indies. Between 18th August and 17th September 1852, 130 persons took the yellow fever, and 54 died. There were also on board 135 passengers sick and convalescent from dysentery and intermittent fever; of these, 16 died on the passage. The yellow fever was prevalent in the West Indies when the "Armide" left.

"Indefatigable."—No details given. No sickness in quarantine.

"Hannibal."—Cholera broke out on the voyage from Bomarsund to Brest. Between 22d August and 12th September 1854 there were 45 persons attacked, 19 of whom died promptly. On arrival at Brest there were 18 convalescent from cholera on board.

"Dauntless."—One case of cholera and three of cholera on arrival from Plymouth in Brest Roads. One patient died almost immediately after. She returned to sea before the expiration of quarantine. The Russian prisoners she brought were put on board the French frigate "Gassendi."

"Recherché."—Epidemic yellow fever broke out during the voyage. Between 3d and 19th October there were 28 attacked, of whom 10 died. Besides these, there were 16 sick of chronic dysentery, bilious fever, dry colic, and anæmia. Five died of bilious fever and anæmia.

"Isis."—No case of yellow fever during the voyage; but one death from dysentery and intense heat; five on arrival.

"Fortune."—Epidemic yellow fever appeared on 1st of August, the day she left, and no fewer than 51 deaths occurred during the voyage, and 14 were sick on arrival, four dangerously.

There were also on board convalescents from various tropical diseases.

"Africaine."—Yellow fever on board during the voyage; seven cases, and one death. The disease commenced 28th July, and ceased on 15th August 1856.

There were also on board, 59 sick and convalescent of tropical diseases.

"Meuse."—There were 180 sick and convalescent of chronic dysentery and ague on board on arrival from the Tagus, when yellow fever was raging in Lisbon. Five died of dysentery during the voyage.

From

From 1823 to 1850 the lazaret has often received as many as 180 persons at a time. During the quarantine of the "Armide," in 1852, between sick and convalescents, attendants and others, there were nearly 140 inmates; and during the quarantine of the "Fortune," in 1856, the total number was 80.

In no instances have diseases occurred among the persons received—"none but the diseases they brought with them."

Respecting the number of deaths in the lazaret, there is "no information previous to 1828. Since then, 109 persons have been interred at the lazaret during the quarantines of sundry ships, between October 1828 and November 1844. From that time to 1852, information is also missing. From October 1852 to September 1856, 10 persons have been interred at Treberon, five deaths from yellow fever, four from chronic dysentery, and one from cause unknown."

No instance of any disease spreading from either persons or goods has occurred at Brest.

Asiatic cholera first appeared at Brest in 1832, since which year it has occurred several times. The most severe outbreak, that of 1832 excepted, was in 1849. The last epidemic was in 1854-55. In 1854, the earliest cases occurred in July.

BOURDEAUX.

During the five years and-a-half from the beginning of 1854 to the middle of 1859, 132 vessels in all were quarantined.

Mr. Consul Scott has sent a detailed tabulated list of 20 of these vessels, from various parts of the world, as a specimen of the quarantine practice at Bourdeaux. In seven of these vessels there had been sickness on the voyage; in two from yellow fever, in one from what was believed to be Indian colic, and in four the nature of the sickness was not verified.

In none of these seven vessels, did any fresh sickness occur during their detention. The cause of detention in the remaining 13 vessels was the irregularity or want of the bill of health, or the cargo being in a foul, unwholesome state.

The quarantine usually imposed was from three to five days; but even this short period was in several instances reduced by order of the Government.

In the case of the two vessels which had had yellow fever during the voyage, pratique was granted after measures of purification had been adopted. One vessel which had a foul bill from Lisbon, where yellow fever was prevailing, was quarantined for three days.

Consul Scott states, that he was unable to ascertain the number of persons received into the lazaret, or any particulars respecting the diseases amongst those received. The Director of Health informed him, that "he had no knowledge that any illness among persons in quarantine has ever been communicated to the employés of the lazaret, or to any in the neighbourhood."

The same officer "is not aware that any disease for which quarantine is required, except the cholera, has appeared in Bourdeaux, or in the neighbourhood of the lazaret. The cholera appeared in 1832, 1849, 1850, 1854, and 1855, from overland."

In 1849 it appeared in June, and continued till December. In 1850 the chief mortality was from the middle of August to the middle of November.

In 1854 it began about the middle of August, but did not spread much till the first or second week of October.

The average annual number of vessels from abroad of recent years has been 1,700. The average amount of dues and fines levied on vessels and individuals in quarantine during the last five years has been 1,135 l. 17 s.

In the instructive remarks appended to his replies, Consul Scott remarks that "as the sanitary service occupies little of the attention of the authorities, who content themselves with the enforcement, as much as possible, of the law and regulations in vigour, no reports on the working and results of this service are made. This question appears to be left completely aside, and I have not been able to meet with a single person who has bestowed any attention on it.

"The sanitary state of the town and port (there are no docks) is generally good; the only diseases that occasionally prevail on shore are typhus and intermittent fevers, but of late years these maladies have diminished.

"As no active supervision takes place as to the sanitary state of vessels frequenting this port, or the hygienic condition of their crews, their accommodation, or their food or drink, no precise information can be given."

ALGERIA.

In 1858, five vessels were put in quarantine; three for wanting a bill of health, one for having lost a man at sea, the cause of death being unknown; and one for having communicated on the voyage with Malta, then suspected of the plague in consequence of its large intercourse with Bengazi. The quarantine in this last instance was for five days; in the other instances for three days.

No specific information respecting the number of persons received into the lazaret of recent years is to be had. It would appear that several cases of cholera were admitted, and that six deaths from that disease occurred, in 1854 among persons arrived from Marseilles. Since that period it would seem that no quarantine has been performed in the lazaret.

The cholera has appeared several times in Algeria.

Consul General Bell writes that, in 1849, he sent a report on the cholera as it occurred that year in the province and town of Oran, showing that the disease which previously

France.

existed at Algiers had been brought by the Government steamers from that city, and that it had broken out immediately in all the ports along the coast where the steamers had touched.

At the port of Argon, where the packet had not touched, the cholera reached that place a month afterwards by land from Oran, by way of St. Denis.

In the summer of 1850 the cholera was at Oran, but it did not then extend to Algiers, in consequence, it was believed, of quarantine restrictions. The disease then prevailed all along the coast of Barbary, from Tunis and Tripoli as far as Egypt; Tunis was almost depopulated by death and desertion. In 1851 Oran and the adjoining districts again suffered. Algiers was infected in the summer of 1854.

PORTUGAL.

LISBON.

Portugal, and
Colonies.

THE total number of vessels placed in quarantine in one year, 1858, was 179. Numerous other arrivals left the Tagus in quarantine.

The detention varied from four to 25 days: the average period was 10 days.

More than two thirds of the vessels quarantined had clean bills of health; between 50 and 60 had foul bills. In a few the bills were irregular, or wanting altogether.

In 136 out of the 179 cases, the quarantine was imposed on arrivals from countries, chiefly Brazil, that were declared to be infected with or suspected of yellow fever.

In 25 cases it was on arrivals from ports infected with or suspected of cholera; in the remaining instances a casual death from some non-infectious disease, or even from an accident, during the voyage was the cause; or else the bill of health was informal. In one case the cause of the quarantine was because the vessel from Gibraltar, with leeches, had communicated with a steamer from Alexandria, then declared to be infected with the plague.

In four only of the 136 vessels quarantined for yellow fever, had any deaths from the disease occurred on board during the voyage, which varied from 30 days to 60 days, and more. Two of these four vessels were our Royal Mail steamers, the "Tyne" and the "Medway," both from Rio Janeiro. In the former there had been 40 cases of yellow fever, and nine deaths; and in the latter there had been one death. Both vessels left Lisbon in quarantine, and proceeded on to Southampton. The other two vessels, each of which had lost one man from the disease since leaving their port of departure, were one from Para which, after a voyage of 30 days, was quarantined for 21 days; and the other, which had been out from Rio Janeiro 50 days, was quarantined for 16 days.

Besides these four vessels, in which fatal cases of yellow fever had occurred during the voyage from South America, the disease appeared on board a Portuguese vessel on her voyage to St. Michael's from Lisbon with a clean bill of health. No particulars are given, nor anything said as to the probable origin of the fever, which must have been caught before she left Lisbon. She had to return to Lisbon to undergo a quarantine of 13 days before proceeding to her destination.

A much longer detention was imposed on many of the vessels where there had been no sickness whatever during the voyage, but which had merely come from infected or suspected ports.

A ship out 30 days from New Orleans, and with a clean bill (the Lisbon Board of Health had, however, declared that city to be infected) was quarantined for 24 days.

Another vessel with a clean bill out 38 days from Bahia, a suspected port, was quarantined for 20 days; and another with a clean bill from Pernambuco, and after a voyage of two months, was detained for 10 days before receiving pratique.

This was the period assigned to arrivals from places (chiefly in the Baltic) which had been declared by the Lisbon Board to be infected with the cholera. Thus, a vessel 40 days out from Riga was quarantined for 10 days; but another vessel, 46 days out from Christiansand, a suspected port, was detained five days.

In none of the 25 vessels which were quarantined for the cholera, had any sickness occurred during the voyage.

The number of deaths on board vessels at sea from ordinary casual diseases, chiefly phthisis, chronic diarrhoea, hepatitis, apoplexy, exceeded, in the proportion of 21 to 12, that from the diseases against which quarantine is specially directed. There were also three deaths from drowning.

In all these cases a quarantine of several days was imposed. A vessel from Sunderland, and another from Hamburg, both having clean bills, were detained for four and six days respectively, in consequence of a death from apoplexy during the voyage.

The only instance, where sickness occurred in any of the 179 vessels while undergoing quarantine, was on board a vessel 57 days out from Rio Janeiro (during which time she had lost one man from chronic diarrhoea), and detained for 19 days before receiving pratique. The case was one of dysentery, and it proved fatal.

The number of persons received into the lazaret on shore and the floating lazaret from the beginning of 1856 to the end of April 1859 was 4,420, viz., 662 in 1856, 1,760 in 1857, 1,459 in 1858, and 539 in the first four months of 1859. This number does not include the many hundreds of persons who performed their quarantine on board their respective vessels.

The baggage of all passengers was sent to the lazaret to undergo the prescribed purification.

"The only cases of epidemic disease," says Dr. Donnet, "that have appeared in the lazarets

lazarets for the last 43 years, are three cases of cholera in July 1856, whilst the disease was raging in Lisbon. The subjects were a custom-house officer and two labourers, sent from the city to do duty at the lazaret. All of them died."

Nine deaths have occurred in the lazaret among the officials and persons received into it since the beginning of 1856, viz. :—

- 3 officials from cholera in July 1856.
- 3 passengers from consumption in 1856, 1857, and 1859.
- 1 passenger from anasarca in 1857.
- 1 " " disease of heart in 1857.
- 1 " " anæmia in 1857.

To the preceding statements, received from Mr. Consul Smith and Dr. Donnet, we may add the following from Dr. Lyon's Report on the Yellow Fever in 1857, presented to both Houses of Parliament, p. 123 :

"The register of deaths (at the lazaret) shows that, since the establishment of regular quarantine in 1848, there has not been one single case of death from epidemic disease, nor even one single person attacked,"—with the exception only of the three above-cited fatal cases of cholera in 1856.

"The inspector of the lazaret told us that the mortality four years ago had been considerable among those undergoing quarantine. It is not surprising that passengers coming from great distances, making long voyages, often for the purpose of re-establishing health by the fine climate of Lisbon, fall into a struggle with death when incarcerated in an establishment of this kind, without light, air, medical aid, and the lesser comforts of life."

On the subject of the spreading of a disease from persons or from goods undergoing quarantine to other persons, the following particulars are given by Consul Smith: "Three officials, viz., a custom-house officer, and two labourers employed at the lazaret warehouse, died of cholera in July 1856;" and, according to the current and generally accepted belief in Lisbon, "the first persons attacked with yellow fever in 1857 were the custom-house officers who had been employed in examining the luggage of persons who had died of the fever on their voyage from the Brazils. Their luggage had not been opened at the lazaret, and consequently had not undergone the proper purification,"—the vessel or vessels having, however, performed the prescribed quarantine, and been admitted to free pratique.

The decree of the 2d April 1858 was issued by the Board of Health under the conviction that the foul linen so introduced was the main cause of the fever. The vessel which brought the suspected fomites has never been particularised.

With respect to the three deaths from cholera in 1856, Dr. Donnet, of the British Naval Hospital at Lisbon, states, that the three men "had come from Lisbon, where the cholera was raging at the time, and had therefore brought the germs of the disease from the city into the lazaret." The disease did not spread to other persons in the lazaret establishment.

As regards the introduction of the yellow fever in 1857 in the manner above stated, Dr. Donnet says: "From what I have been able to gather, there exists no sufficient proof to establish this opinion as an unquestionable fact. Ships had been daily coming in from the Brazils bringing cargoes for Lisbon, and having had yellow fever on board, but no instance of infection could be traced with certainty to any one of these ships."

Dr. Lyons also, in his elaborate report on this epidemic from minute personal inquiries on the spot, expresses his unbelief in the alleged mode of its importation as held by the Lisbon Board of Health.

He adds that, "The inspector of the lazaret, who has resided there for 42 years, affirmed in the most positive manner that there has never been a single person of those undergoing quarantine who was attacked with an epidemic disease."

It does not appear that there was any suspicion of the disease having in any case spread from the sick in the lazaret, during the fatal epidemic of 1857, to either the attendants or officials connected with the establishment.

Lisbon has on several occasions of recent years suffered from severe visitations of epidemic diseases, against which quarantine is especially directed. Cholera appeared for the first time in 1833-34, and again in 1855-56. Yellow fever appeared in 1856-57.

The following particulars respecting the epidemics of cholera are condensed from an important communication by Dr. Donnet, Staff-surgeon, R.N., of the Royal Naval Hospital, Lisbon, the details being derived from the official report of the Portuguese Board of Health.

In 1833, having first committed some havoc among the inhabitants of Belem, about four miles west of Lisbon, it broke out in the city in April, and lasted there till October: 13,552 persons were attacked. The disease was considered to have been brought from England. It re-appeared in 1834, but was less fatal than in the previous year.

From that period to 1855 no cases were noted in Portugal, although the pestilence had in November of 1853 appeared in the conterminous Spanish province of Galicia on the north.

In 1855 it occurred first in the district of Guarda, on the north-east, then in Braganza, Porto, and Aveiro. Descending the Douro, along the banks of which it committed considerable ravages, it spread along the coast and proved very fatal. At the city of Coimbra it halted in this direction. But while the northern provinces were suffering, the districts of Faro to the south and Portalegre to the west were also ravaged by the pestilence, which at the same time had extended through Andalusia and Estremadura until it reached Madrid. Following the course of the Tagus downwards, it at length invaded Lisbon,

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which had as yet escaped, and where every precaution was used to ward off the threatened attack by preventing persons from infected places entering the city, and also by measures of purification.* In the months of July, August, and September, gastro-intestinal affections were more prevalent than usual; but it was not till the 10th of October that the first case of cholera appeared. It occurred in the hospital of San José, in a syphilitic patient admitted four days previously, with ague and diarrhoea. Within the next three days, two other fatal cases occurred in the same ward, which was low, badly ventilated, and crowded. No communication could be traced between these patients, or between them and persons outside the hospital.

Consul Smith says, "During the epidemic cholera of 1855, all persons coming from infected places, if labouring under any sickness whatever, were not permitted to enter the city; yet, in spite of this and other precautions, the authorities were surprised to find the disease break out in the hospital San José, and spread over the town."

On the 19th of October the first case among the shipping took place, and on the same day two of the inmates of the lunatic asylum were attacked. After this time the disease appeared in different parts of the city, and chiefly in the western which is the most filthy and the most crowded; but it soon ceased; and the entire number of persons affected in Lisbon was not more than 105, of whom 75 died. Throughout the kingdom generally the number was estimated at 19,558, of whom 8,718 died.

In the summer of 1856 cholera re-appeared in numerous districts of the country, as well as in the capital.

Respecting the yellow fever epidemic, Dr. Donnet gives the following particulars:

It appeared in Lisbon on the 5th of September 1856 in the Rua dos Cordoeiros, parish of Santa Catharina, and then spread to the neighbourhood, causing a mortality in all of 87.

But before appearing in the city, it had broken out in Belem, where an apothecary and his family were the first attacked. It then spread to others, and occasioned in all 35 deaths. The disease was not then recognised by several physicians as yellow fever, and little notice was consequently taken of the early cases.

1857.—The first six months of the year were healthier than usual; the mortality was below the average.

The earliest case of yellow fever occurred on the 22d of July in a labourer employed in the Custom House, and living in the Rua da Padaria, No. 33. He died on the third day of his illness.

On the 29th of July a woman who had had dealings with this patient was attacked; and within two days another man, living in the same house with him, fell sick and died. His wife and three sons, with all the inmates of the house, were successively attacked.

All these cases were considered at the time to be bilious fever; and it was only when public attention was drawn to the amount of sickness in the same house, that the real nature of the disease was ascertained.

During August the disease appeared in some of the streets adjoining the Rua da Padaria; and subsequently extended, gradually and steadily, to other streets, causing great ravages in its progress.

Dr. Simon da Cunha, in his recent History of the Yellow Fever Epidemic of Lisbon in 1723, remarks that the disease of 1857 appeared not only in the same district, but in the very same streets which it infested in 1723. All the lower parts of the city suffered greatly; the district which suffered most being that which was first attacked. In the central part of the city, where the population is densest, the attacks were the fewest.

Several merchant ships lay in the Tagus during the whole epidemic. Three cases only of the disease occurred on board.

The pestilence went on increasing from August to the 20th of October, when it began to decline. It may be said to have ceased in December, although several sporadic cases occurred throughout the city in January and February 1858.

The total number of attacks was estimated at 19,672, and of deaths at 5,652. Admitting the population of Lisbon to be 200,000, the rate of mortality was 1 in 35.4 of the inhabitants.

As to the commencement of the disease in 1857, this could certainly be traced either to the Custom House or to persons employed there.

Previous to the outbreak the state of this building was deplorably bad. There was a large deposit close to it of putrescent filth, which had been collecting for years; and it was undermined with foul choked-up sewers. The banks of the Tagus, which washes the south side of the Custom House, were at low water covered with the most abominable refuse from the drains. The stench in and around the place was at times insufferable.

In the bonded stores of this establishment, the goods imported from the Brazils, then infected with yellow fever since 1849, are detained for a considerable time. Some soiled linen was found there with those goods. It was supposed that some of the luggage of passengers, or goods in the stores from Brazil, had been opened by some of the labourers in the Custom House, and that those were the persons first affected. This is the accepted opinion among the official authorities.

Ships

* In the autumn of the preceding year, 1854, several scattered cases, or small groups of cases, of malignant cholera occurred in different districts of Algarve, the southern province of Portugal, and at the same time much choleraic diarrhoea prevailed in Lisbon. The inmates of the St. José Hospital then suffered greatly; the attacks were sudden, and so often without any apparent cause that they were regarded as the precursors of epidemic cholera.

Ships had been daily arriving from the Brazils, and having had yellow fever on board; but no instance of yellow fever could be traced with certainty to any one of these vessels. Portugal and Colonies.

Consul Smith says, "The yellow fever of 1857 is here considered to have been introduced by foul linen (which had not been thoroughly purified previous to the vessel being admitted to pratique) infecting the Custom House officials employed in the examination."

Dr. Lyons, in his very able report founded on minute personal inquiries on the spot, observes:

"It cannot be doubted that while in the epidemic of 1856 two out of the three localities chiefly attacked, St. Roque and Bica, were at some distance from the river, in 1857 the most considerable number of cases occurred in the first instance in the proximity of the Custom House, and in that establishment itself. No case is recorded in this locality prior to September 1857; but, before this date, there seems good ground for believing that cases of undoubted yellow fever had been observed. One case is recorded as having been verified so early as May. Another case is stated to have been seen in July, while there appears to have been at least five in August. Some of these cases occurred in the quarter of St. Roque, an elevated district 100 to 150 feet above the Tagus level, as already indicated. It has been attempted to give a special significance to certain of these cases by saying that the parties attacked, though residents in the district of St. Roque, were employed in the Custom House. I can neither affirm nor positively deny the truth of this statement, as I could procure no reliable evidence respecting it, and I am not aware that any such exists. My own conviction, based on the results of inquiries made amongst medical men of all shades of opinion, is, that prior to the declared and fully recognised existence of the epidemic isolated cases presented themselves in various parts of the city, of which no accurate record was made, but of the existence of which no moral doubt can be entertained."

Dr. Lyons mentions "the remarkable immunity enjoyed by the shipping in the Tagus, notwithstanding the great and constant intercourse with the town. I know of but one instance of a British seaman having become a victim of the disease; he had been drinking on shore. He died in the British Hospital."

In the month of August 1857 yellow fever had appeared to some extent in Ferrol, Corunna, and some other towns on the seaboard of Galicia. Ferrol was then declared infected with the disease by the Lisbon Board of Health, and other parts in the province were declared suspected. The circumstances attending the appearance of the fever in the north of Spain are not known.

Oporto.

In the autumn of 1851 two vessels from Pernambuco, where yellow fever then existed, were, in consequence of the false representations of their captains, admitted to pratique on arrival at Oporto. It was afterwards discovered that some casualties had occurred during their voyage; but no details were given. The Health guards and Custom House officers who went on board were attacked with a bad form of fever, the nature of which was not at first recognised, but which was afterwards declared to be genuine yellow fever. Between 20 and 30 cases occurred subsequently, and all among persons who had gone on board the vessels. After the first week of October, all traces of the disease ceased.

Azores.

St. Michael.—Six vessels were put in quarantine during the last 12 months; five were British schooners, and the other an American vessel. The five British vessels were from New York or Boston, and arrived at St. Michael's either in October, November, or December 1858, after a voyage of from 14 to 21 days.

The American vessel arrived in November, from Scarsport, after 18 days' passage. All six vessels had clean bills, and no sickness had occurred during the voyage.

The quarantine on the vessels was in consequence of the dread of yellow fever.

The American vessel, laden with timber, went to Lisbon, and was in quarantine there for eight days. The British vessels, being in ballast, went to England instead of going to Lisbon, and thence returning direct, they were granted free pratique, the crews having continued well all the time. No sickness occurred in the American vessel during her quarantine at Lisbon.

"The port of Porto Delgado, in fact the whole island, has always been entirely free from contagious diseases, whether epidemic or endemic."

Madeira.

In 1856 the number of vessels quarantined was	-	-	-	148
In 1857 - - - - -	-	-	-	54
In 1858 - - - - -	-	-	-	15

In the great majority of instances, the existence, or the suspicion of the existence, of yellow fever in the port of departure, chiefly Brazil, was the motive. In a good many instances it was the risk of cholera being imported from Mogador, Constantinople, Saffi, Lisbon, Demerara, Nantes and Memel. In a few, the occurrence of small-pox and measles on board, or of a casual or accidental death during the voyage, caused the detention. Still more frequently,

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it was the absence of, or some irregularity in, the bill of health, in which case the vessel had generally to undergo a quarantine of five days.

To give a few examples:—

May 1856.—A vessel in ballast, 50 days out from Demerara, detained 15 days. One death on the voyage not verified.

July 1856.—A vessel, three days from Lisbon, then infected with cholera, quarantined for eight days.

January 1857.—A vessel, 42 days from Para, declared to be infected with yellow fever, detained for 11 days.

December 1857.—A vessel six days from St. Ubes, detained for 15 days in quarantine, cause of detention being yellow fever.

In none of these three last cited instances had any sickness occurred on board: neither did any disease whatever occur in any of the above total number (212) of vessels during their detention in quarantine.

No regard is paid at Madeira to the bills of health of vessels; "the quarantines are ordered not on account of the bill of health, but according to the classification given to the port of departure by the General Board of Health of the kingdom."

During the five years previous to the closing of the lazaret at the end of 1856, the number of persons received into it was 1,899.

The only instances of disease that occurred in it, during the same period, were four cases of cholera in 1856.

Only one death has occurred among the persons received, and that was in a person from Scotland, in the last stage of consumption. There have been no deaths among the officials. There have been no instances of the spreading of disease from persons or goods to other persons in or near the lazaret.

The island was visited for the first time by epidemic cholera in 1856.

"The disease occurred among the inhabitants of Funchal, and over the greater part of the island, in the autumn of that year. The first cases occurred among the troops, who had only a few days previously arrived from Lisbon, where the disease was prevailing. A detailed report of all the facts and circumstances known respecting this epidemic, including dates of the earliest cases, and other such authentic particulars as could be obtained, respecting the origin and development of the disease, was transmitted to the Foreign Office from this consulate on the 24th December 1856, addressed to the Earl of Clarendon, for the President of the Board of Health."

Dr. Donnet, of the Royal Naval Hospital at Lisbon, says—

"As the outbreak in Madeira was contemporaneous with the arrival of troops from Lisbon, the disease was considered to have been imported by them from that city, though, from the evidence of inhabitants of that island, several rapid cases of death had occurred previous to their arrival, and where the patients exhibited symptoms very much allied to cholera. The general opinion was so strong in favour of its importation by these troops, that, determined to allow no more persons coming from infected places to land and perform quarantine in the island, the inhabitants pulled down and effectually destroyed the lazaret at Funchal."

During the autumn of 1856 cholera prevailed in Portugal, also in the south of Spain, and along the African shores of the Mediterranean as far as Morocco.

The average annual number of vessels arriving from abroad for the last three years is 252.

CAPE DE VERDE ISLANDS.

Consul Miller, writing from the island of St. Vincent, says, "The only vessels put in quarantine in these islands are those arriving monthly from the Brazils, after about seven days' voyage. The usual period of quarantine imposed is the time necessary for coaling, about 24 hours. There have been no instances of disease occurring on board any vessel, except in the R. M. Packet 'Avon,' which on one occasion had had three deaths from yellow fever during the voyage. There were several cases of the same sickness in the 'Avon' during her stay here, but no fatal termination."

Boa Vista.—In 1845 occurred the severe outbreak of yellow fever in the island of Boa Vista, after the arrival of H. M. S. "Eclair," from the coast of Africa, with the disease on board.

In the valuable Report of Dr. McWilliam, who was sent out by the Government to inquire into the origin of the epidemic, and afford relief to the suffering population, the connexion between the outbreak and the arrival of the "Eclair" is strongly pointed out. She arrived in a very sickly state on the 21st of August, landed the sick 10 days afterwards, and, in consequence of the unabated malignancy of the fever among her crew, sailed for England on the 13th of September. Pratique was refused at Madeira; and on reaching England on the 28th, strict quarantine measures were adopted. The fever broke out at Boa Vista soon after the departure of the "Eclair," the persons first attacked being those who had been in direct communication with the sick who had been landed. It subsequently spread to the town, and thence extended to various parts of the island, causing great mortality. After a lull towards the end of the year, there was a slight recommencement of the

the disease in the following spring. Since that period, yellow fever has not revisited Boa Vista. The other islands escaped. A strict quarantine against Boa Vista was kept up for nearly 12 months. Portugal and Colonies.

In the autumn of 1851 a fatal sickness prevailed in the Cape de Verdes, especially in the islands of St. Vincent and St. Antonio. In the latter island a large proportion (more than a half it was stated) of the entire population had perished; and much difficulty had been experienced in procuring labourers to coal the steamers at St. Vincent. The islands had suffered severely from tempestuous gales and heavy rains.

Fogo.—Cholera broke out in this island in the beginning of July 1855. The circumstances connected with the visitation are thus stated by Mr. Consul Miller:—

"A Sardinian vessel, with emigrants from Savona for Buenos Ayres, arrived here on the 30th June. The passengers were in a sickly state, and there had been some deaths during the voyage; but from what cause it is not stated. No inquiries were made to ascertain the particulars by the authorities, and pratique was at once granted; the passengers were disembarked, and the vessel cleansed and disinfected. The island was healthy at the time of the ship's arrival. No sooner is free communication established, than cholera breaks out amongst the inhabitants on shore. On the 4th July five persons were attacked, and the disease progressed with such rapidity, and on the following day the deaths were so numerous (the only medical man on the island being among the number), that the authorities and principal people fled in terror, abandoned the others to their fate, and set sail in two vessels for the island of St. Jago. It was upon this occasion that a temporary lazaret was erected at St. Jago, and there these fugitives, 142 in number, were accommodated. During the passage from one island to the other, only two deaths occurred. The population of Fogo was 5,195, and the deaths from this visitation amounted to 123."

St. Vincent.—"In 1856 the cholera appeared at this island, and as I was on the spot," says Mr. Consul Miller, "during the whole time it lasted, I had an opportunity of observing its progress. I believe that the disease was generated in the island. The vessels which had arrived from infected ports, viz., Lisbon and Madeira, brought no cases of sickness on board. The disease broke out on the 23d August; the population was then 1,350 souls. During the first 15 days there were 626 deaths, and in the nine succeeding days 19 deaths occurred, making the total loss 645 in 28 days. The only medical man on the island died on the seventh day of the pestilence.

"The disease spread not only through the island to the few detached habitations in the interior, but it was unfortunately conveyed by a slave, who with her master fled on the 25th August in an open boat, across the channel, to the neighbouring island of St. Antonio, about 10 miles distant. On the same day, a small schooner sailed from hence to the island of St. Nicolas. She was ordered to anchor at an outport, distant from hence about 50 miles. On the passage, one of the crew died of cholera, and on the 5th September two persons disembarked, and they both died. Next day, two of the guard, who formed a sanitary cordon, were attacked; one recovered and the other died. On the 11th another guard arrived from the town, was attacked and died; and on the same day many other attacks occurred in the immediate vicinity of the house where the first death took place. The disease then spread with awful rapidity, and the deaths increased up to the 22d September, and then decreased until the 29th, when the pestilence disappeared. About one-half of the population had perished."

In the island of St. Antonio, it is stated that upwards of 2,000 persons died in about a fortnight after the introduction of the cholera. A solitary fatal case occurred on the 23d November, in the person of a woman who had visited and searched a house where all the inmates had died of the disease, and which had been shut up ever since the occurrence, two months previously.

SPAIN.

ALICANTE.

"THE number of vessels from abroad subjected to quarantine regulations was—

In 1854	-	-	-	-	-	-	-	-	212
" 1855	-	-	-	-	-	-	-	-	340
" 1856	-	-	-	-	-	-	-	-	475
" 1857	-	-	-	-	-	-	-	-	524
" 1858	-	-	-	-	-	-	-	-	622

"I cannot procure," adds Mr. Consul Barrie, "a tabulated list of all the vessels put in quarantine in this port during the last twelve months; but of the 622 arrivals from abroad, and paying health dues, about one-third are from England, and the three days' observation imposed on them would seem to be more for the purpose of obtaining the quarantine fees than as a sanitary precaution. During the last 13 years I am not aware of any deaths having occurred on board British vessels from contagious diseases, either during the voyage or detention in quarantine."

Spain.

In 1858 the whole sanitary dues collected amounted to 1,173*l*. 10*s*.

The health dues on entrance of vessels from ports in Europe or Coast of Africa to the parallel of the Canary Islands are 50 cents of a real (two-pence halfpenny) per ton, and the quarantine dues 25 cents per ton per diem.

During the last three years no persons have been detained in quarantine on shore, nor has any death occurred among the persons so landed, or among the quarantine officials during the last 13 years. No instance of the spreading of disease has been known from persons or goods undergoing quarantine.

"The Asiatic cholera occurred here in 1834, and again in 1854. On this last occasion, it carried off, within six weeks, 1,850 persons out of the 12,000 inhabitants who remained in the city, all the rest of the population having fled. The first case was on the 9th of August, and the disease ceased on the 20th of September. It was believed to have been introduced by a person just arrived from Barcelona, where the disease was then raging, and also, about the same time, by the medium of contraband goods from Marseilles. Though many of the towns in the province, and particularly on the coast, adopted measures to prevent communication with infected places, few of them escaped. Among the latter was Carthagena, where very rigorous measures, both by sea and land, were enforced. This is the only instance in Spain, of which I am aware, where sanitary isolation proved effectual."

Last autumn (1859) the cholera was prevailing in Alicante and various other places on the east coast of Spain.

CARTHAGENA.

In 1858, 36 vessels were put in quarantine of observation. Half of them were ordered away, either to proceed on their voyage, or, in consequence of having foul bills, to go to Port Mahon, there to undergo their quarantine; the other half, chiefly colliers from England, were detained for three days, as coming from ports "in free communication with all parts of the world, as noticed by the Spanish Consul."

It does not appear that any sickness had existed on board any of the vessels quarantined. "The prohibition against strict quarantine in this port is most prejudicial to commerce and to the public generally."

In an interesting paper appended to Consul Turner's replies, Dr. Dalgairns states that in 1834 the town was almost decimated by the cholera.

In 1854 and 1855, when the disease was raging in other parts of Spain, a cordon was formed around the town, and no persons were allowed to enter until they had performed a longer or shorter quarantine. Corn, meat, and poultry were admitted without trouble, but letters and newspapers, after being pierced in various places, had to be dipped in salt water or vinegar before they could be received. Three cases only, in persons who had come from Murcia, all fatal, occurred; one within the town, one in the suburbs, and the third in a village three miles off. Medical men might visit patients outside the cordon, but they were permitted only to approach the sick within a certain distance.

Outside the cordon, in the suburbs and neighbouring villages, persons were in the habit of coming from infected districts without bringing infection.

Many fatal cases occurred in the town of Adra in 1855.

The average annual number of vessels arriving from abroad is 178. The average amount of dues levied, whether under observation or not, is 25,000 reals.

Respecting the sanitary and hygienic condition of the merchant shipping, Dr. Dalgairns remarks that the most common diseases among the crews are "venereal and rheumatic, chronic bronchitis, and phthisis in the first and second stage. Scorbatic affections are rare. The accommodation on board in cases of sickness is generally bad, and the medicine chests badly supplied. They usually contain the prescribed number of bottles, but the contents are often sadly deficient, and the master and mates ignorant of their use."

MALAGA.

In 1858, the number of vessels which performed quarantine of observation (foul arrivals for plague or yellow fever are not admitted) was 237. Of these, 160 were from the British Isles, averaging a voyage of from 25 to 40 days, and freighted with coals, iron, hardware, and bale goods.

Thirty were from the United States, with staves, and 47 from Cuba, Spanish Main, and Brazils, with sugar, coffee, tobacco, hides, &c.

The quarantine for the last-named vessels was seven days, for all the rest three days.

No case of disease occurred on board any of these vessels during the voyage, or during quarantine.

No instances of serious illness or death, or of the spreading of diseases, has occurred among the persons landed in quarantine here of late years. The total number is not stated.

Mr. Consul Mark alludes to "the extreme difficulty of obtaining statistical data upon any point, more especially in connexion with the matter under consideration."

"In the autumn of 1854, and again in the summer of 1855, this city and province were visited by epidemic cholera. In 1854 the greatest number of deaths in one day was, I believe, about 55, but in 1855 as many as 212 occurred in one day."

The population of the city at the time was about 90,000, but a great portion of the inhabitants fled.

Malaga

Malaga suffered from the disease in 1834 for the first time. It has prevailed to a considerable extent during the summer of the present year (1860).

The entire number of vessels which entered the port in 1858 was 3,489. Of these, 2,011 were lateen and coasting craft.

"I am unable to ascertain the gross amount of quarantine dues levied here; but I can state that the amount paid by 80 British vessels quarantined in 1858, for quarantine dues, fumigation and health guard, was about 156*l.*, to which sum must be added 52*l.* for pilot fees for removing upon admission to pratique, and also the value of three days' time lost, interest of money invested in ship and cargo, wages and provision of crew, &c."

BARCELONA.

The replies received are almost all simply negative. Quarantine of observation only is allowed to be performed, all vessels having to undergo a strict quarantine are sent off to Port Mahon.

Barcelona, and some other places in Catalonia, suffered severely from an epidemic of yellow fever in 1821-22. It was first visited by the cholera in 1834, and again in 1854.

VIGO.

In 1857, the number of vessels placed in quarantine was 216, having 3,145 crews, and 1,951 passengers on board. In the great majority of cases, the detention was for seven, ten, or 15 days; the period of 10 days was the most frequent. Almost all the arrivals were from the West Indies, South America, or New Orleans, the cause of the detention being the existence, or the suspected existence, of yellow fever in the port of departure. The length of the voyage varied from 30 to upwards of 100 days.

The number of deaths on board the above 216 vessels at sea, amounted to 61, of which 13 were from yellow fever, in seven different vessels, all the rest being from chronic diseases, generally consumption. In a good many cases, the nature of the disease is not stated.

The number of deaths which occurred among the crews and passengers in quarantine was 21, of which seven were from yellow fever (there had been 31 cases of the disease), and the remainder from chronic diseases, mostly phthisis and dysentery. The seven deaths from yellow fever occurred among the crew of the Spanish war steamer "Pizarro," with a crew of 155 and four passengers. She left Puerto Rico on the 26th August with a clean bill of health. Four deaths from yellow fever occurred during the voyage of 20 days. Her quarantine lasted for 51 days.

During the year, eight vessels, three from Hamburg and five from Sweden, were quarantined, each for five days, in consequence of the suspicion or the presence of cholera in the port of departure, and after voyages of from 30 to 40 days without any sickness.

In 1858, there were 271 vessels detained in quarantine for the same causes, and for like periods of time as in 1857. Of the total number, six vessels were detained for five days only, being arrivals from ports suspected of, or infected with, the cholera. These ports were Stockholm, Riga, and London.

The number of deaths during the voyage, amounted to 101; they occurred on board 56 vessels. Four-fifths at least were from what are designated "common diseases;" a good many were from consumption. One is ascribed to "pernicious fever," two to "fever," and one to "yellow fever," which occurred in a war transport, "Laborde," from Ferrol during the voyage of three days, having left that port with a clean bill. Two other deaths occurred from the disease in quarantine.

Besides this case, another war steamer, the "Isabel," arrived from Ferrol, which she left on the 8th of August, with several cases of yellow fever on board. One death occurred in the lazaret, and as the fever continued she was sent to Port Mahon.

In addition to these three deaths from yellow fever, 38 other deaths occurred in the lazaret during the twelvemonth. Three-fourths of them were from consumption.

Several cases of small-pox occurred among the crew of a vessel, both during the voyage from Havanna and also while in quarantine. None proved fatal.

In 1859, the number of vessels quarantined was 162, under nearly the same conditions and circumstances as in the two former years. Of the entire number, nine were put in quarantine on account of the existence or suspicion of cholera in Cronstadt, Riga, Viberg, Hamburg, Stockholm, Antwerp, London, Carthagena, and Zanzibar, on the east coast of Africa.

Sixty-eight deaths occurred on board 34 of the vessels during their voyage. Three-fourths were from consumption. No death occurred from any form of fever.

Of twelve deaths which occurred in the lazaret this year, nine were from consumption, and the other three from chronic catarrh, peritonitis, and dysentery.

The entire number of persons who underwent quarantine at the lazaret, reckoning the crews of vessels and passengers, during the last three years, amounted to 20,157, being 11,134 of the former, and 9,023 of the latter.

The average amount of dues levied on vessels, individuals, and goods, while in quarantine is estimated, one year with another, at 400,000 reals, or about 4,000 *l.*

"Neither during the last few years, nor prior thereto, has any instance occurred of the spreading of a disease either from persons or goods undergoing quarantine to other inmates of the lazaret or to the officials of the establishment, although on several occasions vessels have arrived with cases of cholera and yellow fever. On the contrary, on different occasions, both these diseases have ended most completely within the sanitary circle."

Spain.

In reply to query 16, it is stated that, in the middle of November 1853, this part of the country (the district around Vigo) was for the second time* invaded by the cholera. Its development was inferred to have arisen from importation, as the weather preceding the appearance of the disease had been favourable to health, and the habits and mode of living of the people had been without any change. Between the beginning of autumn and the above date, more than a hundred vessels, most of them from the Spanish West Indies, where, at the period of their departure, both the yellow fever and the cholera prevailed, had performed quarantine at the lazaret. Among these vessels was the Spanish war steamer, "Isabel la Catolica," which had lost two men (from what disease is not stated), on the voyage of 19 days from the Havanna, which she left on the 10th of October. Several suspicious cases are believed to have occurred among the crew while in the lazaret. It was also then said that whilst the vessel was in quarantine, a boat with 14 men had left her at night and had landed on the southern coast, where they sold some clothes and purchased some goods. It is certain that on the 9th of November the cholera began to show itself in the places near to that beach, and slowly and progressively propagated "itself to other places near." It subsequently spread to the province and town of Corunna, where it proved very destructive.

Not a single case of the disease occurred within the lazaret establishment itself, nor among any of the persons undergoing quarantine at the time, although, "in all probability, it took its origin from the mail steamer 'Isabel,' then in quarantine."

In the autumn of 1854, the cholera was prevailing at Ferrol, a little to the north of Corunna. Since that period, it has existed extensively in different parts of Galicia, as well as in other provinces of Spain.

In 1857, as already stated, under the head of Lisbon, the yellow fever existed at Ferrol, Corunna, &c.

TENERIFFE.

Santa Cruz.—In 1856, 17 vessels were quarantined; in 1857, 1; and in 1858, 3 vessels. Of these 21 vessels, four were quarantined for 10 days, arriving from ports suspected of yellow fever; and 14 for from 3 to 6 days, arriving in 1856 from places (Cadiz generally) infected with, or suspected of cholera. One of these last was detained 10 days; but the cause is not stated. One vessel from Havannah was quarantined for 8 days, suspected of small-pox; and in the two remaining instances the detention imposed was for some breach of the sanitary laws.

No statement is made whether any sickness had existed on board any of the quarantined vessels. None occurred during quarantine.

In September 1846 an epidemic fever, generally believed by the inhabitants to have been yellow fever, and to have been introduced by a vessel from Havannah having sickly passengers on board, but which the Board of Health, in their official report, ascribed to atmospheric influences, prevailed in this capital. The epidemic lasted four months. There were 35 deaths from it in September, and 76 in October. The cases in the next two months were fewer, but more malignant, and the symptoms indicative of the West Indian or yellow fever less equivocal.

Notwithstanding this epidemic, the Board of Health continued to issue clean bills of health, although they recommended that a detachment of troops on arrival should be sent to an elevated station, some miles distant from the town, where it was found that the epidemic did not extend, on account of the lower temperature. The population of Santa Cruz was, at the time, about 8,000. The deaths do not appear to have exceeded two per cent. of this number, although the epidemic was very general.

In 1847 a similar epidemic broke out in Las Palmas, Grand Canary, in October, and lasted for about the same time. It was also attributed to importation from Havannah. The mortality was estimated at about two per cent. of the persons attacked (?). Foreigners and native Spaniards were the chief sufferers. The city of Las Palmas contained a population of about 10,000.

In the beginning of June 1851 cholera broke out severely at Las Palmas. It was supposed to have been introduced by a vessel from Havannah. The atmosphere at the time was charged with a misty vapour, during the continuance of which the disease committed its greatest ravages. It rapidly spread all over the town, and extended throughout the island. The alarm was extreme; all authority for the time was suspended.

The mortality was estimated, during the four months of the epidemic, at 8,000, out of a population on the island of 60,000. None of the other islands of the Archipelago were attacked. A strict quarantine was exercised in all of them against the Grand Canary, all communication with it being cut off.

Since 1851 the Canary Islands have been entirely free from any epidemic disease, except small-pox, which has been prevalent both in Teneriffe and Grand Canary this year, 1859, and many cases have proved fatal.

Consul Murray remarks, respecting its presence at Santa Cruz, that "while it was in that city, vessels from the coast of Africa were quarantined on account of the existence of the disease there."

The average number of vessels arriving at Santa Cruz from abroad is about 300. Vessels pay 25 cents. of one real vellon per ton during each day of quarantine. Persons in quarantine pay four reals per day as a quarantine fee for residence in lazaret.

Cuba and Puerto Rico. See the *Gulf of Mexico*, &c.

* The former invasion appears to have been in 1848, as in November of that year, the Vigo Board of Health then published a report on the disease.

SARDINIA.

GENOA.

DURING the year 1858, 147 vessels performed quarantine. All of them had foul bills, and, with the exception of a very few from Alexandria, Tunis and Algiers, and Malta, had come from some port between Buenos Ayres and Charleston, and were laden chiefly with sugar, coffee, and tobacco.

The average annual number of arrivals during the last three years has been 3,533 vessels, having a tonnage of 539,353, and crews to the number of 47,770.

The quarantine imposed, in the large majority of cases, was from three to five days, and was performed at the Mole Nuovo in the port of Genoa. In 12 cases only, it varied from 8 to 15 days. When the maximum period was imposed, the vessels were sent to the lazaret at Villa Franca, near Nice.

The particulars of the longer detentions are not stated; but it may be presumed that yellow fever had occurred during the voyage, or existed on arrival.

In one instance, a vessel from St. Domingo with wood and hides, it is mentioned that "four persons died on board." As free pratique had been granted at Marseilles, she was put in quarantine for five days only.

In another instance, it is stated, "One of the crew having died on the passage (from Rio Janeiro), two sanitary officers were put on board."

The same thing was done in another vessel from Havannah.

In the case of a vessel from Buenos Ayres with hides and wool, it is stated, "purification of the goods in the quarantine ground for 15 days." The vessel underwent a quarantine of four days only, having been in quarantine for two days at Marseilles.

The length of the voyage of the vessels put in quarantine at Genoa is not given in the tabulated list; neither are the dates of arrival given.

In 1858 the total number of persons received into the lazaret was under 40. Ordinarily, all who have to perform quarantine remain on board their vessels.

Diseases have occurred occasionally, Mr. Consul Brown was informed, among the persons received into the lazaret, but he was unable to obtain precise details. No deaths have taken place during the last six years.

In 1826 two of the health guards and several of the crew on board a vessel from Candia, died of the plague in the lazaret, which was then at Spezzia.

In 1849 one of the health officers, after having visited the hold of a ship from Havannah, which had had fatal cases of yellow fever during the voyage, died of the disease. No other case occurred in the lazaret; and from the sanitary archives, it would appear that instances of the spreading of a disease have scarcely been known.

Genoa was visited, for the first time, by epidemic cholera in 1834-35. In the summer of 1854 the pestilence raged with most destructive violence, causing great mortality, and inflicting a very heavy expense on the community.

It is stated that during the last 20 years the town has been much improved by the formation of new streets, and the admission of more light and air into the dwellings of the poorer classes. The health of the inhabitants has correspondingly improved during the same period. The sanitary state of the town is said to be satisfactory, and that of the Sardinian vessels generally good.

The harbour near the landing-place, where most of the vessels lie, is very foul.

CAGLIARI.

No diseases for which quarantine is liable to be imposed have occurred, it is stated, during the last 20 years, with the exception of a few doubtful cases of cholera in 1854. In 1855 the cholera prevailed at Sassari, and in the northern extremity of the island, to a fearful extent.

No special cases of disease have ever occurred among the employés of the lazaret. Two deaths only have been known to occur during recent years; one from mesenteric disease, and the other from enteritis.

The new quarantine system is considered to be a great improvement over the system previously in force, which, it is stated, was productive of more harm than good.

The average annual number of vessels arriving at Cagliari is 850.

In the report of Dr. Bo, the Director General of Maritime Health in Sardinia, on the Hygienic condition of vessels detained for observation at Cagliari, a record of 22 vessels, between the beginning of 1853 and the middle of 1856, having had sickness during the voyage, or with sickness on arrival, is given. In the majority of instances, this was either scurvy, ague, bilious fever, pulmonary ailments, or some wound or injury. In one instance a man was affected with small-pox, and in another instance one of the crew had cholera. Both patients were landed at once in the lazaret, and both recovered. It would seem that none of these 22 vessels were detained in quarantine for any longer period than for the removal of the sick on shore, and the cleansing and purification of the vessels themselves. The utmost importance is attached by Professor Bo to the necessity of improving the sanitary condition of mercantile ships generally, and also of their crews, most of the sickness in such vessels, on arrival, being traceable, in his opinion, to the faulty arrangements

Sardinia.

on board. On the important subject of the accommodation for the men, he alludes to the great superiority, in point of wholesomeness and comfort, of the deck-houses in most Dutch and American ships over the ordinary berths in or under the fore-castle. They are more easily kept dry, and are, of course, much better ventilated. Nor can the space be encroached on by the cargo, or be tainted with the foul smells either from it or from the hold. The men are more promptly at their posts when suddenly called on deck; and the change of temperature between their sleeping places and the outer air, a point of no small moment for the preservation of health, is much less considerable. It is a great advantage, also, to have the galley close at hand; their food is better dressed, and their berths are kept warmer and drier in cold and stormy weather. The galley in deck-house ships is invariably very superior to the galley in ordinary merchantmen. There is too often, says Dr. Bo, a marked contrast between the clean and smart look of the outside of many merchant vessels, with the gay and handsome cabins of the officers and passengers, and the dingy slovenness and discomfort of the quarters of the crew, and the foul pollution of the hold.

Dr. Bo alludes also to the defective clothing of merchant sailors as a frequent cause of sickness and bad health among them.

The state of the provisions and of the water supply on board is another subject of great moment for their welfare. He is of opinion that scorbutic and other cachectic diseases is often due to the impurity of the water, which in many cases he has found on examination, to be quite unfit for use.

Two Sicilies.

THE TWO SICILIES.

NAPLES.

THE number of vessels quarantined in 1856 was 30			
"	"	1857	" 8
"	"	1858	" 14
			52

All the vessels had clean bills of health except one, which had no bill at all.

Of the 52 vessels, nine came from ports infected with yellow fever, or suspected of being so; nine from a port (Malta) infected with typhus in the spring and summer of 1856; 27 from various ports (Gallicia and other places in Spain, Malta, Galatz, Bergen, Lisbon, and Elsinore) infected with the cholera; and six from ports suspected of the plague (?), viz., Marseilles, Nantes, Almeira, and Leghorn.

The duration of the quarantine for the first class was in all cases 10 days, the voyages having varied from 30 to 64 days; for the second from 7 to 10 days; for the third 5, 7, but generally 10 days; and for the fourth 10 days.

In none of the 52 vessels had any case of sickness occurred during the voyage, or during the detention in quarantine.

The number of arrivals from foreign ports at Naples in the course of a year is not stated.

In 1856, 66 persons were sent to the lazaret; none in 1857, and 156 in 1858.

No cases of sickness, no death, and no instance of the spreading of disease from persons or goods in quarantine has been known during the last three years.

"Typhus fever is said to prevail epidemically every spring in Naples. Cholera appeared here first in 1836, and again in 1837 when it was very severe. In the middle of July 1854 it broke out with great violence, and again slightly in 1855."

PALERMO.

No list of vessels put in quarantine can be had even for a twelvemonth.

No persons, it is stated, have been sent to the lazaret of late years; the quarantine being doubtless always performed on board ship.

No cases of sickness or of death have occurred among persons detained in quarantine, nor has any instance been known of the spreading of disease from persons or goods.

In 1837 cholera broke out on 7th June in Palermo while vessels from Naples, &c., were performing quarantine in the harbour, and continued till September. A sixth part of the population perished. Mr. Consul Goodwin transmitted a most interesting report of this visitation to the Foreign Office. The first cases occurred in two watermen about the same time; both were fatal. For a week or two, the disease made little progress; on the 15th of June the Board of Health declared the public health to be highly satisfactory. In the next six weeks, 23,000 of the inhabitants of the town had perished. The panic baffled all description. Three persons vaguely suspected of having poisoned the water of the public fountains were torn in pieces by the mob.

In 1856 cholera burst forth in Messina on the 10th August, and continued till the 30th September. It carried off, as at Palermo in 1837, a sixth of the population.

The average annual number of vessels arriving from foreign countries is 400, of which 100 are steamers.

Dr.

Dr. John Davy, in his instructive work on the Mediterranean, says, "It is a well-known fact that while a strict quarantine was often imposed by Sicily on Malta, smuggling was going on all the while. It is, of course, a direct premium on the continuance of the system."

Two Sicilies.

TURKEY, BLACK SEA, &c.

CONSTANTINOPLE.

DURING 1858 only 23 vessels were placed in quarantine; two-thirds of them were arrivals from the Danube, or from Russian ports in the Black Sea with cargoes of grain; they occurred at all seasons of the year.

Turkey,
Black Sea, &c.

The quarantine imposed varied from five to 17 days; the cause of the difference is not stated. One vessel with fruit from the island of Milo in the month of March was quarantined for 23 days; in April a Sardinian vessel from Ibrail was kept 24 days; and in August a vessel in ballast from Trieste was kept in quarantine for no less than 25 days. Two vessels from England with general cargoes were quarantined for 10 days each.

The annual average of arrivals from abroad is not stated.

In 1858 no persons were received into the lazaret. No register is kept. With respect to the existence in Constantinople of any disease for which quarantine is imposed, Consul General Drummond Hay states that "no information can be had."

No annual reports are published by the Board of Health; and with reference to the sanitary condition of the city, and of Turkish or other vessels frequenting the port, "information on these points cannot be obtained."

Dr. Foote, Secretary to the Levant Quarantine Association of Constantinople, states in a communication addressed to the Committee, that during last autumn, while vessels in which no sickness whatever had existed, and arriving from Malta and other healthy ports in the Mediterranean, were being often detained for several days in the Dardanelles, crowded emigrant ships from Russian ports in the Black Sea with malignant fever on board were being admitted at once to pratique in the Bosphorus.

The report by Deputy Inspector Dr. Dawson in 1841, addressed to Dr. J. Davy, for the information of the British Government, and printed in the Parliamentary correspondence 1836-43, is, it is believed, as applicable now as then: "Common continued fevers are to be met with at all seasons, and low types of nervous fever never cease to occur. Typhus of a very severe form is at some seasons more prevalent than at others; but the city is said never to be free from it. It is at times very destructive of life. Small-pox never ceases its ravages in Constantinople; vaccination is not held in much estimation."

The cholera has repeatedly prevailed in the city and suburbs since its first visitation in 1831.

The last epidemic of plague was in 1838. Cases were occasionally seen for two or three years afterwards in the lazaret on the opposite side of the Bosphorus, having been brought by vessels from Egypt, as in the instance reported by Dr. J. Davy in 1841. During the interval between August of that year and April 1839, when the lazaret was first opened, no fewer than 12,771 persons had been received into it, and of this number every one had remained in perfect health, except those who were sick on being admitted.

Except in two or three instances, no cases of apparently communicated sickness appear to have occurred among the *employés* of the quarantine establishment.

GALATZ, &c.

No vessels have been quarantined for the last five or six years, either here or in other ports of the Danube. Previous to the war in the East the number of vessels detained in quarantine by the Russian authorities was very large.

During the whole period the lazaret was used, viz., from 1829 to 1854, no case of plague occurred there.

No death has occurred among any of the inmates or officials from any disease for which quarantine is imposed; nor has any instance of the spreading of disease been known.

Since quarantine was instituted (1829) cholera has been twice in Galatz; but no cases occurred in quarantine; at all events very few; and the disease commenced in the town.

Corn vessels when detained for any time near the mouth of the Danube, during the hot season, often suffer severely from malignant fever.

The only information received respecting vessels put in quarantine in any of the ports of the Black Sea, Russian or Turkish, is that at Soukoum Kale, in 1858, two colliers with clean bills were put in quarantine in consequence of having communicated with Constantinople, which, like other places in Turkey, was suspected on account of the plague in Barbary. The average annual number of vessels arriving there is 300.

At Trebizond no record is kept of vessels quarantined there.

Between 1,500 or 1,800 persons have been admitted into the lazaret in the last five years; during which time no disease has occurred among those confined there. In 1847 and 1848 when cholera raged at Trebizond, some deaths from the disease took place in the lazaret. No instances are known of the spreading of any disease from the sick to the well.

Turkey,
Black Sea, &c.

At *Taganrog*, cholera prevailed in 1847 and 1848 with some intensity, commencing in June each year, and terminating in September. Choleraic affections are common almost every year during the hot season.

Berdiansk.—"The cholera visited this place in 1848, and although it was not so severe as in other districts of Russia, yet it was estimated that the population lost 10 per cent."

No information has been received respecting the practice, and results of the practice, of quarantine at the great Russian lazaret establishment at *Kertch* prior to 1855, when it was dismantled and broken up, on the capture of the town by the English and French troops.

ASIA MINOR AND SYRIA, &c.

Brussa.—Few or no foreign vessels ever arrive at the towns on the adjacent coast, viz., *Ghio* (or *Ghemlek*) *Mundania*, *Mitralitz*, and *Panormo*; they are chiefly Ionian. There have been no persons detained here of recent years: "Detention of persons in quarantine," says Consul Sandison, "is absolute imprisonment without the commission of offence."

"In July 1839, there occurred several authenticated cases of plague at *Ghio* (21 miles distant), and the village of *Demirdesh* near to this; they were officially reported by me at the time. The malady did not extend to this city, without the communications having been subjected to restraint. Only some imperfect rules of quarantine were ordered with respect of the houses infected, in addition to spontaneous precautions being taken by the inhabitants. On the 12th of August, I advised that there were no further cases of plague reported, save one so considered by the neighbours, and occurring in a family which was performing quarantine outside of *Demirdesh*. These are the last and sole occurrences of the kind since my being established here as Her Majesty's Consul in June 1839.

Before the plague had been eradicated in Turkey, it made its appearance occasionally somewhere, either of an isolated character, or with more or less development.

We had a visitation of cholera in 1848, none since. No quarantine regulations were imposed on account of it. The epidemic had been prevalent for some time at *Constantinople*; it proved very destructive here. But how or whence it came, was involved in utter mystery."

Alexandretta.—No vessels have been detained at this, the port of *Aleppo*. No information has been received respecting the prevalence of epidemic disease, &c.

Beyrout.—In the 10 months from August 1858 to May 1859, there were 168 vessels, all from *Egypt*, put in quarantine, the duration of which varied from five to 15 days.

The quarantine was on account of the suspicion of the plague in *Alexandria*.

No information is given respecting the number of persons received into the lazaret.

In reply to query 16, it is stated that, "There was the plague in *Syria*, from 1840 till 1843, and the cholera in 1848 and 1854. The plague of 1840 seemed to have been imported by the *Egyptian* troops; it followed at least their movements, and there were cases of plague and deaths at the lazaret among these troops, and among the officials of the establishment; but no dates or particulars can be furnished for that period with any precision, no records being then kept.

"As to the cholera, it is impossible to say whence it came; no disease at that epoch broke out in arrivals by sea."

At the beginning of September 1859, it was announced that two cases of plague had occurred at *Beyrout*; and immediately a foul-bill quarantine was imposed on all arrivals therefrom, and from the coast of *Syria*, generally, in many of the *Mediterranean* ports; among others at *Malta*. It was not till the second week of October that the error was recognised, the two cases of sickness having been ascertained to be cases of ordinary fever and not of the plague, and the strict quarantine was discontinued.

The average annual number of vessels arriving is 400, besides 1,000 small native coasters.

The information as to the estimated charges imposed, cannot be obtained with accuracy, but judging from the amount of shipping, &c., it cannot be much under 2,500 *l*.

RHODES.

In 1854, the number of sailing vessels subjected to quarantine was 54; most of them came from *Constantinople*, or other parts infected with, or suspected of, the cholera. The others were detained either from some cause of suspicion on board; as for example, having lost one of the crew, or having met with pirates on the voyage, or from wanting a proper bill of health. Besides these 54 vessels, 22 steamers *Austrian*, *Ottoman*, and *French*, were quarantined, but all these left in quarantine.

1855. The number of sailing vessels quarantined was 316, and that of steamers 53. The cause in almost all the cases was the existence or suspicion of cholera in the port of departure. In a few, the want of a bill of health was the motive; and in one instance, the port of departure had been in communication with the crew of a vessel wrecked in its vicinity, and was therefore considered suspected.

1856.—The number of sailing vessels quarantined this year was only 16, and that of steamers 10. In all, with one exception where the bill of health was wanting, the cause was the arriving from a port infected with cholera, or in communication with other ports where the disease existed. The ports enumerated are *Constantinople*, *Bengazi*, *Tripoli*, *Teesmé*, *Derna*, and *Alexandria*.

1857.—No quarantine was imposed this year, except in six sailing vessels, with salt from Samos, or coals from Britain, which were unprovided with bills of health. This was in consequence of the general healthy state of the Ottoman Empire.

1858.—No fewer than 280 sailing vessels, and 19 steamers were put in quarantine. The cause of this great and sudden increase was the outbreak of the plague at Bengazi, and the rumoured occurrence of a case of the disease at Alexandria.

The first quarantine against Tripoli commenced on 21st June, and arrivals from Malta were considered foul from 11th of August to 18th September.

The island of Cos was put in quarantine for having communicated with a vessel from Tripoli.

The amount of dues and fees levied during these five years was 1,900 *l*.

During the five years from 1854 to 1858, the total number of persons received into the lazaret was 1,755, of whom 1,464 were Ottoman, and 288 were foreign subjects. The cause of detention was the dread of cholera being imported either from Constantinople, Smyrna, Stanchio, or Syra from 1854 to 1857, or of the plague being brought from Barbary or Egypt in 1858.

The quarantine in the former case was five days, and in the latter from 10 to 15 days.

Among the entire number received, not a single instance of fresh sickness occurred; and the only deaths were four; one from consumption, and three from dysentery in poor pilgrims from Mecca, all of them being in a dying state when landed.

One or two of the memoranda appended to the table may be given: 13 porters of the town were quarantined for having shipped coals on board a steamer from Alexandria, having no bill of health; and 22 others were quarantined for having done the same to a steamer from a port where cholera existed.

In 1858 there were 629 pilgrims, and 1,734 sponge-fishers detained on the quay and beach; which, with the above number of 1,755 received into the lazaret, makes a total of 3,489 put in quarantine this year.

"Since 1838, when Rhodes was erected into a central health office, no diseases for which quarantine is liable to be imposed in this port, have occurred in the island."

There was an epidemic of chicken pox in Rhodes in the spring of 1856.

"Vessels from Cyprus, Caramania, and Anatolia, often bring with them malignant typhus fevers. The greater number of these cases, when not in the last stage, recover; which is solely owing to the great salubrity of this climate."

The average annual amount of quarantine dues on vessels and individuals is about 380 *l*.

VOLO.

Seven vessels were put in quarantine between April 1855 and April 1859. Two had foul bills from Salonica, on account of cholera. The others had fewer or more persons on board than stated in the bill of health.

The quarantine varied from five to 10 days.

Seventy-three persons were admitted into the lazaret during the last four years. No case of sickness or death occurred, nor any instance of the spreading of disease.

Asiatic cholera prevailed from the 12th June to the end of July 1855.

LARISSA.

The entries into the three frontier lazarets for one year were:

At Soorbi	-	-	-	-	-	617 persons.
„ Damoko	-	-	-	-	-	1,503 „
„ Kastangia	-	-	-	-	-	187 „
						<hr/> 2,307 persons.

These entries only passed through under observation. Since the establishment of the quarantine service in this province, no occasion has occurred for imposing quarantine.

"The cholera prevailed here and in other parts of Thessaly in the summer of 1855. It was almost general at that period in all European Turkey. The sanitary service did not commence in this province till after the epidemic had ceased, and there are, therefore, no means of obtaining the desired information."

SCIO.

Vessels with foul bills for the plague or yellow fever are not admissible.

During the last three years, seven vessels from Bengazi have purged their quarantine of observation. They were all from Alexandria, between December 1858 and April 1859. The voyage varied from 10 to 20 days. All had clean bills, and were laden with rice. No sickness had occurred during the voyage, or while in quarantine, which lasted five days. Thirty-two cases of cholera occurred among those admitted into the lazaret in 1855 and 1856; nearly all proved fatal. None of the *employees* suffered, and there has been no instance of a disease spreading from the sick to the well. Since 1856, no persons have been received into the lazaret.

"Although, during the last 25 years, numerous vessels have arrived here with cholera

Turkey,
Black Sea, &c.

on board, and the sick have been landed at the lazaret, no case either of that or any other contagious disease has ever occurred among the population."

MYTILENE.

Since 1854, when cholera was in the Levant, no arrivals have been quarantined. Arrivals from ports where plague exists are not admitted.

"About August 1850, four persons who had just returned from Asia Minor, were attacked with cholera in the village of San Marino, about five miles from this town. One died with all the symptoms of Asiatic cholera; the three recovered. It is generally believed that in 1853 there was one case of cholera in this town."

The sanitary state of the town is described as very bad, nevertheless the place and the island generally are said to be healthy.

CYPRUS.

Arrivals from Egypt and Barbary were quarantined in 1858 for 15 days; also from Malta for the same period, in consequence of the great intercourse with the Barbary coast. The quarantine against Alexandria was in consequence of some cases of plague in the lazaret there, and the escape thence of a person, which compromised the whole city. A few deaths have occurred in the lazaret during the last five years from old age and destitution, or accidents, chiefly among the pilgrims from Mecca and Jerusalem, who had undertaken a long journey with insufficient means of subsistence.

This island has never been afflicted with any of the diseases for which quarantine is imposed.

EGYPT AND BARBARY.

ALEXANDRIA.

Egypt and
Barbary.

THE number of vessels put in quarantine from 14th June 1858 to 5th June 1859 was 149. The great majority of these were Ottoman vessels from Barbary and other parts of the African coast. There were also a good many English and French steamers, and a few Austrian.

The cause of the quarantine in every instance was the plague at Benghazi, first announced in the summer of 1858.

For the first two months or so the quarantine imposed, more especially on arrivals directly from the Barbary coast, was strict; and for a period of 10, 20, 30 days and upwards. Towards the end of August its rigour was materially relaxed, a quarantine of observation of from five to three days being then substituted on all arrivals except from the Barbary coast and from Malta. Malta was declared a suspected port about the beginning of August, in consequence of the death of one of the crew of the "Pactolus," in the hospital at Alexandria, from what was alleged to be the true plague. This case had such important bearings on the restrictions imposed on Malta by almost all the Mediterranean states that it requires to be noted as far as the particulars have been made known. The steamer had arrived on the 2d of August from Tangier, Gibraltar, and Malta, with a crew of 36, and 215 passengers, and a general cargo. No other case of sickness appears to have occurred on board. She left Alexandria while in detention (a quarantine of 30 days had been imposed), and having landed her passengers, proceeded to Beyrout, from whence she returned in ballast, and with the same number of crew, on the 30th of August. Her bill of health being foul, a quarantine of nine days was imposed; but she left in quarantine not only without paying the dues levied for the health guardians, but forcibly getting rid of them.

Previous to this date, English vessels from Malta had been admitted to *pratique par disposition superieure*, or, in other words, by orders from Constantinople.

The Alexandrian case was afterwards admitted by the professional men on the spot to have been one not of plague.

No other case of sickness is mentioned as having occurred on board any of the 149 vessels that were quarantined during the twelvemonth, with the exception of the death (cause not stated) of the captain of an Ottoman vessel just before entering the port, but without exciting any suspicion of infection.

The last four cases enumerated in the list will show the character of the quarantine restrictions at Alexandria in the months of May and June of the present year (1859):

"Arcadia,"	English steamer from Malta, with clean bill,	9 days.
"Simois,"	French "	2 "
"Nassand,"	Ottoman brig from Benghazi, with foul bill,	15 "
"Meandre,"	French steamer, from Malta, with clean bill,	2 "

At Alexandria, in 1856, 1,818 persons were received into the lazaret.

" in 1857, none.

" in 1858, 574

Among

Among the 1,818 admissions in 1856, there were 56 cases of disease, of which number 24 were *fatigues de voyage*, 25 or 26 from various gastric and abdominal complaints, two from Asiatic cholera (in May) and three or four from intermittent or continued fevers. Twenty-four deaths occurred among these persons; seven from fatigue and exhaustion, 14 from marasmus and intestinal diseases, two from cholera, and one from peritonitis.

In 1858 two deaths occurred in the lazaret; one in July from typhus, and one in August from *soupeçon de peste*.

No instance of the communication of disease from sick to well has occurred during these three years.

Accompanying the elaborate and highly valuable replies of the Egyptian Board of Health are two statistical tables of the number of attacks and deaths from the plague in Alexandria during the decenniad from 1834 to 1843; and also of the number of attacks and deaths from Asiatic cholera from 1844 to 1859.

Before the month of July 1834 Egypt had been for several years exempt from the plague. The institution of the sanitary administration of Egypt dates from the end of 1831, after the first visitation of the cholera; between that period and the middle of 1834, cases of the plague were admitted on several occasions into the lazaret, and did not spread beyond it. In no year from 1834 to 1843 was Alexandria quite exempt from the disease; but its severity varied much in different years. In 1835 it raged with epidemic violence, and between 7,000 and 8,000 perished of it in the city. In 1839 the number of deaths from the plague was only 19; in 1840 and in 1841 the number was respectively 679 and 775.

The appearance of the pestilence in Alexandria has generally been imputed to importation by contraband goods brought from infected places. This was alleged by many to have been the origin of the epidemic of 1835, which did not finally cease in Egypt till the autumn of 1837. From September of that year to April 1838 no cases of the disease occurred in Alexandria; but, during the hot months, it was observed both in this year and the following one. The outbreak in 1840, which became still more severe in 1841, was considered to be a new invasion.

The result of observations during the eight years from 1835 to 1843 showed that the month of May is most favourable to the full development of the plague; and that the force of the disease is diminished chiefly in the five months from September to January, inclusive. In October the disease was less fatal.

In the months when the pestilence abated the ordinary mortality generally increased. Since 1843, no case of plague has been seen throughout Egypt.

With respect to cholera, this pestilence prevailed with greater or less severity in Alexandria in 1844, 1848, 1850, and 1855. The visitation in 1848 was the most fatal; that in 1855 was next in point of severity, when nearly 2,000 died between June and November. Partial outbreaks of the disease had occurred in 1835, and again in 1837, during the months of October and November.

In August 1858, symptoms of cholera were detected in pilgrims going from Jeddah to Mecca. The disease was, however, decided to be merely sporadic. Nevertheless, the appointed quarantine was established against all arrivals from the Hedjaz. Only 12 of the pilgrims died.

The same year, 1858, was marked by the outbreak of typhus among the negro soldiers at Kas-el-Nile. The statistical tables, from which the above particulars are taken, will be found in "Papers respecting Quarantine in the Mediterranean," printed by the Foreign Office, and just presented to Parliament. A synoptical table of the certified births, deaths, vaccinations, and of the sick treated in their own homes and in hospital, throughout the whole of Egypt during the year 1858 is included. From this table, it appears that the number of births was 161,702, of which 87,095 were males, and 74,607 were females; the number of deaths was 99,392, of which 53,938 were in males, and 45,454 were in females; and the number of children vaccinated (vaccination is compulsory) amounted to 102,494. Some highly interesting observations on the prevailing diseases of Alexandria, and of Egypt generally, accompany the table.

The number of sailing vessels which arrived at Alexandria in—

1854	-	-	-	-	was	-	-	-	-	2,013
1855	-	-	-	-	"	-	-	-	-	2,357
1856	-	-	-	-	"	-	-	-	-	2,314
1857	-	-	-	-	"	-	-	-	-	2,153
1858	-	-	-	-	"	-	-	-	-	2,043

The number of steamers arriving during these five years was 1,472.

TRIPOLI.

In 1856	-	-	-	-	-	-	19 vessels were quarantined.
1857	-	-	-	-	-	2	" " "
1858	-	-	-	-	-	44	" " "

In 1856, the cause of quarantine was in every instance the arrival from a port infected with cholera, or suspected to be so. The ports enumerated are Tunis and Alexandria, with several intermediate places on the coast, including Bengazi. The quarantine imposed was generally for five days; in two instances, where a death had occurred during

Egypt and
Barbary.

the voyage, it was for 10 days. No case of disease occurred on board any of the vessels during their detention.

The cause of the quarantine on the two arrivals in 1857 was, in the one instance the want of a health certificate from Constantinople, and, in the other instance, the death of a sailor on the voyage from Smyrna. The detention imposed was 12 and 10 days.

In 1858, no vessel was put in quarantine till Midsummer, when the dread of the plague at Benghazi began. Of the 44 cases, seven of the arrivals were direct from that place, and the detention imposed was at first 15 days, and then for 40 days. Towards the end of the year it was reduced to 30, and afterwards to 20 days.

Four of the arrivals were from Alexandria, the quarantine being in every instance for 15 days.

All the rest were from Malta, which was at first subjected to a quarantine of 10 days, and after the first week of September, of five days.

In none of the vessels quarantined in 1858 had any sickness occurred, either during the voyage or their detention.

In 1856, 596 persons performed quarantine in the lazaret; in 1857, 19 persons, and in 1858, there were 281 persons admitted. No cases of sickness or death occurred amongst them during their detention. "The last epidemic of plague in Tripoli occurred 25 years ago (1834), and was imported, it is said, by a ship from the Levant. The epidemic lasted for six months, and caused great havoc."

The late appearance of the plague in the district of Benghazi (the ancient Cyrenais and Pentapolis, celebrated for its richness and fertility), on the Barbary coast, took place under the following circumstances. After three or four years of unusual drought, which parched up the ground and destroyed the ordinary food of man and beast, the people were reduced to a state of famine in 1857. Great numbers of the poor Arabs perished from sheer want, both in the country and in Benghazi, to which they had gone in search of food.

An epizootic disease had also prevailed among the cattle. Notwithstanding some supplies of food sent from Constantinople, the utmost misery continued up to the time when a malignant fever appeared about the middle of April 1858 in an Arab encampment, about eight hours distance from Benghazi (the ancient Berenice). The disease manifested itself in the town at the beginning of May, but did not spread much till June, during which month it caused a great mortality. By the middle of July, between 800 and 900 persons had died out of an estimated population of about 10,000 souls, of whom, however, more than one-half had fled in terror to other places. Many families left for Alexandria and Malta. It was impossible to ascertain the mortality among the Bedouin tribes. The disease extended to Merdji, the principal place of the arrondissement of Gharb, about 18 hours distant from Benghazi, and also to Derna (the ancient Dardanis) on the coast.

Out of the garrison of Benghazi about 200 strong, 30 deaths occurred. Two or three vessels in the roadstead were also attacked.

The medical commission, consisting of Drs. Bartoletti and Amadeo, which was sent from Constantinople in July to inquire into the history of the outbursts, was convinced that the disease had sprung up spontaneously in the Arab encampment, under the favouring circumstances of prolonged destitution and misery, as seemed to have been the case in the great plague of the province of Erzerom in 1841, and on various other occasions. To suppose that germs of the pestilence had remained dormant for 15 or 20 years was, of course, out of the question.

The district is said to be generally healthy; there are no marshes, and, with the exception of a few salt lakes near the town, the ordinary causes of the insalubrity of countries in the East, are not present. The heat in the summer months is usually very high, but in June and July of 1858 it was very much below the usual average.

The spreading of the disease appeared to be generally in consequence of communication with the infected. The occurrence of one case in a house was usually followed by others. Death occurred in most instances between the third and seventh day of the attack, but sometimes much more rapidly.

For some time after the first appearance of the fever it was regarded by the sanitary physician of the district as a comparatively mild form of typhus, the glandular swellings never going on to suppuration, and most of the patients, when properly treated, recovering. After the months of August and September, Benghazi was considered to be nearly free from the infection.

In the early spring of 1859 it would seem that the disease was believed to have entirely ceased throughout the country; but soon afterwards fresh cases began to re-appear about Benghazi, and forthwith the strict quarantine at Malta and other ports in the Mediterranean was re-imposed in all its rigor.

The cholera appeared in Tripoli for the first time in July 1850, imported, it was said, from Tunis, where it had existed for several months. The disease spread over the whole province, and was very destructive.

In 1853 it reappeared frequently between the months of April and November, without presenting the character of a continued epidemic. It was supposed to have been imported this year from Malta.

Many sporadic cases occurred during the years 1854 and 1855.

"The sanitary state of the town is generally bad during the summer, owing to the high temperature, the extreme dampness of the air, and also to the wretched manner in which the great majority of the inhabitants live, as well as to the extremely filthy state of their houses."

UNITED STATES.

BOSTON.

No list of vessels placed in quarantine can be had, as there is no ordinance requiring such a record to be kept.

During the last five years there were admitted into the quarantine or marine hospital on Dear Island 59 cases of smallpox, of which six died; 15 cases of yellow fever, of which four died; and 10 cases of ship or typhus fever, of which two died.

No fresh cases of sickness are recorded to have occurred.

As to the spreading of disease it is stated, "a woman employed to wash clothing on board a vessel infected with yellow fever died. A man, his wife and child went on board the same vessel, and the child was afterwards attacked with the disease."

Cholera appeared here first in 1832, again in 1848, and a few cases have occurred every summer since the last date.

Smallpox has for the last 20 years been more or less constant in Boston.

Yellow fever and ship or typhus fever have only prevailed to a limited extent, and usually among those exposed to actual contagion.

"Great interest on the subject of quarantine has just been awakened in most of our seaboard cities, and in Boston particularly."

United States.

NEW YORK.

The number of vessels, having or having had cases of yellow fever on board, arriving from infected ports at the quarantine station in 1858, amounted to 145.

1856.—The annual report of the marine hospital at quarantine states that, "The total number of patients admitted was 1,556, among whom were 269 with true typhus (independent of numerous cases of simple fever), 177 with yellow fever, and 325 with smallpox. The per-centage of deaths to cases of these diseases was 12, 32, and 8, in the order of enumeration.

"There were also eight admissions and two deaths from cholera. Typhus is the perpetuated curse of famine and overcrowding; and fresh air, cleanliness, and wholesome aliment are the great prophylactics against typhus and most other diseases."

With respect to smallpox, it is remarked that, "When the subject of vaccination receives the attention which it deserves, and a sufficiently strict surveillance over infected vessels, passengers and cargoes is enforced by law, the scourge will so nearly disappear from us as to be very seldom seen beyond the limits of the quarantine lazaretto."

Between the middle of June and the end of September, 77 vessels with yellow fever on board during the voyage, or on arrival, anchored off the quarantine ground. In some of the vessels the entire crew had suffered, and many deaths had occurred since leaving Havanna or other ports in the south.

Many of the stevedores, and others employed in unloading the vessels, were attacked with the fever and died. The disease spread to the shore, attacking first some dwellings on the beach near the hospital, and subsequently extending in different directions. "Large quantities of refuse matter, decaying fruits, old bedding, &c., and all such materials as floated, were carried in directions and to localities which were subsequently the lurking places of the pestilence. But it was not by such tidal influences alone that the fomites of infection seemed to be conveyed to the shores, nor was it the fate of those alone to suffer who dwelt by the waterside."

In the course of the season the disease was conveyed to the city of New York and to Brooklyn, as well as to other adjacent localities.

In all, 538 cases of genuine yellow fever, of which one-third proved fatal, are reported to have occurred during the summer and autumn in and around the quarantine grounds on Staten Island, and other parts along the shore of the port of New York. A large proportion of them was traced directly to infected vessels and fomites. Three of the cases occurred among patients convalescent from other diseases in the marine hospital.

On the subject of the principal agencies in the spreading of the disease from the infected shipping, Dr. Harris, the physician of the marine hospital, remarks, when speaking of the locality on shore where it first appeared, and remained longest and was most fatal:—

"There can be no doubt that the most active course of the pestilence in this locality was from the accumulation of infected materials floated from the vessels in quarantine. We have already noticed the extension of the fever to New Jersey by the same agency, and it is rational to presume that the cases admitted from the upper districts of New York and Brooklyn received the infection from a similar cause."

Within the last 26 years, New York has had five serious attacks of cholera.

Dr. Walser, Deputy Health Officer of the Quarantine Hospital, remarks:

Although cholera appeared in 1849 and 1853 in the surrounding villages, within a short time after its prevalence in the hospital, it would be difficult to trace its origin to the hospital or its patients. Persons labouring under the disease were admitted from New York long before the presence of the epidemic on Staten Island became manifest; nevertheless,

United States.

less, it is worthy of remark that the inhabitants of the buildings in the immediate vicinity of the cholera hospitals suffered earlier, and more than any other locality." The accompanying very instructive table, given by Dr. Walser, shows the relation of the appearance of cholera to the admissions from shipboard. Sporadic cases of the disease, it is to be observed, are unknown in the history of the quarantine hospital in New York:

YEAR.	Date of First Admissions from Shipboard.	Date of First Admissions from City.	Date of First Admissions from Staten Island.	Date of First Appearance among the inmates of the Hospital.	Number of Cases admitted from Shipboard or elsewhere, before the appearance in the Hospital.	Total Number of Cases admitted from Vessels.	Total Number of Cases admitted from City.	Total Number of Cases admitted from Staten Island.	Total Number of Cases among the inmates of the Hospital.	Date of last Admission from Shipboard.	Date of last occurrence among the inmates of the Hospital.	TOTAL Number Treated.	Number of Deaths among Patients admitted from Shipboard or elsewhere.	Number of Deaths among Patients admitted with other Diseases.	Number of Vessels from which Cholera Cases were admitted.	Largest Number of Cases admitted from One Vessel.
1832	16 July	10 July	26 July	-	-	23	2	2	-	16 Oct.	-	27	5	-	7	10
33	10 "	-	22 Aug.	-	-	3	-	2	-	10 Sept.	-	5	2	-	3	1
1848	2 Dec.	-	-	6 Dec.	14	58	-	-	15	27 Dec.	18 Dec.	73	27	14	4	55
1849	27 May	11 June	1 Aug.	15 April	-	230	7	5	110	29 Nov.	16 Nov.	352	101	80	60	22
1850	1 Oct.	-	-	7 Oct.	22	22	-	-	3	31 Oct.	11 Oct.	25	11	3	3	11
1851	6 Jan.	-	-	-	-	2	-	-	-	6 Jan.	-	2	2	-	2	1
1851	20 Oct.	-	-	24 "	1	1	-	-	5	20 Oct.	26 Oct.	6	1	5	1	1
1852	17 June	19 June	16 July	3 July	3	21	43	2	100	3 Oct.	27 "	175	34	97	12	5
1853	11 Sept.	30 July	25 Oct.	26 Sept.	3	312	19	2	51	17 Dec.	31 Dec.	384	117	39	43	61
1853 and 1854	11 "	30 "	25 "	26 "	3	19	4	-	10	22 Jan.	24 Jan.	33	7	5	5	6
1854 and 1855	16 May	16 May	3 July	19 May	39	419	61	43	60	19 Dec.	20 Nov.	592	249	53	39	127
1855	9 Oct.	-	-	17 Oct.	4	4	-	-	2	9 Oct.	19 Oct.	6	2	2	2	3
1856	1 June	-	-	9 June	3	3	-	-	1	1 June	9 June	4	2	1	1	3
1857	15 Sept.	-	-	24 Nov.	65	65	-	-	15	24 Nov.	1 Dec.	80	12	14	10	14

From the annual report of 1858, it appears that of 1,166 admissions during the year, 173 were from typhus (independently of 56 from simple fever), 200 from yellow fever, and 267 from smallpox. The per-centage of deaths from these diseases to discharges were 7, 21, and 5.

Besides the 267 cases of smallpox, 4,004 passengers from vessels infected with the disease during the voyage or on arrival were landed, and, after vaccination, detained here for observation for the average period of five days.

Between the second week of June and the end of the first week in October, 145 vessels having, or having had, cases of yellow fever on board, arrived at the quarantine station.

165 passengers and 568 seamen from 56 different vessels, supposed to be infected with yellow fever malaria, were quarantined also for five days, but not a single case occurred among them; while, from the smaller number remaining on board, 34 patients sick with yellow fever were subsequently admitted, showing the necessity for the immediate debarkation of passengers and crew from infected vessels, and their comparative immunity from the disease when once removed from its deleterious influence. Among other vessels which arrived with yellow fever on board was the "Susquehanna" frigate, which had landed 40 cases at Jamaica, after losing several of her crew on the voyage from Chagres.

As in 1856, many of the stevedores and lightermen engaged in discharging the cargoes of infected ships, and other persons who went on board, more especially if they remained for some time in the lower parts of the vessel, were attacked and sent to the hospital. In the course of the summer several cases occurred on shore, chiefly in low, unwholesome localities near the beach: 39 cases in all occurred on Staten Island, outside of the quarantine grounds, and of these 13 were fatal.

On the 1st and 2d of September, the hospital and other buildings in the quarantine grounds were destroyed by incendiarism. Many of the inmates were yellow fever patients, and had to be removed and placed in temporary sheds, &c. It does not appear that the disease was communicated to any person engaged in removing or attending upon them.

"That ventilation may so attenuate the poisonous malaria as to render it harmless, is evident from the fact that vessels may be visited with comparative impunity as long as the visitors remain on deck or in the well-ventilated cabin; but to venture into the hold of the vessel is to endanger health and life.

"That cargoes and goods coming from infected vessels are as prolific sources of the infection as the vessels themselves, is a matter of daily observation."

On

On the question of the personal contagiousness of the disease, Dr. Bissell, the physician of the hospital in 1858, adds, "Since 1798, over 1,200 cases of yellow fever have been admitted, and indiscriminately placed among the other patients in the hospital, and yet there is not a single instance on record where the disease has been communicated from one individual to another."

PHILADELPHIA.

In consequence of the frequent change of the officer at the lazaret, no list of the vessels put in quarantine has been preserved. During the last five years, 201 patients have been admitted into the lazaret or marine hospital. No healthy persons have been received, nor have any of the inmates contracted disease, except one nurse, who died of typhoid fever in 1857.

There were 29 deaths among the sick persons received during the five years from yellow fever, typhus, small-pox, and remittent fever.

No instance of the spreading of disease has occurred but that of the one nurse mentioned.

"Occasional instances of yellow fever, and typhoid fever and small-pox have occurred in Philadelphia from contact with foul vessels. The dates it is impossible to communicate."

Philadelphia, like other cities of the Union, has been more than once visited by cholera.

In 1853 it experienced a slight visitation of yellow fever. The vessel, which was suspected by some persons to have imported the disease, had been kept in quarantine for three or four weeks.

BALTIMORE.

No record is kept of the number of vessels placed in quarantine.

The average number of vessels arriving from sea during the last six years has been 2,248 annually.

In 1858 the number of arrivals from abroad was 2,348, of which 600 were from foreign ports.

1854: Of 68 admissions into the lazaret or marine hospital—

31	-	-	were from	-	-	typhus and typhoid fever.
2	-	-	-	-	-	yellow fever.
18	-	-	-	-	-	varioid.
5	-	-	-	-	-	variola.
12	-	-	-	-	-	other diseases.

There were eight deaths in all.

1855: Of 156 admissions—

29	-	-	were from	-	-	typhus and typhoid.
100	-	-	-	-	-	varioid.
11	-	-	-	-	-	variola.
16	-	-	-	-	-	other diseases, destitution, &c.

1856: Of 99 admissions—

55	-	-	were from	-	-	varioid.
29	-	-	-	-	-	variola.
12	-	-	-	-	-	yellow fever.
1	-	-	-	-	-	typhus fever.
2	-	-	-	-	-	other diseases.

1857: Of 34 admissions—

13	-	-	were from	-	-	varioid.
3	-	-	-	-	-	variola.
4	-	-	-	-	-	yellow fever.
14	-	-	-	-	-	other diseases.

1858: Of 96 admissions—

62	-	-	were from	-	-	varioid.
23	-	-	-	-	-	variola.
6	-	-	-	-	-	yellow fever.
2	-	-	-	-	-	typhus fever.
3	-	-	-	-	-	other diseases.

The total number of cases treated was 458, and of deaths 53.

United States.

In 1852 one assistant physician and two nurses died from typhus fever, caught from sick emigrants. These are the only cases mentioned of the officials being affected with any of the diseases received into the hospital.

"In 1857 one of the boatmen belonging to the hospital died of yellow fever, caught from contact with cotton landed from an infected ship.

"There have always been instances, during the last 20 years, of cases of small-pox, typhoid fever, and nearly all of the diseases for which quarantine is liable to be imposed on vessels arriving in this port, occurring in the city to some degree. But during that period there has been but one instance in which any of these diseases can be considered to have visited the city in the epidemic form, and then but partially so, having not extended beyond a small district. This was in August 1854, when the yellow fever appeared about some of the wharves in the lower and least healthy part of the town. Its origin was not attributed to external infection, but to local causes, chiefly to decayed animal and vegetable rubbish thrown overboard from vessels lying at the wharves, and to the stirring up and exposing of the bottom of a foul basin, where the water had long been stagnant. By the prompt adoption of sanitary measures, the removal of filth, the free use of disinfectants, and by restricting as far as practicable the communication of the rest of the city with the infected district, the disease did not spread over a quarter of a mile from the point where it originated. On this occasion 50 persons were attacked, and 24 died.

"In the summer of 1855, when yellow fever raged with the greatest violence in most of the ports south of Baltimore, the ports to the north and east of Baltimore, without exception, established a most rigid quarantine upon arrivals from the south."

At Norfolk and Portsmouth (in Virginia), situated on opposite sides of the James River, 180 miles distant from this city, the fever raged most malignantly. The inhabitants first sought refuge by flight to the neighbouring towns and villages; but this was soon prevented by the people there, who turned out with arms, and drove them back to their own pest-stricken city. All communication both by rail and boat was cut off, and one mode alone remained, viz., by the daily line of steamers from Baltimore to Norfolk, and no impediment was offered by the authorities and people of this city to the arrival of the fugitives. Daily did the steamers convey provisions, medicines, clothing, coffins, &c., and daily did they return laden with fugitives. On arrival opposite the Marine Hospital, the steamers stopped until they were boarded by the health officer, who removed any case of fever that might exist on board, and then allowed her to proceed and land her passengers, &c. Several hundreds of these took up their quarters at once in the hotels of the city.

Some sickened with the fever shortly after landing. The number of deaths thus occurring was about 50. Not a single instance was known to have arisen from contagion, all being distinctly traced to those persons alone who had come to this city from the infected districts.

The utmost vigilance was employed all the while by the health authorities to thoroughly cleanse and purify the city, particularly all ship-yards, wharves, drains, cellars, &c.

RICHMOND.

There were 20 vessels put in quarantine from June to November 1857.

No particulars respecting the number of sick persons landed, or the cause of detention of the vessels, &c., have been received.

Respecting the yellow fever epidemics in Norfolk, the following particulars are taken from the printed report on the latest visitation there, in 1855.

The first recorded epidemic of the fever in this city was in 1795. For the next 10 years, 1804 alone excepted, there was a recurrence of the disease to a greater or less extent every summer. After 1815 it ceased to appear till 1821, and then there was another lull for five years, when it re-appeared in the same neighbourhood as in 1821.

During the long interval from 1826 to 1852 there was again a complete exemption from any visitation, notwithstanding the greatly increased trade with the West Indies and other southern countries, where yellow fever is endemic. The epidemic of 1852 was milder than those of 1821 and 1826, but considerably more diffused. In 1853 there was no case of fever in the town; but in 1854 two women died of the disease in October, and one in November. No connexion could be traced between these cases and any sick or infected vessels in the port.

In the following year by far the most malignant and fatal visitation took place, and fortunately of this an official report was made by a medical committee to the municipal authorities.

The earliest traceable case occurred, in the third week of June, on board a steamer which had arrived about a fortnight before from St. Thomas, and which, after being detained at the quarantine station for 11 days, was allowed to cross over to Gosport, on the opposite side of the river, for repair. All the passengers, 40 in number, had been landed on the arrival of the vessel, and dispersed themselves at once in various directions, some to Norfolk, others to Baltimore, and elsewhere. The patient, one of the crew, and who of course had been repeatedly ashore, must have sickened on board about the 16th or 18th of June; on the 21st he was taken to the Marine Hospital at Norfolk, and died on the following day with black vomit.

The next case seems to have occurred on the 23d or 24th in a woman living a mile and-a-half from where the steamer lay, and who had had no direct communication with her, or any on board. Cases of the disease had occurred in the same house in the epidemic of 1854.

Within a week from this time, six or seven persons were attacked on shore in the immediate

mediate neighbourhood of the ship-yard where the vessel was undergoing repair. Some of these persons had been working on board of her; but it does not appear that they sickened before the others, two of whom were women. The disease rapidly spread afterwards, and generally in low, undrained, and bad localities.

It did not appear in Norfolk until the middle of July, and then in a dirty row of buildings, which is described as a suitable nidus for any febrile miasm. They were ordered to be burnt to the ground, all the inhabitants, both sick and well, having been removed to sheds outside the city.

The epidemic continued in force till the middle of September, and then began to decline, ceasing altogether before the end of October.

The number of deaths was about 2,000, or one-fourth of the entire population that remained in the city.

The general conclusions as to the development and the diffusion of the pestilence at which the committee, with the exception of one out of the six members, arrived, were—

1. That it was introduced by the steamer from St. Thomas, and that there is no reason to believe that we should have been visited by the epidemic but for the arrival in our harbour of this, or some other vessel with the fever on board.

2. That the fever did not appear in any case to be communicated by (personal) contagion. In none of the great number of instances, in which persons from Norfolk died with this disease in other places, was the disease communicated.

CHARLESTON.

During the twelve months from November 1857 to November 1858, 98 vessels, out of an annual average of 350 foreign arrivals, were detained at the quarantine station before they were allowed to proceed up to the wharves. All the detentions occurred between the end of May and the beginning of October.

No particulars are given as to the length of the quarantines imposed.

The earliest arrivals which had had cases of yellow fever during the voyage, since leaving their port of departure, seem to have been at the beginning of August. Instances of the disease had occurred two or three weeks previously in a bad locality of the town.

No records have been kept of the number of persons detained in quarantine.

No cases of sickness have occurred among those who were sent to the lazaret well; nor "any instances," says the port physician, "within my personal knowledge, of the spreading of a disease from persons or from goods. Whenever yellow fever prevails in Charleston, attempts are made to trace it to the quarantine station, but they are by no means satisfactory."

"In the last 20 years there have been," says this gentleman, "seven epidemics of yellow fever, viz., in 1839, 1843, 1849, 1852, 1854, 1856, and 1858. It is impossible to give any correct information respecting the origin or development of the disease."

During the last 8 or 10 years these visitations have been more frequent and fatal than previously; that of 1858 was the worst of all.

A special committee of the city council investigated the history of this visitation, and the following particulars are derived from their printed report:—The first recognised case of the disease occurred on the 9th of July, in a policeman living in one of the worst localities of the town; within a few days two other inmates of the same house were attacked, and subsequently other cases occurred there, as well as in the immediate neighbourhood. On examination, the house was found to be so foul and unwholesome, that it was ordered by the authorities to be at once evacuated, and to be thoroughly cleansed and purified before re-occupation. Besides other causes of mischief in Thradd-street, where the house stood, "the filth and putrefaction in the continuous line of subterranean cesspools emitting the most offensive odours," are mentioned as "a very probable reason for the malignant typhus fevers which have prevailed in this section of the city for two or three years past in the winter and spring months, and yellow fever in summer."

Some persons supposed that the fever had been imported by a steamer which arrived from the Havannah on the 28th of June, chiefly because the second and third cases occurred in persons who had arrived by the vessel. There had been no sickness on board among the crew or passengers (40 in number) either during the voyage or afterwards. The steamer moreover had been detained, and subjected to the same quarantine treatment as many other vessels from the West Indies, before as well as after the occurrence.

The opinion of the committee was that the disease could not be traced to importation, but that it was of local development, favoured by the pestiferous condition of the locality where the first cases were observed.

The general death-rate in Charleston for 1858 was 1 in 26 of the population; the average for the 10 years from 1849 to 1859 was 1 in 35.8. In five of these 10 years, yellow fever prevailed more or less epidemically.

SAVANNAH.

No records are kept of the vessels put into quarantine, or of the number of persons received into the Marine Hospital.

"Yellow fever appeared in the years 1820-1825, 1854, and 1858. In 1854 it commenced in the early part of July, and in 1858 in the early part of September.

United States.

"In some of these instances it made its appearance before the arrival of any vessel from a suspected port, and in others after the arrival of vessels with cases on board."

MOBILE.

No record is kept at this port of quarantine operations.

No accurate record is kept of persons admitted into the Marine Hospital. From 15 to 20 patients are admitted during the winter season; in summer it is closed.

In 1855 one or two of the crew of the British ship "Portland" died either on board their ship, or in the hospital, from visiting a ship with yellow fever on board. It did not spread.

"No disease has been contracted from ships in the bay by citizens of the nearest places.

"The only disease prevalent here is yellow fever, which commences late in July or early in August, and lasts until October: it is not recorded to have ever extended to the shipping in the bay."

NEW ORLEANS.

In 1858 the total number of vessels detained was 38; three on account of small-pox during the voyage; eight for yellow fever, and five for typhus fever on board. There was no sickness in the other vessels, but they were detained in consequence of the precautionary proclamation in force during the summer months to guard against the importation of yellow fever.

"I have not been able," writes the Consul, "to ascertain the number of persons received into the lazaret for the last three or five years.

"No diseases have originated in the lazaret. No deaths have occurred among the officials of the quarantine establishment since its commencement; but I cannot obtain the number of deaths among the persons received into it.

"No instances of the spreading of a disease have occurred.

"Most of the diseases for which quarantine is liable to be imposed have occurred at this port. Yellow fever has committed great ravages here since the establishment of quarantine (1855). Small-pox, bilious, and intermittents have also been prevalent at certain periods."

The medical faculty here are so divided as to the origin or development of yellow fever, that it would be quite impossible to arrive at any correct conclusion on the subject. The earliest cases of yellow fever have been about the 6th or 7th of May; but, of late years, the first recorded cases have been as late as the middle of June or July.

From the month of June to November in 1853, the mortality was between 12,000 and 13,000, out of an estimated population of 120,000. Yellow fever has prevailed since during the summer months to a very considerable extent.

The average number of vessels arriving at this port during the last five years is 2,041.

GULF OF MEXICO AND WEST INDIES.

TAMPICO.

Gulf of Mexico
and West Indies.

"No foul bills of health have been given by the authorities here during the last 10 years, to my recollection," says Mr. Consul Cumberlege, "nor has this place, or its neighbourhood, been visited in that period by any other epidemic than the ordinary fever and ague, and occasional instances of brain fever and dysentery, caused by the great and sudden changes of temperature, and the marshes and stagnant lakes which surround the town. In the rainy season, the dwellings of the lower classes are flooded; no sewerage or drainage; hence such diseases as fever and ague.

"One or two cases of yellow fever have been brought here by the packets; but the disease has never yet located itself at Tampico, notwithstanding its proximity to Vera Cruz, where the yellow fever rages all the year round."

Cholera raged with great violence in various parts of Mexico in 1833, before it reached Cuba in that year. The loss of life in the summer of that year at Tampico was frightful; more than half the population of the place is supposed to have perished from the visitation.

Mr. Consul General Crawford (Havanna) stated to Dr. Milroy, in 1851, that the disease had again visited Tampico within the previous year or two.

VERA CRUZ.

"During the 26 years that I have been Her Majesty's Consul here," says Mr. Consul Giffard, "more than 100 of Her Majesty's ships of war have visited the port: and I believe I am within the mark when I say that less than 25 of the crews have succumbed to the local fever, called the yellow fever or black vomit, during that period. The city is remarkably

ably clean, and, with the exception of the local fever mentioned, and to which every arriving foreigner is subject, the place is generally healthy."

Cholera prevailed in the city of Mexico and in other towns of the interior in the summer of 1850, as well as at Vera Cruz.

There was small-pox at Vera Cruz in the spring of 1853.

Gulf of Mexico
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PUERTO CABELLO.

In 1843 an epidemic of small-pox, which carried off 600 out of a population of from 8,000 to 9,000, prevailed. It was believed to have been introduced by a vessel from St. Thomas, with a case of the disease on board. The disease extended to the adjoining province of Caraccas, where also many died. The capital town, Valentia, did not suffer. A cordon was placed between that city and Puerto Cabello, and continued with great strictness for two months, during which time all the population of Valentia, amounting to 20,000 persons, were vaccinated.

To these two precautions was attributed the escape of the city.

In 1853 yellow fever existed, supposed to be brought by a Danish ship of war from Santa Cruz. The disease has continued here with more or less malignity ever since, although during the last three years it has been occasionally absent for a short time. For many years previous to 1853 only a few sporadic cases of yellow fever, but not fatal, had been observed in Puerto Cabello.

In a despatch from Consul Kortright, dated Carthagena, February 1853, in reply to instructions from the Foreign Office not to send British subjects in distress on board of the Royal Mail steamers bound homewards, states, "The cases of yellow fever at this port have been exclusively confined to persons landed from the Royal Mail Steam Packet Company's ships, and have in no way affected the health of the town."

"On a late occasion, at the urgent request of Captain Wilson, 10 men and two officers of the Royal Mail Steam Packet 'Dee,' were landed here, suffering severely from yellow fever; and as quarantine regulations formerly in force at this port had been rescinded, owing to the report of the Board of Health of Great Britain, there was no obstacle to their being landed and placed in the general hospital; and I have the satisfaction to report that, with the exception of two already in the last stage of black vomit, I sent the whole, including the two officers, on board their ship convalescent, and without the disease in any way affecting the general health of the town."

"From the result of this case, and several others that have come under my notice, I should not hesitate to say that instant removal from the contaminated ship to an elevated and airy situation is the only safe means to insure the lives of all on board when this disease once takes possession of a ship."

"It is the opinion of the medical men in attendance on board the 'Dee,' and concurred in by the captain and the men themselves, that had they not been landed at Carthagena, it is probable that few, if any, of the ship's company would have been saved."

Cholera prevailed at Bogota and along the course of the River Magdalena in the summer of 1850.

BOLIVAR.

No register is kept of the vessels put in quarantine; "but to my knowledge," says Consul Matheron, "two sloops, from Trinidad, suffered 40 days' quarantine in 1841, from having two cases of small-pox on board during the voyage."

"In 1851 a schooner and sloop from Demerara were kept 10 days as coming from a place infected with yellow fever, although it is notorious that the whole borders of the River Orinoco are almost yearly visited with fever and black vomit, between the months of September and December."

"Yellow fever was known here for the first time in 1817, when the men forming the British legion came here; some hundreds died of that disease."

"In October 1836 it again appeared, and also in September 1851; since then it may be said to have become endemic every year between September and December. It is not believed by the resident medical men here to be contagious, but to be produced by limited streams of miasms floating in the air."

"In November 1855 the cholera existed, and was believed to have been brought from Caraccas. The disease raged in the interior."

"Small-pox has frequently visited this country, and always from the interior."

SURINAM.

During the five years 1854 to 1858, 20 vessels were quarantined. Of this number, eight were for small-pox having been on board during the voyage, or existing in the port of departure; seven because yellow fever, and five because the cholera, prevailed in the port of departure.

In the case of small-pox and yellow fever, the detention was generally for 14 days, and in the case of the cholera (at Demerara) for 40 days before free pratique was granted.

With the exception of three instances, in which there had been two or three cases of

Gulf of Mexico
and West Indies.

small-pox on board, all the other vessels had been quite free from sickness during the voyage, and continued so during their detention.

Consul Munro says, "A common belief exists here that yellow fever is generally imported; still it is very doubtful, as it often prevails when its introduction is unaccountable."

The annual number of vessels arriving from abroad and the neighbouring colonies is about 200.

The port of Nickerie is in some seasons more unhealthy than that of Paramaribo, especially up the river, opposite the plantations, where crews of vessels are often attacked with bilious typhus fever. Their hammocks should be provided with mosquito nettings, to prevent the annoyance and loss of necessary rest to the men, especially during the rainy season.

CURAÇOA.

"In Venezuela and in the neighbouring islands several of the diseases, such as small-pox, cholera, measles, yellow fever, &c., have occurred during the last 10 years. A few cases of small-pox have occurred in this island during that period, by the arrival of an infected vessel from Jamaica. The disease was, however, soon frustrated by sequestration.

"The yellow fever broke out in 1852, two months after the departure of a Danish vessel of war, which arrived here with a considerable number of the crew sick with the disease."

ST. THOMAS.

From August 1852 to August 1853, 242 persons died at St. Thomas of yellow fever, all being foreigners and whites.

"Cholera commenced on the 13th of December 1853, suddenly, on an estate surrounded by high hills towards the east, south, and west, but open to the Atlantic towards the north-west. From that date to the end of the year, 302 persons died of it in the town of Charlotte Amelia. During January 1854 the deaths were 1,097; during February, 123; and in March, up to the 15th, when the disease ceased, the deaths were only 12.

"In the country 464 deaths occurred. The total number was 2,000, out of a population of 11,000.

"Among the deaths, 10 only occurred among white persons, and these were previously in feeble health.

"In July, August, and September 1856, 191 deaths occurred from cholera, which commenced suddenly in the north-west part of the town; all the victims were coloured, except one man, who attended the patients, and was a drunkard."

A gentleman, well acquainted with the West India Islands, has recently stated, in a letter to the "Times," that "During the last 10 years the Island of St. Thomas has been the seat of the most persistent and most fatal outbursts of yellow fever that has been ever known in the present or in the last century. Scarcely a year has passed over without some terrible mortality among the shipping which resort to that port, and every season the state of things is becoming worse. The epidemic of last summer was most destructively fatal there; nor is the mischief confined to the island itself, but is being continually conveyed to other places by shipping.

The cause of the increased and increasing sickness of the harbour is notorious, and does not admit of a doubt. From the enormously enlarged traffic, more especially in connexion with the coaling of the numerous West India steamers that are almost daily touching there, the amount of pollution that is constantly finding its way into the waters of this land-locked nearly tideless harbour, not to mention other accumulations of filth and ordure near the wharves, is inconceivable.

Quarantine restrictions, as well as sanitary regulations, are ignored by the authorities of the island when an outbreak of yellow fever prevails; but against cholera and small-pox, the most strict and vexatious quarantine is maintained. On granting the bills of health, the form adopted by the authorities is word for word, 'that no plague, epidemic cholera, nor dangerous or contagious disorder exists in this island;' but when ships from St. Thomas proceed to the island of Santa Cruz, 40 miles to the southward, and the seat of the Danish government in the West Indies, quarantine is imposed upon them; and so severe was this in 1857, that vessels from St. Thomas were actually refused admission. The reason of such inconsistency is obvious; quarantine at St. Thomas for yellow fever would put an end to its commerce."

CUBA and PUERTO RICO.

During the last five years, no vessels have been quarantined at Havannah.

At Puerto Rico, in 1856, 10 vessels were quarantined; in 1857, 8 vessels; and in 1858, 8 vessels: in all, 26. In the majority of instances the quarantine was only nominal, not exceeding 24 hours. In four cases of vessels from St. Thomas and Havannah the detention was for five days, and in two cases only of vessels from Hamburg it was for 10 days. No particulars are given. The bills of health were generally suspected; in a few instances only it was foul.

Of recent years, no instance has been known of the spreading of a disease from the quarantine ground or lazaret. Consul General Crawford says, "Havannah is never entirely free from small-pox and typhoid fevers. The cholera was very prevalent in 1852, and committed great ravages, chiefly among the negroes. Yellow fever prevails all the year round; but this disease does not subject vessels to quarantine. The worst period is from

April

April to October. The diseases most prevalent here are small-pox, yellow fever, dysentery, and typhoid fevers. The most destructive among the shipping is yellow fever."

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and West Indies.

In the summer of 1852, small-pox and yellow fever prevailed to a very fatal extent along with cholera.

Cuba was attacked by the cholera at a much earlier date than any other of the West India islands, and in few countries has the pestilence prevailed more frequently and more destructively from the first visitation in 1833-34. In the early part of 1850 it re-appeared, and spread extensively over many districts; since that year it has rarely been for any considerable period entirely out of the island. The ravages among the negroes have on various occasions been reported as frightful. The town of St. Jago de Cuba experienced its first and only visitation in 1852, between the months of September and November. In Puerto Rico, "cholera appeared for the first time in the latter part of 1855, and prevailed up to the 2d of January 1857, carrying off 25,820 persons out of an estimated population of half a million.

"About the middle of 1856, small-pox made its appearance; and although it attacked a large number of persons, it was generally mild. No data have been prepared.

"No authentic particulars have been preserved respecting the origin and development of these diseases.

"Yellow fever has constantly appeared in sporadic cases among foreigners lately arrived, and epidemically along with the diseases referred to in 1856. Whenever fresh bodies of troops arrive from Spain to relieve the garrison, yellow fever almost invariably appears, and often spreads among the other foreigners in the town.

"There is no evidence on record as to the importation into Puerto Rico of any disease for which quarantine is usually imposed."

The average annual number of vessels arriving from abroad, exclusive of the coasting trade, is about 1,400.*

ST. DOMINGO.

In a valuable paper appended to Consul Usher's replies, Dr. Smith, long resident in the island, states, that in March 1843 the small-pox was introduced into Port au Prince by an American brig, two of whose crew had the disease on arrival. They were taken on shore, where one died. Five or six weeks after the death, isolated cases appeared in different parts of the town. The vessel had in the meanwhile been chartered by the Haytian Government to convey troops, &c. to another part of the island, and there the disease broke out epidemically soon afterwards. It spread throughout the island, causing desolation everywhere; nor did it entirely cease till the end of 1845. The mortality was very great, but no returns were made. Vaccination was not general.

Again, in March 1857 small-pox was introduced by a vessel from New York. The circumstances in most respects were nearly the same as on the former occasion. From the neighbourhood of Port au Prince, where it first appeared, the disease spread across the country to the north side of the island. It had not disappeared altogether in the autumn of 1859. No estimate can be formed of the ravages committed throughout the island.

Dr. Smith bears testimony to the inestimable advantages of vaccination, which, although not an infallible preservation against the poison of small-pox, invariably exercises a great modifying power on the disease when it occurs in vaccinated persons: "Three cases of variola occurred among vaccinated persons (in Port au Prince) during the first epidemic, and five cases very recently in 1857. The first cases were vaccinated by myself in 1833, when they were between two and three years' old; the latter cases had been vaccinated between 1844 and 1845. In all these persons the pustules were distinct, and the disease unaccompanied with any typhoid symptoms."

Dr. Smith gives some interesting details respecting the epidemic of yellow fever at Port au Prince, which began towards the end of 1855, and continued during 1856 when H. M. ships "Malacca" and "Argus," and two French ships of war, were seriously affected.

In 1857, the number of vessels which entered the port from foreign countries was 214, the tonnage of which amounted to 39,656 tons.

In 1858 there were 157 arrivals, and 76 arrivals from the 1st of January to the 13th July of 1859.

Of the vessels that enter this port, the French and German are, according to Dr. Smith, generally more cleanly, and of a better class than those under British and American flags. The French and German sailors also are, on the whole, more cleanly, and less intemperate than the British and Americans. British vessels frequenting Port au Prince are, with rare exceptions, very filthy and hygienically bad in respect of their internal sanitary arrangements. The forecastles where the men are lodged are generally unwholesome, while the bedding, &c., are dirty and unaired. Reckless as well as intemperate in their habits, the men are often exposed to the sun and rain in landing and shipping the cargo, and then they resort to the immoderate use of the cheap ardent spirit of the country to keep up their strength, or to ward off, as they imagine, attacks of the indigenous fever.

The

* Dr. Murphy, who had resided since 1849 in Puerto Rico, informed Dr. Milroy, in the end of 1851, that the island had up to that date remained quite free from Asiatic cholera, although no quarantine had been imposed at any time on arrivals either from Cuba (these are but few), or from the United States, with which the communication is very extensive.

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and West Indies.

The too common practice of masters of vessels taking upon themselves to drug their men on the onset of sickness, often with drastic and irritating medicines, before applying for medical advice, is much to be deprecated. Men after having been seriously ill for several days without professional assistance have, when danger was apprehended, been taken to the hospital in the day, and have died on the following night. "In many cases, a medical man is resorted to only when it is feared that death may occur on board, in which event, according to the law, the ship would be liable to a penalty of 500 dollars." Instances have occurred in his experience of vessels losing half their crew from sickness, and the other half by desertion, while in the harbour.

B R A Z I L.

RIO JANEIRO.

Brazil.

BETWEEN June 1856 and September 1859 only 13 vessels in all have been put in quarantine, three in the last half of 1856, four during 1857, and six during 1858. The longest detention was for 96 hours, in the case of a vessel from Lisbon in December 1857, with a foul bill in consequence of yellow fever in that city. Generally it did not exceed 48 hours, and sometimes it was shorter still. One-half of the vessels had foul bills, and they were all from Lisbon, the voyage therefrom varying from 33 to 49 days.

In one instance a vessel which left Rio in June 1856 with a clean bill had to put back after having been 10 days at sea, in consequence of yellow fever having appeared on board during the voyage. The sick were removed to the hospital on shore, and the vessel was liberated after 24 hours' detention.

In 1836 an epidemic of typhus was brought here by a vessel which arrived from the Canary Islands on the 28th of May, with 500 emigrants on board, suffering from scurvy, diarrhoea, and fever. She had been 62 days at sea.

The fever spread to two old ships of war, both in the harbour, between which and the infected vessel free communication existed. "It did not extend to Rio at this time as an epidemic," says Dr. Macleod of H. M. Ship "Madagascar," "but cases of typhus have now and then occurred in and about the city since 1836." It appears to have been considered a new disease in Rio.

Scarlatina existed in Rio from September 1837 to April 1838.

In 1841 a fever much resembling the above-mentioned typhus appeared from September to December among the troops stationed at St. Catharine's, and by them was brought to Rio. It did not spread much, being confined chiefly to the military.

Another epidemic of scarlatina appeared in 1842, and continued till October 1843, and proved very fatal.

From 1846 to 1848, what was called a rheumatic eruptive fever prevailed not only at Rio, but also at Bahia, and Pernambuco in the north, and in some of the southern provinces of the kingdom likewise. Dr. Macleod identifies it with the scarlatina rheumatica of Dr. Copland.

In June 1849, scarlatina reappeared and prevailed as an epidemic till the end of the year, or beginning of the following one. The type of the fever was low typhus. This appears to have been the character of most febrile affections since 1836. All depletory remedies had been found inadmissible.

In November 1850 rubeola prevailed in Rio.

Towards the end of the year 1849 the yellow fever for the first time appeared in Rio. Its appearance was preceded by an anomalous state of the public health. Whether the earliest cases of this disease appeared in Rio or at Bahia, or whether the pestilence manifested itself in both places about the same time, it seems impossible to determine. The nature of the fever seems not to have been recognised until several fatal cases had occurred.

The deaths in the city from the commencement of the pestilence till September 1850, when the epidemic ceased, amounted to 4,000.

It was stated that the mortality had been quite as great in Bahia and also in Pernambuco.

French Guiana also suffered fearfully from the disease about the same time.

The disease has continued to prevail in Rio with more or less virulence almost every year ever since its first appearance. In some seasons the shipping have suffered most, in other seasons the city. Many of the suburbs have remained exempt, although in unrestricted communication with the town, no cases having occurred except in persons who brought the disease with them. In the spring of 1858 the mortality among the English shipping was very great, upwards of 600 deaths having, it has been stated, taken place between the months of February and May. In previous years also, great numbers of our merchant seamen perished.

The sanitary state of the town, and of the shore of the harbour, is notoriously very bad.

The first outbreak of cholera in Rio appears to have commenced in July 1855. There had been some suspected cases of cholera at the close of 1854 and beginning of 1855; but they did not seem to have affected the general public health, which continued to be most favourable till the month of July.

It appears that, in the latter part of May, several deaths had occurred at Para of what was believed to be Asiatic cholera, and also on board a vessel which left that place in the same month and went to Bethlem. The disease seemed to proceed chiefly from north to south. In August, September, and October, it was particularly prevalent at Rio Janeiro.

About six weeks after the arrival, in October 1855, at Rio Grande do Sul of a steamer from Rio Janeiro, the first case of the cholera occurred at the former port, or rather in a neighbouring district, where it rapidly spread to other localities in the province, and afterwards to the city of Rio Grande. The general opinion among the residents was that the disease manifested itself in this province quite independently of the arrival of vessels from Rio Janeiro or other ports in the north. The small town of San José do Norte, close to which the above-mentioned steamer from Rio Janeiro disembarked her passengers into a temporary shed, was among the very few places in the province which escaped the pestilence. Neither did the disease spread to St. Catherine's, where the same steamer had landed several cholera patients on her way to Rio Grande, until the month of March in 1856.

Respecting the sanitary condition of the merchant shipping frequenting Rio Janeiro, Dr. Macleod, says, "I am informed by the bonding officer that the ships in general are dirty, little attention being paid to the comforts of the men. All that the owners care about is to provide room for the cargo and passengers if they carry such."

"All the ships coming from the Azores with emigrants, both crews and passengers, have scurvy, low fever, and ophthalmia; about one-third of them afflicted with scurvy, and three per cent. with ophthalmia. The vessels are dirty, and badly found in provisions, many of the unfortunate emigrants too not having any clothes except what are on their backs."

"The average annual number of ships arriving at Rio during the last five years, amounts to 1,105."

"During the year 1857, there were sent to the St. Isabel Hospital from the merchant shipping 2,204 cases of yellow fever. Of these, 400 were fatal."

"In 1858, the number of cases sent amounted to 2,721, and of deaths to 455."

MARANHAM.

Although the cholera was very prevalent in Para in the latter months of 1855 and also in 1856, it never manifested itself in this place, notwithstanding that the quarantine restrictions between the two ports were most loosely observed, and the most glaring infractions of the regulations occurred.

"In 1851, in spite of the quarantine precautions then taken, the yellow fever became universally prevalent in the town. It did not spread from centres, but instantaneously attacked, so to speak, a great number of people in various quarters of the city, proving mild in the natives and in foreigners acclimatised by long residence, but very fatal to recent arrivals."

ST. CATHERINE'S.

During the last nine years, the vessels quarantined have been, in March 1850, a pilot-boat from Rio Janeiro; in April 1851, a vessel from Santos; in January 1853, a vessel from Paranagua; all for yellow fever.

From October 1855 to February 1856, the steam packets, and some sailing vessels, coming from Rio Janeiro were not allowed to communicate with the shore, on account of that port being infected with cholera, and some of them having the disease on board. From March 1856 to the present time, no vessel has been put in quarantine.

In January 1853, the crew of the Hamburg vessel from Paranagua were landed on the island lazaret (some leagues from the town), four or five being ill with yellow fever, and the rest slightly affected. On the 2d of February they had all recovered. From the 16th October to the end of November 1855, 55 persons were attacked with cholera, coming from Rio Janeiro in the Brazilian steamer "Impératrice;" they were received into the lazaret; 19 died; 18 in the first six days, and one on the 10th of November.

No instance of the spreading of disease to the official or other inmates of the lazaret has been known to occur.

Mr. Consul Callandar adds the following particulars respecting the prevailing epidemics of the province.

In 1841 an epidemic cerebral fever appeared in the town; it was imported by soldiers from the northern provinces who landed here. After attacking the soldiers, it spread among the population; it lasted four months.

In 1845 a fever, vulgarly called "polka fever," was introduced from Rio Janeiro. It attacked the greater number of the population, without causing much mortality.

In 1848 an epidemic dysentery, also imported by soldiers from the north, destroyed many persons, generally of the poorer class, who resided in close and unwholesome dwellings, and had not the means of procuring proper treatment.

In 1850 the bloody-flux, which appears every year with more or less intensity, made great havoc; two-thirds, and more, of the fatal cases are among children of 12 years and under.

In March 1850 yellow fever appeared for the first time in this province, imported from Rio Janeiro.

In 1851, 1852, and 1853, the yellow fever appeared in various parts of the province.

In 1851 the bloody-flux became milder, except in one parish.

Brazil.

Small-pox was imported by a slaver from the Coast of Africa, and augmented by soldiers arriving from Rio Janeiro.

In September of this year, scarlet fever was imported from Rio Grande do Sul.

In 1852 were many cases of bloody-flux, but generally mild.

In 1853, from September to March 1854, the small-pox raged severely at Lages (a village in the interior), and 35 persons died.

In 1854 small-pox appeared in another parish, and caused several deaths.

In 1855-6 the cholera was imported.

In August of 1856 the hooping-cough appeared in the town, and spread through all the provinces.

In 1857 small-pox caused several deaths in Desterro and San José.

For about two months past, measles and croup have prevailed, and several children have died.

MONTE VIDEO.

Monte Video.

No register is kept of vessels put in quarantine. Almost all vessels which have been put in quarantine have arrived from Rio Janeiro, the average voyage from which by steamer is five days, by sailing vessels, is 15 days. No register is kept of the number of persons received into the lazaret. "I suppose the greatest number of inmates at any one time may have been from 90 to 100."

"During the 12 years that quarantine has occasionally been enforced here, nothing that can be called disease has existed among the persons received."

"During that time there has been only one death, about three months ago, and that was from apoplexy."

"During the last 20 years," adds our consul, "only two instances have occurred of the outbreak of diseases against which quarantine is imposed."

In 1842 typhus fever broke out among the inhabitants of the town, but in a mild form. There had been a great emigration from Europe about the time, and the population were, in consequence, more than usually crowded.

In 1857 Monte Video was visited for the first time by yellow fever. The disease was not much noticed till the beginning of March, when the cases began to increase rapidly, and the medical men to be of opinion that it was decided yellow fever. The fever lasted from the middle of February to the end of May. The deaths were about 1,800 out of a population which is usually from 25,000 to 30,000, but, from the vast numbers that had fled, could not then have exceeded 8,000. Many persons who left the town with the disease upon them died in the country among their friends; but in no instance did the disease spread. There was only one fatal case on board the shipping, and this was in the surgeon of Her Majesty's ship 'Rifleman,' who had been constantly on shore, even passing the night there.

Respecting the development of the fever, Mr. Wade, surgeon of Her Majesty's ship 'Leopard,' says, in a communication to Sir J. Liddell, "By some its introduction was attributed to the mail steamer 'Prince,' which arrived from Rio Janeiro on the 1st March, having had several cases of yellow fever on board, but which on her arrival were stated to be convalescent. The passengers for Monte Video were landed at Rat Island, and there underwent three days' quarantine, and the steamer proceeded to Buenos Ayres. Fresh cases occurred on board the steamer there; but, before this intelligence reached Monte Video, the passengers had received pratique, and a few days afterwards the disease began to spread in the town. On the other hand, cases of yellow fever are said to have occurred in the previous month (February), and to these a local origin has been attributed. The part of the town where they occurred is close to the beach, and occupied chiefly by boatmen and others connected with the landing of cargoes. Even at the present time, although said to be much improved, it is a most filthy part; heaps of mud with ordure and all kinds of filth are here deposited, and an unfinished sewer pours its contents into the sand immediately in front of the houses. It was here that the disease was most fatal. It does not seem that the disease extended beyond the town, although communication with the surrounding country was maintained as previously."

Our consul expresses his conviction that the disease was not imported by the steamer from Janeiro, cases of it having occurred previous to her arrival.

Alluding to the generally healthy state of ships' crews at Monte Video, he says, "Even those arrivals with disease on board—as yellow fever, small-pox, typhus fever, and scurvy—rapidly get rid of it. Once here, the crews are generally healthy. Abundance of fresh meat of excellent quality, vegetables, and good water, can be obtained at very moderate charges."

PARAGUAY.

About 170 vessels arrive annually at Assumption, where all the foreign trade of the country is centered.

Small-pox is the only quarantined disease which has appeared here, at intervals, with more or less intensity.

C H I L I.

VALPARAISO.

No case of a vessel being quarantined has occurred during the last five years. "Fifteen years ago," says Dr. Ancram, R. N., "three vessels from Guayaquil, with bad yellow fever on board, arrived here; they were sent to the port of Quintero, 20 miles distant, and kept there for 40 days.

"Ten years ago Her Majesty's ship 'Calypso,' from Manganillo in Mexico, was refused pratique in consequence of having yellow fever on board.

"These are the only two cases of quarantine having been exercised here during the last 15 years, that I can hear of.

"I have known several instances of vessels arriving at Valparaiso with cases of yellow fever on board, and where the patients were permitted to be landed, and treated on shore. No instance has hitherto occurred of disease having spread to other persons."

Chili.

COQUIMBO.

"During a residence of 33 years no infectious disease has made its appearance, with the exception of occasional cases of small-pox, for which a lazaret has been provided near the town."

Respecting the sanitary state of merchant vessels and their crews little exact information is given in any of the replies, except in three or four instances, where the evidence strictly coincides with the observations of Professor Bo, of Genoa.

Consul Bowman at San Francisco says—"The accommodation on board ships, especially British, might be greatly improved. In this particular the Americans are far before us, for while their seamen are generally provided with roomy, dry, and airy accommodation in houses on deck, our sailors are placed in the fore-castle below, where there is little light or fresh air, and always more or less damp. I attribute to this cause, as well as to an insufficiency of warm clothing, the number of English seamen arriving here suffering from rheumatism and diseases of the chest and lungs."

Consul Foote of Salvador also writes:—"The seamen of English vessels expose themselves more to the sun, take fewer precautions, and are neither so cleanly in person, nor so judiciously provisioned as those of other nations, more particularly the French, who have lately sent vessels to this coast which are perfect models of cleanliness.

"The two last which entered, the 'Natalie' and the 'Télégraphe,' had condensers attached to their large commodious cooking stoves, whereby the fuel required for cooking served also to distil from sea water about 60 gallons of fresh water daily.

"The provisions were excellent, including preserved vegetables and meats of every variety, so that the men had a change every day. Fresh bread was baked daily, and it was exceedingly good."

Consul Foote attributes to the intemperate indulgence in the native rum or aguardiente, in a great measure, the low state of our merchant seamen, and this is aggravated by the want of comfort in their accommodation on board.

QUARANTINE IN BRITISH COLONIES.

ABSTRACTS of REGULATIONS in Force in BRITISH COLONIES respecting QUARANTINE, and the RESULTS of QUARANTINE in these COLONIES.

Sir,

3, Waterloo-place, S. W., 10 August 1860.

I HAVE the honour to forward, in the name of the Sub-committee on Quarantine of the National Association for the Promotion of Social Science, for the consideration of the Lords of the Committee of the Privy Council for Trade, the accompanying two abstracts relating to the quarantine regulations in force in different British Colonies, and to the results of quarantine in these Colonies.

The Secretary
of the Board of Trade.

I have, &c.
(signed) *Gavin Milroy, M.D.*,
Honorary Secretary.

PART I.

ABSTRACT of REGULATIONS in force in BRITISH COLONIES respecting QUARANTINE.

Heligoland.	Port Adelaide.	Barbadoes.
Ionian Islands.	Western Australia.	St. Lucia.
Malta.	New Zealand.	Antigua.
Gibraltar.	Ceylon.	Nevis.
Gambia.	Hong Kong.	Dominica.
Sierra Leone.	Labuan.	Montserrat.
Cape Coast Castle.	Nova Scotia.	Tobago.
St. Helena.	Canada.	Trinidad.
Cape of Good Hope.	Bermuda.	Grenada.
Port Natal.	Bahamas.	Guiana.
Mauritius.	Virgin Islands.	Honduras.
Sydney.	St. Kitt's.	Bay Islands.
Melbourne.	Jamaica.	Falkland Islands.

PREPARED by the Sub-committee on Quarantine of the National Association for the
Promotion of Social Science. May 1860.

HELIGOLAND.

Heligoland.

THE quarantine laws, which are still binding, are those published by the Danish Government in March 15th, 1805, for the Duchies of Schleswig and Holstein, although the island has been in the possession of Great Britain since September 1807.

An extract from these old laws is still read once a year from the pulpit by the officiating minister, and the patents of the pilots contain a short notice, reminding them to respect these laws. They relate almost exclusively to the risk of the plague and plaguelike diseases. Pilots are not to touch things of metal or paper from an infected vessel, without the former having been first washed in salt water, and the latter moistened with vinegar, and then pierced and fumigated. Letters are directed to be delivered in a tin case tied with a cord, which cord is to be washed with salt water before the pilot touches it.

Help and assistance must be rendered to all people in distress from shipwreck; but after they have been saved, they must strip off their clothes and wash their bodies all over with salt water.

When a suspicious vessel has been wrecked, no part of the cargo or goods floating about is to be saved, before the authorities have given permission to that effect.

Anything plague-infected floated on shore is to be burned without being touched by human hands.

All persons who assist at the burial of any one who has died of plaguelike diseases, are to be put in quarantine of from 4 to 14 days; but their clothes need not be burned.

In

In 1831, when the cholera was considered absolutely contagious, Heligolander as well as foreign vessels coming from an infected port were placed under a quarantine of from four to eight days. And if any person was to sicken of the small-pox at the present time, his house would be strictly watched by the police to prevent communication.

Heligoland.

IONIAN ISLANDS.

CORFU.

THE Director General of the General Health Office states, that "all arrivals from places where perfect health is generally enjoyed, and when furnished with clean bills of health, are always admitted to pratique;" and that the diseases which render all arrivals, without exception, whether sick or well, from a place or country where such diseases are existing at the time of departure, subject to quarantine, are "plague, cholera, yellow fever, smallpox, typhus fever, leprosy, &c."

Ionian Islands.

The quarantine varies from five to 28 days. If "the above-named maladies and others of a suspected nature" occur on board a vessel during the voyage, quarantine, varying according to circumstances, is imposed.

No difference in the period of quarantine imposed is made when a medical officer is on board the vessel. "To ships of war the days of voyage are calculated in the period of quarantine; and in the event of the arrival of royal personages, &c. a few days' grace has been sometimes granted."

When the cessation of a disease in the port of departure has been officially certified, "the arrivals from such place are admitted to free pratique after a medical visit, a few days after the total disappearance of any sickness of a contagious nature, and in consideration of vessels having been furnished with a clean bill of health by the local authorities."

"The lazaret is on a separate island, $2\frac{1}{2}$ miles N. W. from the town, furnished with a cistern of good water and a church. Its buildings offer sufficient accommodation for passengers and expurgation of susceptible goods."

Articles deemed susceptible are those "composed of the following materials, viz., wool, leather, linen, hemp, cotton, raw silk, paper, &c. These are handled and ventilated daily at the lazaretto during the period of their quarantine by expurgators sent from the town, under the superintendence of a sanitary guardian."

When sickness occurs on board a vessel in quarantine, "the proto-medico and assistant proto-medico are bound to render medical assistance in their capacity of public medical officers, for which they receive a yearly salary from the Government."

Previous to the granting of pratique, the vessel is visited by a medical officer, and "the sanitary guardian has orders to ventilate and handle daily the wearing apparel and bedding of the crew and passengers, as well as to cleanse and fumigate the vessel."

No sanitary inspection of a vessel is ever made before the granting of a clean bill of health.

"Since the year 1816, when the plague broke out in the district of Lefchimo,* in Corfu, and which was prevented from spreading by sanitary cordons having been formed and other measures taken, no malady of a similar nature has manifested itself in these Isles."

Besides the lazaret at Corfu, the other Ionian Islands are provided with similar establishments. "The accommodations in all of them are sufficiently good and commodious for the few passengers who consummate their quarantine in the smaller islands."

Some of these lazarets have been at times described by travellers as utterly unfit for the purpose.

MALTA.

THE regulations for the performance of quarantine at Malta are dated October 1820.

Malta.

The most recent enactment on the subject is an Ordinance of the Governor in January 1857, wherein it is appointed that, "The head of the Civil Government, having heard the opinion of the Board of Health, by permanent sanitary regulations, or by orders issued for the occasion, determines the time when quarantine or any other sanitary measure is to be imposed on vessels, persons, merchandize, or other things, the place in which the quarantine must be observed, the restrictions necessary to ensure the object of the quarantine, the period during which the quarantine is to run, and the conditions to be observed for admission to pratique."

Severe

* This district has been described by Dr. John Davy as wretchedly unwholesome. The disease appears to have been a most malignant fever generated on the spot. *Notes and Observations on the Ionian Islands and Malta, with some remarks on Constantinople and Turkey, and on the system of Quarantine as at present conducted.* 2 vols. 1842.

Malta.

Severe penalties are affixed to breaches of the regulations, including imprisonment with hard labour from six months to nine years, according to the cause or disease for which the quarantine was imposed.

The diseases which render all arrivals without exception from an infected port, whether the arrivals be sick or well, subject to quarantine are plague, yellow fever, and the cholera;—of 21 days for the plague, and of 5 days for the yellow fever and the cholera.

There is no country now subject to a permanent quarantine, all arrivals carrying a clean bill of health being admitted to free pratique. Repeated complaints were formerly made by our ships of war of the long and vexatious quarantines imposed on arriving from all ports in the Levant, and the serious inconveniences to the public service in consequence; and lengthened diplomatic correspondence has on several occasions ensued, as in the case of Admiral Stopford in 1838.

In 1838, the quarantines imposed on men-of-war from these ports were 15 days with clean bills; 18 days with suspected bills; 35 days with foul bills. In the case of merchant vessels, these periods of detention commenced from the time of unloading susceptible goods into the lazaret.

The English Government strove to have the days of the voyage included in the above periods when the bills of health were clean, and no sickness had occurred during the voyage, more especially in the case of ships of war; but the proposal was resisted by all the other Mediterranean powers, except by that of France.

The existence of small-pox on board subjects the vessel to a quarantine which varies according to circumstances. Vessels with other diseases on board are examined by the lazaretto physician on entering port, previous to receiving pratique.

No difference is made in the quarantine imposed when a medical officer is on board. In the case of men-of-war, &c., the voyage is sometimes reckoned as part of the quarantine, at other times it is not.

A bill of health is considered as foul when the port of departure, or the country from which the vessel arrives, is actually infected with plague; it is considered as suspected after the expiration of 41 days from the last case of plague, and clean after the expiration of one year from the last case.

There is an extensive lazaret establishment on a small island in the quarantine harbour.

Only susceptible cargoes, as enumerated in the Quarantine Regulations of 1820, are sent to the lazaret for depuration. The process employed is there described.

When sickness occurs in a vessel while in quarantine, the patient is landed at the lazaret, and treated at the public expense.

When a vessel arrives in a foul and sickly state, she is inspected by the lazaret physician, and every precautionary measure adopted as to cleanliness and ventilation; and when necessary the cargo is removed, and the hold of the vessel washed out and fumigated.

A record is kept of all vessels put in quarantine.

Before a vessel receives a clean bill of health on leaving Malta, she is inspected.

Sanitary cordons by land were adopted formerly, independently of the sanitary establishment. The lazaretto being on an island, renders this measure, except in extreme cases, unnecessary.

A list of the vessels put in quarantine in 1858 is sent.

GIBRALTAR.

Gibraltar.

THE quarantine regulations in force at Gibraltar were instituted under the Royal Proclamation of 22d June 1836.

The Local Board of Health is empowered to enact any sanitary precautions which are from time to time deemed necessary.*

"The quarantines in this port are necessarily regulated by those in Spain, as if we did not impose nearly similar restrictions, the consequence would be their closing the communication with us, as happened in 1853. But were Spain to modify her sanitary restrictions, it would confer great benefit on Gibraltar."

The interruption in 1853 was on account of the quarantine imposed at Gibraltar on arrivals from England, then partially infected with cholera, not being deemed by the Spanish authorities sufficiently stringent. At first it was for three days only on all arrivals from British ports, whether with clean bills or not; subsequently, the period of detention was extended to eight days, in conformity with the Spanish regulations at Algeiras. On the Gibraltar Board of Health attempting to relax this practice in favour of vessels with clean bills, the Governor of Algeiras established on the 2d November 1853 a cordon across the neutral ground, by which all intercourse by land between the rock and Spain was completely interrupted. This state of things continued to the serious detriment and distress of the inhabitants of both places for more than three months. Not even provisions were allowed to pass the Spanish lines, so rigorous was the embargo on the inter-communication.

With

* Dr. Baly states that, except in regard to the Plague, no very regular system of quarantine seems to have been acted upon at Gibraltar, until after the last visitation of yellow fever in 1823; and that it was in 1830 a Board of Health for the purpose was constituted by an Order in Council.—*Report to the Secretary of State for the Colonies on Quarantine at Gibraltar, House of Commons, 1855.*

With respect to the quarantine regulations at present in force, "vessels from the West Coast of Africa between latitude 30 degrees north, and latitude 20 degrees south, and from the adjacent islands (the Canary Islands only excepted), are not allowed to enter the port, or admitted to free pratique throughout the year, without performing quarantine. Also vessels from the West Indies, the Brazils, or Continent of America, between the Equator and latitude 34 degrees north, and arriving between the 1st July and 15th November, shall be ordered to quit the harbour and roadstead, whether their bills be foul or clean, so that the communication between Gibraltar and these countries is cut off during the summer months."

A very stringent and protracted quarantine is imposed upon arrivals from countries infected with, or suspected of the plague, as was the case in 1858-9 upon arrivals from the coast of Barbary, Syria, &c.

Besides the cholera, yellow fever, and the plague, the existence of any infectious or contagious disease on board subjects the vessel to quarantine, the duration of which is determined by the Board of Health according to the circumstances of each case. The introduction of small-pox is especially guarded against.

A medical certificate generally facilitates pratique; but no exception is made in favour of men-of-war, yachts, or of any personages. In the case of ships of war however, the voyage from the date of leaving the last port is generally reckoned as part of the quarantine.

When the cessation of a disease in an infected or suspected place is notified by the British Consul, or on receipt of clean bills of health therefrom, immediate pratique is given.

There is no lazaret or quarantine establishment on shore; only one or more hulks used as depôts for coals for the steamers, where passengers can perform their quarantine.

When there is sickness on board a vessel performing quarantine, the inspector of health visits the vessel, and a civilian medical officer repairs alongside and renders the required assistance, but not at the public expense.

When vessels arrive in a foul and sickly condition, no inspection is made, as arriving under those circumstances, they are ordered to quit the port. No record is kept of such vessels.

Before a clean bill of health is granted to a vessel, no medical inspection of her state is made, and no certificate is given to the captain, the bill of health being only applicable to the state of health of the fortress.

In the case of a pestilential disease appearing in the neighbourhood of this fortress, a sanitary cordon has been placed across the neutral ground.

A list of the vessels placed in quarantine in the port of Gibraltar between 1st May 1858 and 30th April 1859 is sent.

Gibraltar.

GAMBIA.

QUARANTINES when imposed are at the discretion of the Colonial Surgeon. There is no lazaret at or near the port.

Gambia.

"This colony has been happily so free from the visitations of contagious disease for upwards of 20 years, that no special quarantine regulations have been framed by the local government. For many years there has not been even a suspicion of contagious disease in any vessel touching at this port. In the event of a vessel being suspected, it would be the duty of the Colonial Surgeon to visit her, and impose such restrictions between the crew and the shore, as would, in his judgment, most effectually tend to prevent the contagion from spreading."

SIERRA LEONE.

THE diseases which render all arrivals subject to quarantine are cholera, small-pox, and yellow fever. The quarantine imposed would be anchorage of the vessel in a situation pointed out by the Governor until the inspector of health might recommend her receiving pratique.

Sierra Leone.

No difference would be made between men-of-war and merchant vessels.

There is a lazaret about four miles distant from Freetown, at the water side, constructed of wood. The charge for accommodation, food, and all other necessities is 1s. 3d. per day for the treatment of liberated Africans, and is paid by the Imperial Government.

No cargoes are ever landed.

The sick on board a vessel in quarantine would be attended by the inspector of health at the cost of the ship.

Sierra Leone.

A vessel in quarantine if found to be filthy or badly ventilated would be reported upon by the inspector of health to the Governor, who would give such instructions as the case required.

No inspection is made of a vessel prior to a clean bill of health being granted.

CAPE COAST CASTLE.

Cape Coast Castle.

"THERE are no quarantine regulations in force in these settlements. I may, however, mention," adds the Acting Governor, "that the diseases which would subject arrivals to quarantine are cholera, yellow fever, and small-pox."

There is no lazaret at any port.

ST. HELENA.

St. Helena.

No quarantine is imposed unless in case of disease existing on board, or having recently occurred. The diseases for which it is imposed are small-pox, measles, scarlet fever, whooping cough, cholera, and yellow fever.

As vessels only remain here to water, &c., the quarantine lasts usually for the few days during their stay at St. Helena.

No difference is made in favour of men-of-war.

There is no lazaret. In 1844 when many captured slavers with slaves were brought to St. Helena, one of the hulks of the slavers was used as a lazaret.

If medical assistance was required for a vessel, it could be easily obtained, but not at the public cost.

No inspection is made of vessels in quarantine, and no record is kept of such vessels.

Scarcely any but foreign vessels leaving St. Helena require bills of health, and they are furnished by their respective consuls. No previous inspection is ever made.

It is believed that evasions of the quarantine regulations are of frequent occurrence. They consist in giving an incorrect certificate on arrival.

The local Ordinance relating to quarantine is founded on an Order in Council, dated 11th June 1839. Clause 54 enjoins that "in case any contagious disease shall be found to prevail in any ship, either before or after she shall have been visited by the health officer, then every person who shall happen to be or to have been on board shall be in quarantine, and shall remain on board, or shall proceed to such place as shall be appointed by the Governor, there to remain until all danger to be apprehended shall be declared by a medical Board to be for that purpose appointed, to have ceased."

CAPE OF GOOD HOPE.

Cape of Good Hope.

THE existing Act and Regulations relating to quarantine are No. 16, 1857.

The diseases for which arrivals are put in quarantine are small-pox and measles, provided disease exists, or has recently existed, on board. The quarantine varies according to the circumstances of each case.

There is no proper lazaret at or near Cape Town. Two batteries, close to the beach, have been occasionally used for the purpose.

On two occasions cargoes have been sent to the lazaret. No distinction was made between susceptible and unsusceptible articles. The means used for purification were fumigations with chlorine.

On two different occasions within the last thirty years, sickness has occurred in vessels under quarantine, without a medical officer on board. Medical assistance was provided at the public cost.

No record has been kept of vessels put in quarantine.

The imposition of quarantine is discretionary with the health officer or person acting as his substitute, who, by clause 10 of the Act of 1857, shall "make every necessary inquiry into the state of health of the officers, passengers, crew, troops, and convicts; and, if there should be any sick persons on board, into the nature and character of their complaints; and shall, after such inquiry, either detain the vessel in quarantine, or give her pratique, as to him may appear fitting. Provided that when there may be any reasonable cause of doubt or suspicion, he shall not grant pratique, but shall place the vessel in quarantine, and report thereon if the vessel is in Table Bay, to the Colonial Secretary; or if in any of the out-ports of this Colony, to the resident magistrate thereat, or other local authority nearest thereto, in order that further medical advice might be obtained."

PORT NATAL.

THE diseases which render vessels liable to quarantine are cholera, small-pox, and others of a malignant, contagious, and epidemic character. The duration of the quarantine is regulated by the severity of the disease, its character, and type, or the port from which the vessel sailed, and other circumstances.

During the last twelve months two vessels arrived from ports where small-pox prevailed, viz., Cape of Good Hope and Algoa Bay. One vessel was quarantined for three days, the other for two days, to ascertain if the initiatory stage of the disease might manifest itself before pratique was granted.

There is no lazaret.

The health officer would attend any sick on board, if there was no surgeon on board.

Every vessel arriving from an infected port is inspected, and a record is kept of the sanitary condition of vessels put in quarantine.

Port Natal.

MAURITIUS.

THE enactments relating to quarantine have undergone repeated changes of recent years, and generally with increasing stringency. The successive ordinances and proclamations, No. 38 of 1844, No. 37, 1851, September 1852, and April and June 1856, were repealed by the Ordinance of No. 3, 1857, and the regulations therein issued by the Proclamation of the governor. These regulations are very stringent and enjoined to be carried out with rigour; they are directed specially against cholera and small-pox. All vessels arriving from any place where contagious and infectious* diseases, including cholera and yellow fever, exist, are to be detained in quarantine until the expiry of 20 days from the date of departure from the infected place; or if any case of such diseases has occurred during the voyage, until 21 days have elapsed from the termination of the last case of the disease by death or perfect recovery, if it be cholera or small-pox, and 15 days if it be fever or other contagious disease.

No difference is made in favour of ships of war, yachts, or of any persons.

Quarantine is continued to be imposed up to 21 days from the period at which the disease is reported to have entirely ceased in an infected port of departure, the length of the voyage being however always reckoned as part of the 21 days.

There are two permanent lazarets, one at Flat Island for cholera only, and the other at Cannonier's Point for all other diseases. Flat Island is about 10 miles from the mainland of Mauritius, and is used almost exclusively for Indian immigrants and for the officials of the quarantine establishment, including the surgeon superintendent, pilot, and the police force. A small steamer is kept for the conveyance of stores, letters, &c., between Port Louis and the island, and she is held in permanent quarantine so long as the island is considered to be in quarantine, so that there is no direct communication all the time between the vessel and the shore.

Private passengers generally prefer performing their quarantine on board their ship, which, after landing the immigrants on the island, goes round to the anchorage in the roadstead, to the leeward of all the other vessels, to ride out her full period. They are under the supervision of a guard-vessel, and with two quarantine guards on board each ship, to prevent all communication with the shore or with other ships.

The other lazaret is about 12 miles distant from Port Louis; it is also principally intended for the use of the Indian immigrants, by whom alone, with the exception of a few sailors landed sick from ships, it has hitherto been occupied. There are excellent accommodations for the immigrants and all the officials, including the surgeon superintendent, apothecary, &c.

Persons landed at either of the lazarets perform quarantine for the following periods, viz.: 21 days for cholera, from the death or perfect recovery of the last patient; 21 days for small-pox, from the death or perfect desquamation of the last patient; and 15 days for typhus, yellow fever, and other contagious or infectious diseases, from the death or perfect recovery of the last patient.

Vessels after landing their immigrants and all other infected persons have to perform quarantine for the abovementioned periods; and if any fresh case shall occur before the vessel receives pratique, such periods are calculated from the death, recovery, or landing at the lazaret of the sick person.

In all cases when Indian immigrants are released from quarantine, their clothing is destroyed and fresh clothing is given to them at the expense of the Government.

The cargo is to remain on board during the quarantine of the ship, and is liberated with it without any purification; it almost invariably consists of rice and other grain.

"No objects, except letters and coins, shall, without written authority of the colonial secretary or chief medical officer, be passed out of any place or vessel in quarantine; and every object which may be passed out shall, before being forwarded, be disinfected, &c."

Special

* These expressions are defined by the Act, "to mean any and every disease which may be communicated from one person to another through the medium of touch, or by near approach, and shall include the cholera morbus."

Mauritius.

Special instructions are given as to the side of the vessel, whether to leeward or windward, by which the medical officer is to approach an immigrant vessel on arrival; and very severe penalties, including the authority to fire upon persons attempting to escape from a quarantine station or vessel in quarantine, are affixed to breaches of the law.

When sickness occurs on board other than immigrant ships in quarantine, medical advice is given alongside by the health officer, who cannot, however, go on board.

No record is kept of the sanitary state of vessels put in quarantine.

No inspection of a vessel is made before granting her a clean bill of health on leaving the port.

NEW SOUTH WALES.

SYDNEY.

New South Wales. **THE** mode in which the Quarantine Laws are carried out in Port Jackson is briefly as follows:—

Every vessel not being a coaster is visited by the health officer as soon as she arrives in port, and the master or other person in charge of the vessel is required to give answer to the questions addressed to the captain or surgeon of the vessel. If it appears to the health officer that the sanitary state of the vessel is good at the time of her arrival, and that no infectious or contagious disease has prevailed on board during the voyage, she is at once allowed pratique; if not, she is taken to the quarantine station, and the health officer recommends to the Government the adoption of such measures as the circumstances of the case seem to him to render necessary. Every case of quarantine is dealt with on its own merits without reference to any classification of disease, or of ports from whence the vessels may have sailed. By this course of procedure, much vexatious delay and unnecessary expense is avoided, and every vessel is admitted to pratique at the earliest possible period, compatible with a due regard to the public health.

The existing Quarantine Act is dated 24 October 1853. The regulations therein prescribed have never been acted on so far as relates to the "grades and classes of quarantine" therein proposed.

The diseases which render vessels liable to quarantine are small-pox, or other infectious or contagious diseases; the duration of quarantine depends on the date at which the disease had ceased to exist on board at the time of arrival.

No reliance is placed on bills of health brought by ships. No difference is made between men of war, merchantmen, &c.

The quarantine station is about six miles from Sydney, and comprises substantial and well-ventilated buildings, capable of accommodating 450 persons, with complete arrangements for washing, cooking, &c.

There is also a floating hospital for the reception of infectious or contagious diseases.

No cargoes are sent to the lazaret; none arriving in this port are considered susceptible.

When a vessel is found on arrival in a foul and unwholesome state, measures are taken to have her thoroughly cleansed and purified. A medical inspection is made of the passengers, &c. on board of passenger ships sailing from the Colony, in the same manner as is required by the Passenger Act 12 & 13 Vict. c. 33, to be done with regard to passenger vessels sailing from the United Kingdom. An inspection is also made of the provisions, of the fittings and accommodation for the passengers, and of the means provided for ensuring efficient ventilation of the "between decks," and the ship is not allowed to clear until she has received a certificate of such inspection.

In 1832, when the dread of the cholera being carried by shipping from place to place, however remote, pervaded every part of the British Empire, a long and complex "Act for subjecting vessels coming to New South Wales from certain places to the performance of Quarantine" was issued by the Colonial Office to this as to other distant Colonies in different parts of the world. Its provisions were founded on the opinions then prevalent in Europe that this, and "other such infectious diseases," might be kept out of a country by rigorous precautionary measures against all persons and things arriving from a place where the disease existed, or was suspected to exist, at the time of the departure of the vessel.

VICTORIA.

MELBOURNE.

Victoria.

ALL vessels arriving from foreign ports are boarded at Port Philip Head, and inspected by the health officer stationed there. If they are found to be in a filthy condition, and there is sickness on board, they are detained until thoroughly cleansed, fumigated, and purified with a solution of chloride of zinc, and are then generally allowed to proceed, the sick and convalescent having been previously landed on the quarantine ground, where they are

are detained until quite recovered. Quarantine, varying from seven to 40 days from the date of the convalescence of the last case of cholera, small-pox, and infectious fevers, is imposed. If no case of any of these diseases has occurred on the voyage, a quarantine of three days is imposed on arrivals from a port infected with them.

The quarantine ground is finely situated on a promontory, named Point Nepean, on the east side of the entrance of Port Philip Bay, and contains about six square miles. There are five spacious stone buildings, detached from each other, and each capable of affording hospital accommodation for 100 persons, and provided with every convenience.

Cargoes of vessels placed in quarantine are not sent to the lazaret.

A record is kept of the sanitary state of all vessels placed in quarantine.

The latest Quarantine Acts are of the dates of 4th December 1841 and of 9th October 1849, and vest large discretionary powers in the health officer to carry out such precautionary measures for the protection of the public health against the introduction of disease by shipping as he may deem expedient, annual reports being presented to the Legislature.

Victoria.

SOUTH AUSTRALIA.

PORT ADELAIDE.

VESSELS having on arrival, or having had during the voyage, cases of small-pox or other eruptive fevers, cholera, or typhoid fever, are placed in quarantine till the health officer has had the opportunity of enforcing proper cleansing and fumigation, if such have not been performed before arrival. The sick are landed at the quarantine station. In the case of small-pox, the ship and passengers are kept in quarantine till such a time (usually three weeks) has elapsed since the last case of convalescence, as to satisfy the health officer that the risk of contagion has ceased. The sick are placed in a hulk, moored some distance from the shore.

The quarantine station is on Torrens Island, distant about five miles from Port Adelaide.

The luggage and bedding of passengers only are landed, but not cargoes. The health officer is authorised by the regulations of the Colonial Ordinance relating to quarantine, dated 14 June 1855, to make any order he may think necessary for the proper ventilation, fumigation, or cleansing of any ship arriving, to inspect the bedding and clothes of the passengers, and to order such bedding and clothes to be properly washed, fumigated, or otherwise purified, or, if he think it necessary for the safety of the public, to destroy what he considers cannot be properly cleansed.

South Australia.

WESTERN AUSTRALIA.

FREEMANTLE.

THE Quarantine Acts now in force in this Colony are 3 William 4, No. 1, and 14 Victoria, No. 11.

The diseases for which quarantine would be imposed are plague, cholera, and yellow fever; formerly also small-pox, scarletina, measles, hooping cough, and typhus.

The quarantine imposed upon the "Anna Robertson" for hooping cough, in December 1851 (the only vessel ever quarantined since I have been in office, reports the health officer), was non-intercourse with the shore and other vessels until the removal of the infected children to the island of Carnac. No other vessel has been quarantined except for a few hours.

There is no regular lazaret station; sickness of an infectious nature being as yet unknown in Western Australia; it is not usual to give vessels bills of health, nor are vessels ever inspected before leaving, except emigrant ships, when the emigration agent requests it.

Western Australia.

NEW ZEALAND.

THE Governor, in a Despatch dated 15th November 1859, and addressed to the Duke of Newcastle, states that, "from the reports of the health officers it will be seen that at eight out of the nine ports of the Colony, no infectious diseases whatever have been imported into New Zealand during 1858. At Dunedin, the chief port in the province of Otago, two emigrant ships arrived, one with the measles, and the other with scarlet fever on board; but no vessel has ever been placed in quarantine, owing to local difficulties which the medical officer thinks are too great to admit of any efficient quarantine regulations being carried into execution."

New Zealand.

New Zealand.

By the quarantine regulations of the Colony, power is vested in the resident magistrate and health officer to detain vessels having any sickness of a contagious or infectious nature on board in quarantine until every symptom of such disease has disappeared, and to institute such measures as the nature of each case may demand.

CEYLON.Ceylon.

By the Ordinance No. 10, 1852, all existing laws and regulations relating to quarantine, both maritime and inland, were abolished. There is, however, a comprehensive clause in the above ordinance which gives the Governor, with the advice of the Executive Council, the power of instituting a temporary quarantine in cases of necessity, both upon vessels arriving in the island, and upon any inland town or district.

The diseases for which quarantine used especially to be enforced, and would be again enforced if necessary, are small-pox and cholera. The plague is named in the old regulations, but it is doubtful of its ever having visited the island.

The reasons for the abolition of local quarantine were the difficulties experienced in enforcing it, and its consequent frequent evasions, the hardships it imposed on the public, especially the poorer classes, and the fact which continued experience brought to light that in crowded towns where it was most required, it altogether failed in preventing the spread of a contagious disease like the small-pox. There are health officers at all the ports of the island, whose duty it is to inspect the crew and passengers of all vessels arriving, and weekly reports of these inspections are sent to the principal medical officer at Colombo.

All the large towns of Ceylon possess isolated hospitals for the reception of cases of small-pox. Experience has also shown the necessity of having separate hospitals for cholera cases.

With the exception of the port of Salavatore, the site of the pearl fishery, while the pearl fishery is in progress, quarantine has not, for a great many years, been imposed on vessels arriving in any of the ports of the island. The quarantine is short, and regulated by the circumstances of each case, when small-pox or cholera is on board, under the authority of the ordinance above cited, and the Proclamation of 16th February 1855.

HONG KONG.Hong Kong.

No quarantine has ever been imposed in Hong Kong from the earliest settlement of the Colony to the present time; nor do any quarantine regulations exist.

The mercantile shipping in harbour is attended by private practitioners, and there is a seaman's hospital on shore.

A bill of health is seldom required. When one is given, it refers to the condition of the Colony, and not to that of the ship or her crew.

LABUAN.Labuan.

Governor Edwards writes, "There are no quarantine regulations in this Colony."

NOVA SCOTIA.Nova Scotia.

THERE are no specific quarantine regulations at Halifax or other ports of the Colony. They are determined, as occasion may require, by the health officer and the Board of Health, who are invested with large discretionary powers of action in all cases, under the approval of the Governor.

By the sanitary orders issued by the Government in October 1852, it is enacted that when any sickness, of whatever kind, exists on board a vessel on arrival, "the health officer shall go on board, and having examined the cases of sickness, shall use such measures as are necessary and proper for their recovery."

"If the health officer shall find the vessel in a filthy condition, or overcrowded, or that there is any danger of disease spreading on board, he shall cause the sick to be taken on shore, and the vessel to be thoroughly cleansed; and in every such case, the captain, agents, or owners of the vessel shall be held responsible for all the necessary expenses incurred in cleansing the ship, in providing suitable apartments for the sick, in their removal thereto, and their treatment therein."

In case of the existence of any contagious or infectious disease on board of any vessel arriving in port, the health officer shall take such measures for the protection of the passengers and crew on board, as also the community on shore, as are prescribed in the several regulations in sect. 8 & 9 of the revised statutes of Nova Scotia, as follows:—

Small-pox and ship fever are the diseases against which quarantine precautions are chiefly directed.

There is no regular lazaret, nor is any list of the vessels put in quarantine kept.

CANADA.

DR. DOUGLAS, the quarantine officer, reports that,—

"No quarantine is imposed upon vessels arriving at the harbour of Quebec from whatever parts of the world they may have sailed, whether bringing a clean or foul bill of health, unless certain diseases should exist or have existed during the voyage."

"There is an establishment, first formed in 1832, and called the quarantine station, situated on an island in the centre of the St. Lawrence, and distant about 30 miles to the east of Quebec. When first established, it was intended to prevent the introduction of Asiatic cholera, and vessels without distinction were obliged to bring up and submit to an inspection, the rules and regulations being framed upon the strict quarantine laws of the Mediterranean. But here, and everywhere else, the attempt to protect the country from cholera by means of quarantine restrictions proved a complete failure.

The utility of the establishment as a place where the sick from the many thousands who yearly arrived in the country could be treated in hospitals, and where the healthy could refit and wash their clothes after their long voyage, before proceeding to their destination in the interior, was found so great, that it has been continued to this day.

Those vessels only are bound to bring up for inspection which have on board 13 steerage passengers and upwards, if under 700 tons register, and 50 steerage passengers and upwards if over 700 tons. Should any sick be found on board, they are forthwith landed and placed in hospitals at the eastern extremity of the island. Should the disease be small-pox, fever, measles, scarletina or Asiatic cholera, all the passengers in the vessel are landed at the western extremity of the island with their foul clothes, beds, bedding, &c., and placed in large airy buildings, near which are extensive washhouses, kitchens, &c., for their use."

The healthy are detained here for a period varying from 24 hours to six days, during which time they are made to wash and air their clothes, &c.; the feather beds and wool mattresses are subjected to dry heat in a hot-air chamber in a large oven constructed for the purpose. After this cleansing, they are forwarded to Quebec. It has been found by the superintendent, who has been many years in charge, that a detention prolonged beyond a certain time causes a deterioration of the health of the emigrants, and that their speedy dispersion has always appeared to be the best means to prevent this.

Men of war and private yachts, not carrying steerage passengers, are not bound to bring up at the quarantine station, unless the diseases already named shall have prevailed on board, and then they would be subject to the same regulations.

All persons in quarantine are supplied with lodging, fuel, the use of the washhouses, &c., free of all cost, and no charge of any kind is imposed upon vessels. Medical assistance and medicines are also provided at the cost of the province to all who require them.

No cargoes are ever sent to the lazaret at the quarantine station. Emigrant vessels are generally in ballast, any part of which if soiled is thrown overboard.

When a vessel arrives in a sickly state, a careful inspection is made into the cause, and when neglect of cleanliness, or imperfect ventilation is ascertained to exist, a report is made to the chief emigration agent, who takes proceedings against the master or owners of the vessel. On the arrival of a vessel in a filthy state, the passengers and their baggage being landed, the between decks are thoroughly cleansed with soap and water if painted, or white-washed with quick lime if not painted, the bow and stern ports are knocked out and a current of air is passed through the vessel. These means, with fumigation, suffice to thoroughly cleanse the foulest ship.

No clean bills of health are ever given to vessels leaving Quebec; nor is it the duty of the port physician to make any inspection to ascertain the sanitary condition of the crew and passengers.

No sanitary cordons by land have ever been attempted to be established in Canada.

The Act relating to quarantine is 16 Vict., cap. 86, and the existing regulations thereupon are dated Quebec, 20 April 1853.

An annual report of the medical superintendent of quarantine is sent in to the Government, and printed in the report of the Land and Emigration Commissioner.

A tabulated detailed list of all vessels detained in quarantine during the last five years is sent.

Canada.

NEWFOUNDLAND.

No reply containing detailed information has yet been received.

Newfoundland.

BERMUDA.

VESSELS arriving from all countries, at all times and seasons of the year, having sickness on board, are subject to quarantine, whether their bill of health be clean or foul.

If the sickness be yellow fever, cholera, or any other infectious or dangerous disease, the vessel may be detained in the ports of Bermuda for eight days; this period may be prolonged if deemed necessary.

No difference is made in favour of vessels having a medical officer on board, or between ships of war, yachts, and merchant vessels, or in favour of any person who may happen to be on board.

Bermuda:

Bermuda.

Pratique is granted at the discretion of the health officer when all apprehension of danger has ceased, without the lapse of any fixed period; also to all arrivals from infected or suspected places, at his discretion.

There is a lazaret near the port of Hamilton, on an island (Durrell's), about one mile from the nearest dwelling. Lately, there has been purchased by the Colony a small island near to Ports, and situated in the Great Sound, with stone buildings erected thereon for the reception of persons when their vessels are performing quarantine.

There is another lazaret belonging to the navy, also situated on an island, and in every respect well adapted for the purpose.

Cargoes are not sent to the lazaret.

Vessels performing quarantine are thoroughly cleansed, purified, and whitewashed in such a manner as may be ordered by the health officer.

When sickness is on board a vessel in quarantine, the health officer attends.

Clean bills of health are granted by the Controller of Customs to vessels leaving Bermuda without previous inspection, when no epidemic is prevailing in the Colony.

The preceding details are derived from the replies of the principal medical officers of the army and navy, no answer having yet been received from the civil authorities.

BAHAMAS.

Bahamas.

THE quarantine regulations at the port of Nassau are under the Colonial Act, 19 Vict., cap. 7.

Quarantines, when imposed, are based for the most part on the actual condition of the ships on arrival, their crews and passengers, and not so much in reference to the existence of particular diseases at the port of departure.

The principal diseases whose existence on board renders vessels liable to quarantine are small-pox, cholera, yellow fever, and scarlet fever. The existence of any other cause which, in the opinion of the health officer, may render the immediate admission of a vessel dangerous to the health of the inhabitants, would also justify its imposition.

The duration of the quarantine is regulated from time to time by the Governor in Council, as he may in each case think fit and necessary. No definite schedule of periods is promulgated.

The only vessels exempt from the operation of quarantine are those carrying mails.

The Governor in Council may permit the landing of passengers and crews under such restrictions as he may deem necessary, and best calculated to guard against the introduction of disease.

There is a small lazaret, erected within the last 12 months, on an island about three miles and a half distant from the port. There is a resident quarantine officer; there is no tariff of charges.

Cargoes are not landed at the lazaret, unless found to be in a putrescent state.

Medical assistance is provided from the shore to sick persons on board, but not at the public expense.

When a vessel is in a foul and sickly state on arrival, the precautionary measures to be adopted are left to the discretion of the health officer, who reports to the Governor.

Bills of health are granted, when requested, to vessels leaving the port of Nassau by the health officer, and have reference only to the health of the town and port. No previous inspection of the vessel is made.

Foreign consuls are now in the habit of granting bills of health to their own vessels, and the health officer is only applied to in the case of British vessels.

In case of a formidable epidemic visiting the Colony, the Governor in Council may issue orders proclaiming interinsular quarantine, and the Board of Health has power to frame rules to meet emergencies.

VIRGIN ISLANDS.

Virgin Islands.

"ALL contagious, infectious, or noxious diseases, but chiefly epidemic cholera, and small-pox, render vessels on arrival liable to quarantine for five days if from an infected port but without disease on board, and for 40 days, if there be any sickness on board."

The Governor may suspend quarantine whenever he sees fit.

There is no lazaret.

No cargo is considered "susceptible"; but soiled clothing from an infected port, or from a port lately infected within eight weeks after the last reported case, is required to be immersed in the sea and kept there for 10 days, during which time the vessel having the clothing on board is subjected to quarantine.

No record is kept of vessels put into quarantine.

A clean bill of health is given with regard to the sanitary condition of the Islands only.

ST. KITT'S.

By the Quarantine Act of September 1858, it is directed that—

"All vessels arriving in this island, together with all persons, goods, and merchandise whatsoever embarked therein, coming from any port or place where cholera, small-pox, measles, or scarlatina shall exist, or from any port or place from whence the Governor, by and with the advice of the Council, shall judge it to be probable that such distempers may be brought, or having had or then having on board any person ill of any of the aforesaid diseases, on board of which vessel any persons shall have died from any such disease as aforesaid during the passage to this island, shall, before such vessel is allowed to enter any port of this island, or any such persons, goods, or merchandise are permitted to be landed, be liable to perform quarantine for such time and in such manner as shall from time to time be directed by the Governor."

The health officer is directed to board all infected or suspected vessels, and to make strict examination of the ship and of all on board, and thereupon to determine whether, in his opinion, there be danger of any noxious disease being introduced into the island, and to act accordingly.

In 1854, a quarantine of 21 days was imposed upon all arrivals from Barbadoes, then infected with the cholera. The disease appeared soon afterwards, notwithstanding.

There is no lazaret, either on shore or afloat.

No record is kept of vessels placed in quarantine.

When clean bills of health are granted, no inspection of the vessel is previously made.

St. Kitt's.

JAMAICA.

THE practice of quarantine in this island has been considerably modified since the official investigation into its working in 1851.

By an order of the Governor in Council of April 1857, it is directed that, "whenever a vessel shall arrive at any port in this island, not having at the time of arrival any case of cholera or small-pox on board, or not having had any death from either of such diseases during the voyage, the health officer is authorised to admit to pratique any such vessel upon such conditions and under such precautions for the protection of the public health, to be taken under his personal superintendence, as such health officer may consider necessary and sufficient and shall direct."

The Governor is authorised to declare vessels coming from places affected with any infectious disease liable to quarantine, the duration, &c., of which depends upon the circumstances of each case, and is left very much to the advice and opinion of the health officer, who reports each case to the Governor.

If a vessel on arrival is not provided with a bill of health from the last port touched at, the surgeon on board, or the captain, is required to certify in writing that such port was, at the time of the ship's departure therefrom, free, to the best of his knowledge, from any infectious disorder.

There is no lazaret at Port Royal, nor even an appointed place at which cargoes might be landed, and the sick comfortably housed.

Medical assistance is procurable for the sick on board, but not at the public expense.

"No investigation of the filthy condition of a vessel can be ascertained, unless the health officer enters the ship and examines her; and such a condition can scarcely be surmised, unless the crew are first ascertained to be unhealthy. Effectual ventilation and purification of a vessel," the health officer adds, "would not be possible in loaded vessels, unless some means were available to discharge at least a portion of the cargo, and deposit it for a time in some convenient and airy locality."

No inspection of a vessel is made before granting a bill of health on leaving the port.

Jamaica.

BARBADOES.

ALTHOUGH the Quarantine Act of September 1832, and the Supplemental Act of April 1837, modified by the Act of July 1839, relaxing the severity of the penalties previously affixed to any breach of the regulations, are still unrepealed, their provisions have been nearly inoperative for some years past.

"When a vessel arrives with any disease on board, she is visited by the medical officer, and he reports the case to the Governor, who has the power either to release her at once, or to award the necessary length of quarantine. * * * It is notorious that quarantine is loosely performed here; of recent years it has been all but discontinued. * * * Although vessels arriving here from infected ports, or with disease on board, are not admitted to immediate pratique and without precaution, yet the sick may be landed and located anywhere favourable to recovery. No instance has occurred of an epidemic outbreak which exact investigation has been able to trace to the relaxation of our quarantine regulations."

There has never been any permanent lazaret, either on shore or afloat. A temporary hulk has been occasionally used for receiving the sick.

Barbadoes.

ST. LUCIA.

St. Lucia.

THE quarantine ordinance relating to quarantine is of the date of 31st August 1839, and special regulations on the subject of small-pox were issued in January 1846.

The diseases for which quarantine is liable to be imposed are small-pox and cholera, from three to six days; but the period is usually left to the discretion of the health officer.

Arrivals with clean bills are at once admitted to pratique.

There is no lazaret or accommodation of any kind.

Clean bills of health are issued to vessels leaving this port when required, without any inspection of the vessel or crew. The only exception has been when either cholera or small-pox has prevailed in the island.

ANTIGUA.

Antigua.

THE diseases which render at all times vessels subject to quarantine are small-pox, yellow fever, and cholera. When any of these diseases are prevailing in the port of departure, then the vessel and crew, whether there has been sickness during the voyage or not, must remain in quarantine, which is usually for 15 days, reckoned from the date of departure from the infected port. The passengers are detained on board during the performance of quarantine. If any person is attacked with small-pox during quarantine, they are removed to the hospital at Fort James, and the quarantine on the vessel continues.

When a disease has ceased in any port which had been declared infected, and clean bills issued from that port, such vessels are admitted at once to pratique.

The quarantine ground is about three miles distant from the town of St. John; and in 1849 a small hospital was erected there at Fort James, for the reception of small-pox patients.

Cargoes are not landed.

When sickness occurs in a vessel while in quarantine, medical assistance is provided at the public cost.

Before a bill of health is granted, no inspection of the vessel is made.

NEVIS.

Nevis.

THE existing "Quarantine Rules" of the Colony bear date 20th February 1855, by which the previous rules, passed only six months before (July 1854), were repealed, as unnecessarily restrictive of commercial intercourse, and otherwise inconvenient.

The diseases for which vessels are placed in quarantine are the plague, small-pox, epidemic cholera, and yellow fever.

A vessel having any case of such diseases on board, or having had any death therefrom during the voyage, would be kept in quarantine during the continuance of such sickness; and for 14 days after such sickness should have ceased, or for so much of the term of 14 days as might remain unexpired from the day of the death.

No other disease would render a vessel liable to quarantine.

Arrivals from a port declared to be infected with any of the above diseases are liable to such quarantine as may be deemed expedient or necessary.

There is no lazaret at or near this port. The course pursued has been to keep the vessel with the sick on board in quarantine.

The health officer attends the sick on board vessels in quarantine.

No record is kept of the state of vessels detained in quarantine.

DOMINICA.

Dominica.

SMALL-POX and cholera are the diseases which subject vessels to quarantine. Vessels are not admitted to pratique till 15 days have elapsed from the date of leaving an infected port.

Should any case of these diseases occur during the voyage, the ship would be liable to quarantine for so many days as shall be fixed by the Board of Health.

In 1854, during the prevalence of cholera in Barbadoes, a quarantine of from 15 to 21 days was imposed. The only person exempted from the operation of quarantine is the agent for the mails on board the Royal Mail steamer, who is permitted to be on shore for a few minutes to exchange mails at the post office, the arriving mails being first fumigated near the sea shore.

When a disease has been officially notified to have ceased in an infected place, and clean bills of health are issued therefrom, 15 days must still elapse before free pratique is granted in Dominica. There is no lazaret.

If sickness occurs in a vessel in quarantine, medical assistance is provided at the public charge.

No inspection of a vessel is made before clean bills are granted, the bill having reference only to the state of health of the island.

Guards along the sea-shore at night have occasionally been employed to watch any suspected case of violation of law.

The first Quarantine Act is dated 3 November 1848, and provides against the introduction of small-pox and other contagious diseases. Several explanatory enactments have been passed subsequently.

MONTSERRAT.

VESSELS arriving in a healthy condition from a non-suspected port are admitted to immediate pratique. "Cholera, small-pox, and all other contagious, infectious, or malignant diseases, render vessels subject to quarantine, the duration of which is determined by the Governor, and seldom exceeds 21 days."

The Governor in Council may permit the landing of passengers from any vessel in quarantine, when he sees fit. There is no lazaret.

No record is kept of the sanitary state of vessels in quarantine, nor is any inspection of the vessel made before clean bills are granted.

The first Quarantine Act in this island was passed in 1853.

Dominica.

Montserrat.

TOBAGO.

THE diseases which render arrivals subject to quarantine are plague, cholera morbus, small-pox, and any other dangerous, infectious, or contagious distemper. The period is generally for 10 days.

In some instances, the quarantine imposed varies according to the exigencies of the case.

Pratique is immediately granted after the cessation of disease in an infected place, information of which is generally certified through an official course.

There is no lazaret floating, or otherwise, at the port of Scarborough, but merely a quarantine station to the leeward of the island.

In the event of sickness occurring on board a vessel in quarantine, the health officer attends, and medical assistance is provided at the public cost. He would inspect a vessel in a foul or unwholesome condition, and order the necessary measures to be adopted. No record is kept of the sanitary state of vessels placed in quarantine.

When a clean bill of health is granted, the health officer makes an inspection of the crew and passengers.

Tobago.

TRINIDAD.

SMALL-POX and cholera are the diseases which cause the imposal of quarantine, the duration of which is regulated according to the lapse of time after leaving the infected port, and the period of incubation, as far as can be known of the disease to be guarded against. In the case of small-pox, a period of 30 days from the sailing of the vessel from the infected port is required to have elapsed; in the case of cholera, if from a contiguous port, a quarantine of observation for the cleansing and purification of the ship, and the washing and disinfection of the clothing of the crew, &c.

When yellow fever is on board, the same cleansing and disinfecting processes are employed.

During the prevalence of cholera at Barbadoes and Grenada in 1854, special precautionary regulations were enforced, *c. g.*—

"All passengers and crews on board vessels in quarantine were informed that unless all foul linens shall be steeped for at least eight hours in hot and fresh water, and well sprinkled with vinegar afterwards, and that all clothes and bedding shall be aired at least eight hours in the sun, they shall not be released from quarantine.

"Passengers and others wishing to destroy their foul linen or bedding must cause it to be burned on the quarantine islands, at such place as shall be directed, and not be thrown overboard."

A boat was sent daily from Port of Spain to the quarantine islands with necessary provisions, &c.; but no communication was permitted between the crew of the boat and the vessels and persons in quarantine beyond landing the goods. The utmost vigilance was adopted by night and day to prevent any intercourse whatever either with Port of Spain or with other vessels.

Men-of-war are expected when they arrive with sickness on board to report it, and no communicate with the shipping or the shore; and in the case of troops arriving, it has been customary to require them to be segregated in their barracks, till the danger of infection is past, if they have come from an infected place.

The Five Islands, distant five and a half miles from the Port of Spain, are used as a lazaret station when required. The sick are sent to one island, and the disinfected to another. Vessels are anchored in the stream.

Cargoes are not landed; but certain articles can be disembarked from vessels in quarantine, under the supervision of the harbour master, in conformity with the proclamation of July 1837 relating to the performance of quarantine in the Colony, and which is

Trinidad.

Trinidad.

still in force. When serious sickness occurs in a vessel under quarantine, a medical man has been sent on board at the public expense.

No examination is made by the health officer of a vessel before bills of health are granted; but every vessel and their crew are inspected by the harbour master previous to sailing. Foreign consuls sometimes grant bills of health to vessels of their own nation, without reference to the health officer appointed by the local Government to perform this duty. "Documents thus surreptitiously issued cannot be depended upon, and open the door to imposition and fraud."

In former times, some abortive attempts were made to prevent the introduction or spread of pestilential disease by quarantine measures on land.

"The enactments of the proclamation by the Governor issued in 1837 are of exaggerated stringency, and, although in most respects virtually inoperative, they have not been formally abrogated."

GRENADA.

Grenada.

ALL vessels from whatever port, with cholera or other malignant or infectious diseases on board, are subject to quarantine, at the discretion of the Governor. The quarantine is usually of seven to 10 days from the date of the vessel leaving an infected port, which is only enforced so long as the island remains free from the disease. But in the event of the disease occurring on shore, vessels are then admitted to pratique, and the sick, if any, removed to hospital.

The certificate from a medical officer on board is generally considered sufficient to admit to pratique, except in the case of immigrants, when it is considered advisable to subject the vessel to the inspection of the health officer from the shore.

There is no specific lazaret, but in case of vessels arriving from infected ports, a vessel is provided for the reception of passengers.

When sickness occurs in a vessel under quarantine, medical assistance from the shore is provided at the public cost.

When a vessel arrives in a foul and sickly state, the health officer takes all necessary precautions and means for the cleansing and purification of the vessel.

Previous to bills of health being granted to a vessel, she is always inspected by the health officer.

The existing Quarantine Act is of the date of 24 December 1831, and was passed to repeal the former Act of August 1793, and to make more general provisions for preventing the communication of the disease called cholera spasmodica, and all other malignant and infectious diseases.

GUIANA.

Guiana.

THE diseases for which quarantine is imposed are small-pox and cholera. For the latter disease, the quarantine is for 40 days.

When the disease has been officially certified to have ceased in an infected port, pratique is immediately granted to arrivals therefrom, after careful inspection of the vessels.

There is no permanent lazaret, but a temporary lazaret has been occasionally established.

In the event of sickness on board a vessel in quarantine, the health officer would attend, at the cost of the vessel, at a fixed fee.

If a vessel arrives from a suspected port, the health officer visits; but if a vessel arrives from a clean port with her crew in a sickly condition, the health officer seldom hears of it. The reason of this is, that the health officer is not, as is the custom in almost every other port, authorised officially to visit or inspect any other than immigrant vessels. No record of the sanitary state of vessels in quarantine is kept, farther than the health officer's report to the Governor.

In 1852, at the suggestion of the late Dr. Gavin, the health officer was ordered by the Central Board to visit and inspect at frequent intervals every vessel in the harbour. The sanitary measures thereby carried out resulted in a very marked reduction of admissions into the Seaman's Hospital, and diminished mortality among those admitted. The Colonial Surgeon-general thought so highly of this measure, that in 1856, when yellow fever again broke out, he recommended it to be revived; but it was not adopted; solely, it is believed, on the score of expense.

No inspection of the vessel itself is made prior to granting bills of health. Foreign consuls compel their vessels to take bills of health from them, prior to signing their clearances.

The existing Quarantine Ordinance in British Guiana is of the date of 15 February 1838, and is supplemental to the Ordinance of 5 August 1831.

Governor Wodehouse in his despatch to Secretary Sir E. B. Lytton, of 9 July 1859, says:—"The article 15 of the Ordinance of August 1831 gives the Governor of the Colony the power of suspending the whole or any part of its provisions; and this power has been practically exercised by perpetual suspension, with the exception of a few short periods during which the Governor for the time being has thought it his duty to enforce quarantine."

The

"The power given to the Governor of suspending 'any part' of the regulations has also virtually enabled him to make any changes which in his judgment might appear expedient.

In 1854, when cholera was in Barbadoes, at the urgent request of the principal inhabitants of this town, a quarantine of 40 days on arrivals from that island was established; but practically it could not be strictly enforced, from the fact that persons leaving Barbadoes for St. Thomas, and coming from that island to George Town, were admitted here on arrival after a voyage of about 10 days."

In 1851, a like quarantine of 40 days was imposed on arrivals from Jamaica during the prevalence of cholera there; but it was known at the time to be evaded notwithstanding every precaution.

Guiana.
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HONDURAS.

THE Quarantine Act of the Local Legislature is 21 Vict. c. 16.

When cholera or small-pox is known to prevail in any of the neighbouring ports of Central America, vessels arriving therefrom are subjected to inspection, and, if necessary, to quarantine, the method and duration of which are determined by the Board of Portwardens. The same precautions have been from time to time taken on the arrival of vessels from Jamaica or other of the West India Islands, when the above diseases were ascertained to be present.

The occurrence of cases of either disease on board during the voyage renders individual arrivals subject to quarantine for such a period as, in each instance, the Board of Portwardens would deem necessary.

No difference is made between men-of-war and merchant vessels.

There is no lazaret, either on shore or afloat. In particular instances, the sick have been removed from the vessel and placed on one of the adjacent kays.

The public medical officer attends to the sick while in quarantine.

On granting clean bills of health, no inspection is previously made.

Honduras.
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BAY ISLANDS.

THE Governor of Belize reports that he has found it impracticable to enforce any adequate quarantine regulations in the Colony in consequence of the absence of medical assistance to enable him to decide upon the nature of any disease, whether infectious or not, which might have occurred during the voyage or may actually exist on arrival.

Persons sick with yellow fever have been landed from vessels from Havanna, and have died on shore, after having been carefully tended and nursed; but no evil results have followed.

By the Act 21 Vict. c. 2, to vest proper authority in the Board of Health of the Colony of Bay Islands, the said Board is empowered, "when they shall be of opinion, and certify in writing, that any house, building, yard, or premises within their jurisdiction is in such condition that the health of the occupiers thereof, or of the public in general, is thereby prejudiced and endangered, to cause a notice to be affixed to the door of such building, &c., requiring the occupiers thereof to cause the same to be thoroughly cleansed within a specified number of hours from the time such notices be so published; and if such order be neglected or disobeyed, then the Board may cause such premises, yard, &c., to be purified, ventilated, and thoroughly cleansed at the expense of the party in occupation of the same."

The Board is also empowered to appoint health officers, whose duty it shall be to board every vessel arriving from any port where an infectious disease is known to prevail, and make all such other examinations as they may deem expedient, &c.

Bay Islands.
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FALKLAND ISLANDS.

GOVERNOR MOORE writes: "No quarantine has ever been imposed on any vessel. Although we have frequent communication with Rio Janeiro and Monte Video, the epidemic diseases which very frequently visit those cities, have never been imported into the colony.

"There is no legislation on the subject, and the only reference to it is the following provisional regulation embodied in the Pilot and Harbour Regulations issued by me in 1857. 'Every pilot going on board any vessel will inquire if there be infectious or contagious disease on board, and the master of any vessel must answer such inquiry; and if there be such disease the pilot shall anchor in Fort William, and signalise, and shall not leave the ship, nor permit any boats to communicate with her without permission. This regulation has never been acted upon.'"

Falkland Islands.
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PART II.

ABSTRACT of the REPORTS respecting the Working and Results of QUARANTINE in the following COLONIES.

Heligoland.	Nevis.	Sierra Leone.
Ionian Islands.	St. Kitts.	St. Helena.
Malta.	Barbadoes.	Cape of Good Hope.
Gibraltar.	Dominica.	Mauritius.
Canada.	St. Vincent.	Ceylon.
Nova Scotia.	St. Lucia.	Hong Kong.
Newfoundland.	Grenada.	Sydney.
Bermuda.	Tobago.	Melbourne.
Jamaica.	Trinidad.	Adelaide.
Bahamas.	Guiana.	Fremantle.
Virgin Islands.	Gambia.	New Zealand.
Montserrat.		

Prepared by the Quarantine Committee of the National Association for the Promotion of Social Science.

9 July 1860.

Heligoland.

HELIGOLAND.

DR. VON ASCHEN, Government physician in Heligoland, states that "Cholera does not seem to find a favourable soil on this island. At different times Heligolandians infected with the disease on the continent returned into the midst of their families, where they recovered or died; but no contagion was perceived. During the last summer, however (1859), we had several cases which are interesting facts bearing on the question of the contagiousness of cholera. In August, when it raged fearfully in Hamburg, an elderly gentleman arrived therefrom in the afternoon, apparently in good health. At midnight he was attacked with the genuine cholera, and died on the following afternoon. Two men, both intemperate, conveyed the body and the dirty bed-clothes to a distant place. The son of one of these men was affected with symptoms of the disease three days subsequently; he recovered. Two days later, the man himself was attacked and died the same evening. His wife and three younger children were removed from the house and escaped. The second man, who had assisted in transporting the corpse of the stranger, fell sick on the eighth day after, and died within 24 hours. No other case of choleraic sickness occurred among the inhabitants."

Dr. Aschen remarks that "epidemic diseases are of very rare occurrence in Heligoland, and distinguish themselves by their mild course, sometimes in utter contrast to the same diseases on the continent, whence those that are contagious are imported. The susceptibility for these contagious diseases differs much, as some make rapid progress among the population, while others seem to lose their contagious character altogether. Typhus fever (ileo-typhus), dysentery, measles, hooping cough, &c., appear occasionally as epidemics and often spread rapidly; they continue mild and seldom end fatally." In consequence of its salubrity, the island is frequented as a watering place by many distinguished visitors.

Ionian States.

IONIAN STATES.

CORFU.

In 1854, of 199 arrivals placed in quarantine, all from Mediterranean ports or from Constantinople, 11 only were quarantined for more than one day, viz.: two for seven days each, one from Molfetta and the other from Malta and Messina, after voyages of two and a half and of three days; one for six days from Messina, after a voyage of seven days; two for five days from Alexandria, after voyages of 16 and of 20 days respectively; two for four days, the one from Messina and the other from Alexandria and Zante, after voyages of 9 and of 17 days; two for three days, the one from Naples, and the other from Cardiff and Cagliari, after voyages of six and of 58 days; and two for two days, the one from Patras and the other from Constantinople, after voyages of six and 10 days respectively.

In all these instances, the cause of the quarantine imposed was the arriving "from places infected with cholera, &c." The bills of health were either suspected or foul.

In no case had there been any sickness during the voyage, nor did any sickness occur during the detention in quarantine.

In 1855, of 227 arrivals, there were 23 vessels quarantined for more than one day, viz.:—One for nine days from Constantinople after a voyage of 16 days; two for seven days, both from Durazzo, after voyages of 13 and of four days; one for six days from Durazzo, after a voyage of three days; one for five days from Zante, after a voyage of three days; nine for

for four days from Navarino, Avlona (two), Bari (two), Venice, Trieste, Brindisi, and Santi Quaranta; three for three days from Navino, Patras, and from Trieste and Durazzo, after voyages of from six to three days; six for two days from Previsa, Trieste, Venice, Brindisi, and Zante (two), after voyages of from two to eight days.

The cause of quarantine in all instances was the arriving "from places infected with cholera, small-pox, &c."

In 1856, no vessel was detained for more than one day.

In 1857, only one vessel appears to have been detained, and in that case the quarantine was for 13 days in a vessel from Rio Janeiro after a voyage of 87 days. No case of disease had occurred during the voyage, nor did any sickness occur in quarantine.

In 1858, during the two months from 20th July to 23d September, there were 40 vessels put in quarantine, and of this number 39 were for the following periods, viz.:—One for seven days from Malta, after a five days' voyage; one for six days from Alexandria, after a voyage of three days; four for five days from Gibraltar (two), and Yerby, and Constantinople, after voyages of 8, 31, 21, and 16 days; sixteen for four days from Trieste (2), Avlona (4), Tenedos, Santi Quaranta, Constantinople (5), Durazzo, Murto, Malta (2), and Zanzarli; 13 for three days, from Trieste, Constantinople, Ancona, &c., after voyages of from two to 31 days; and three for two days from Gallipoli, Trieste, and Avlona.

The cause in all instances was the arriving "from places infected with cholera, small-pox, &c."

No mention is made of the plague on the coast of Barbary, during the summer of 1858, as the cause of quarantine being imposed.

The tabulated list records only four vessels being quarantined during the first nine days of January. One of these was for six days from Alexandria, after a voyage of five days; two were for three days, one being the English steamer "Andes" from Venice, and the other Her Majesty's ship "Terrible," which had communicated with the "Andes." No particulars are given.

About an equal number of vessel shave performed quarantine in the islands of Cephalonia, Zante, Santa Maura, Ithaca, Paxo, and Cerigo, during the period in the above statement, and under the same circumstances.

From the Parliamentary Return of February 1858, it appears that during the 10 years ending 31st December 1854, the number of vessels quarantined in the Ionian Islands was 3,829, and that the average detention during the year varied from two days in 1851, 1852, and 1853, to 10 and 11 days in 1847 and 1848. The longest detention of any one ship was for 40 days; this was in 1846.

The aggregate number of days spent by all the ships in quarantine during the ten years, was 20,742, which gives a mean of between five and six days' detention for each vessel.

The aggregate number of the crews and passengers on board the detained vessels was 34,999 and 4,293, or a total of 39,292 persons.

During the last five years, 1,883 passengers have performed quarantine (in the lazaret) at Corfu alone; and about a similar number in all the other islands combined.

Two cases of yellow fever manifested themselves in 1845 in passengers arriving from Malta; one died.

Three cases of cholera at the lazaretto occurred on the 8th September 1850, in passengers arriving from Cephalonia (where the disease prevailed), of whom one died, and the other two recovered.*

During the sixteen years from 1844 to 1860, 15 deaths have occurred in the lazaret, viz.:—11 from fever, one from small-pox, one from typhus, one from yellow fever, and one from cholera.

No instance has occurred of recent years of the spreading of a disease from persons or goods undergoing quarantine to other inmates of the lazaret, or to any of the officials of the establishment.

On the 4th October 1855, the first case of cholera in Corfu manifested itself, and on the 2d of January 1856, the last. The number of cases amounted to 884, and of deaths to 489.

No further information is given respecting the developement or spread of the disease.

On the 27th February 1852, a case of small-pox showed itself in the Jewish quarter of Corfu; and notwithstanding the active measures taken by the Health Department, the disease continued to spread until August 1853, when it ceased. The number of cases was 4,317, of deaths 809.

The disease had prevailed in Corfu 10 years before.

The islands of Cephalonia and Paxo suffered from it in 1852.

No information is communicated under the head of observations.

* The local authorities of Corfu, in their zeal to exclude the dreaded disease, wished to adopt at this time measures of extraordinary stringency; as, for example, that a quarantine of 25 days be imposed on all arrivals from Trieste or Malta, and that all vessels from Cephalonia be rigorously prevented from approaching the shore, and that some uninhabited rock be assigned to those inhabitants of Cephalonia who wished to leave that island during the pestilence. Sir H. Ward, the Lord High Commissioner, strongly objected to the impolicy of such proposals, pointing out the pernicious results to the poor that would ensue from the interruption of commerce and from the increased price of provisions thereon. Nevertheless, in order to allay the public alarm, he consented to lay a quarantine of 20 days upon arrivals from Cephalonia, and of 16 days upon arrivals from Malta.

Malta.

MALTA.

IN the eight months from the end of April to the end of December 1856, there were 194 vessels put in quarantine. The number of arrivals during that period was about 2,600.

With the exception of two vessels from Brazil, then suspected of yellow fever, after long voyages, and which were admitted the day after arrival, every instance of quarantine was due to the alarm occasioned by the malignant fever which had appeared in Bengazi, on the Barbary coast. At first, the fever was considered and called typhus, and the quarantine imposed on arrivals from the place was for five days. About the end of July, when it was declared to be the plague, the quarantine was raised to 21 days on vessels direct from Bengazi, and to 15 days on arrivals from other places on the coast which were suspected although clean bills of health were still issued by them. The longer detention was also imposed for the infraction of the quarantine regulations at any suspected port, as at Alexandria, where it was rumoured that a suspicious case or two of bad fever had occurred.

After a month's continuance of this rigorous system, the penalty for the offence was reduced, first to a detention for ten days, and then to one of seven days. It does not seem that the presence or not of pilgrims on board, sometimes between 100 and 200 in number, nor the nature or quality of the cargo, nor the length of the voyage, affected the quarantine imposed.

Arrivals also from Gibraltar were suspected, although it was perfectly well known that the Rock was quite healthy all the time, only from "the suspicion of plague existing in Morocco." The quarantine was at first for 10 days, afterwards for seven days, and then for five days.*

Of the 192 vessels quarantined for the plague at Bengazi, six only arrived with foul bills; all these came direct from Bengazi; but there had been no sickness either during the voyage, which varied from 9 to 15 days, nor during their detention.

The same holds true of all the other vessels which were quarantined during the eight months. No sickness whatever occurred during their detention; and all that we learn respecting their health during their voyages is that three deaths in all had occurred. One man had died two days after leaving Rio Janeiro; another on board a vessel also from Brazil, from scurvy; and the third fatal case was in a ship from Alexandria, and occasioned by diarrhoea.

The entire number of the crews of the above 194 vessels amounted to 5,459, and of the passengers on board was 2,524.

From the preceding statement it will be seen that had it not been for the pestilential fever among the squalid inhabitants of a filthy Moorish town in the early part of the year, there would have been no quarantine imposed, and no impediments to perfect freedom of intercommunication with every part of the world.

From the Parliamentary Return of the 22d February 1858, it appears that during the 10 years from 1845 to 1854 the number of vessels quarantined at Malta was 9,415. The aggregate number of days spent by these vessels in quarantine was 47,430; and the longest period of detention of any vessel during each year varied from 10 days in 1854 to 29 days in 1845. No particulars are given as to the cause of quarantine being imposed in the different arrivals.

During the three years ending 30th April 1859, there were 1,513 persons received into the lazaret.

Not a single case of sickness originated among them.

Five deaths occurred among the persons received: four from fever, and one from cholera. No particulars of these cases are given.

No case of plague had been seen in the lazaret since 1841; in which year Her Majesty's ship "Castor" arrived in 15 days from Kaiffa, on the coast of Syria, having had 13 cases (two were doubtful) of plague on board, of which nine had been fatal. No fresh case occurred after reaching Malta. In the same year, two Ottoman brigs, and also an Austrian vessel, all from Alexandria, and crowded with Arab passengers, arrived in a sickly state.

Among

* "A quarantine of 21 days' duration was imposed in the ports of Naples, Greece, Portugal, &c., upon all vessels coming from, or which had touched at, Gibraltar; not that any disease existed there; or that the health of the Rock was bad at the time, but merely because it continued to hold communication with Morocco, which was also at the time in a healthy state, and quite free from any pestilential malady. Our Government, as well as that of France, held out for some time against such preposterous proceedings, and counselled a rational moderation in the enforcement of precautionary measures; but the attempt only brought down upon our intercourse and commerce retaliatory prohibitions of the utmost stringency, and our Mediterranean ports were compelled to yield.

"One of the Peninsular and Oriental steamers, on her voyage out from this country to Alexandria, had to land some passengers at Gibraltar. Before leaving the harbour there, it was necessary to have a bill of health of the place. The document was duly sent on board, enclosed in a tarred box carefully fastened down. The captain of the steamer, not aware of the risk he and his ship incurred, inadvertently opened the box to look at the paper. On arrival at Malta, it was declared by the authorities there that, in consequence of this act, the steamer must be regarded as having had communication with a suspected port, and must undergo a quarantine of 10 days. The passengers who landed were detained in the lazaret for that period, before they received pratique."—From a Paper entitled *Quarantine as it is, and as it ought to be*, in the Transactions of the National Association for the Promotion of Social Science, 1858-9.

Among the persons landed, 17 cases of plague occurred, and no fewer than 13 of them proved fatal.

During the 21 years from 1819 to 1841, 12 vessels having, or having had during the voyage, cases of plague on board were put in quarantine. In all, 46 cases of the disease had been treated in the lazaret, and of these 22 were fatal.*

The only instances in which the disease seems to have occurred among the *employés* of the quarantine establishment were in four health-guards, two of whom had been put on board of infected vessels, and the other two had been shut up in the lazaret to attend upon the sick: one of the latter died; the other three recovered, their attacks having been slight.

As to the spread of the disease from cargoes, Dr. John Davy states that there is not an instance of a single person engaged in unpacking and airing bales of cotton, &c., from Alexandria having ever caught the plague, and that Sir F. Ponsonby, the Governor of Malta, assured him that the same might be asserted of every lazaret in the Mediterranean.

Since the disastrous epidemic of 1813, the plague has not made its appearance among the inhabitants of Valetta, or of any other place in the island. Its origin was never traced. It lasted for nine months, and inflicted incalculable injury on the Colony. The total number of deaths was 4,668, out of a population of 104,000. The mortality among the persons sent from the city, and crammed into the lazaret, was frightful; few recovered. It was chiefly in the low, filthy and crowded parts of the town that the pestilence prevailed. One of the suburbs remained intact. The shipping escaped almost entirely.

In 1837, the cholera appeared for the first time. It commenced in June, and lasted to the beginning of October. The deaths were 4,152, out of a population of 120,000. So great was the alarm among the native medical men, who regarded the pestilence as a sort of plague, and communicable by contact, that they refused to approach the sick.

The adjacent island of Gozo was attacked in the second week of July.

In the summer of 1850, cholera prevailed to a very considerable extent in Valetta. The military suffered severely. While the disease lasted, a lengthened quarantine was imposed on vessels arriving from other infected places, as from Marseilles, Cephalonia, &c.—of nine days upon steamers, and of 12 days upon sailing ships.

Notwithstanding the incessant arrival, in 1854 and 1855, of ships of war, transports, and other vessels from infected parts, during the war in the Crimea, often with sick on board, the disease never spread. In 1856, the cases were more numerous, it is believed.

Dr. John Davy states, that during the seven years, 1829-35, he had seen not only measles, scarlatina, and hooping-cough, but also small-pox, on two different occasions appear among the inhabitants, in spite of all the quarantine precautions taken for their exclusion. During the small-pox epidemic of 1830, upwards of 10,000 were attacked, and 1,500 died, out of a population of 114,000. The disease was believed to have been introduced by Her Majesty's ship "Asia," last from Napoli di Romania. Vaccination must have been greatly neglected.

In August 1850, small-pox and a malignant typhus were prevailing among the civil population, while the cholera was also very fatal among both the civilians and the military.

Again, in the autumn of 1852, the same diseases, small-pox and typhus, prevailed to a considerable extent in Valetta.

Deputy Inspector Salmon, of the Royal Naval Hospital, says that "the general sanitary condition of Valetta, and of the port, harbour and docks, is good. Diarrhoea and dysentery prevail during the autumn. Rheumatism is very common and obstinate; also fever of a remittent character, but assuming at first a continued type, and if not fatal, ending in intermittent, is common at all periods of the year. I believe that the fever is more common among the crews of ships than among the inhabitants. The general sanitary condition of vessels frequenting the port is good. Ague is sometimes met with in arrivals from Agro Romano and Civita Vecchia; while dysentery and ophthalmia are common in arrivals from Alexandria, the Black Sea, and Mouths of the Danube."

Staff Surgeon Domville, of Her Majesty's ship "Marlborough," says, "Of late years cholera has generally appeared during the autumn, both on shore and among ships in harbour. The chief mortality is from pulmonic diseases."

Malta.

GIBRALTAR.

DURING 1858 there were 635 vessels put in quarantine. In a very large proportion the quarantine was merely nominal, the vessels being either admitted to pratique next day, or leaving the port in quarantine.

The average annual number of vessels arriving is 4,100.

Gibraltar.

It

* "During the four years that I was stationed," says Dr. John Davy, "in the Ionian Islands, and seven in Malta (1824-35), not a single case of plague occurred in the lazarets of either, though they were almost constantly receiving persons from Egypt and the Levant, and several times when plague was prevailing in one or the other."

Gibraltar.

It is chiefly against the risk of yellow fever being brought from the West Coast of Africa, the West Indies, and the Brazils, that lengthened quarantine is imposed. For example: a vessel arrived from Rio Janeiro in May, with a cargo of coffee, and after a voyage of 55 days, without sickness on board, was detained 21 days.

A vessel from Matanzas with sugar, after 30 days' voyage, was detained 12 days.

Many arrivals from the Coast of Africa and the West Indies, with clean bills, and without having had any sickness during the voyages of from 30 to 50 days and more, left the port in quarantine, and proceeded on their course.

In September, a vessel 60 days out from Sierra Leone, cargo ground nuts, was in quarantine 109 days (undergoing repairs), and then left without having been admitted to pratique. It does not appear that any sickness had occurred during the voyage, &c. The want of a regular or properly certified bill of health was a frequent cause of detention.

In November, and even so late as near the end of the year (when the risk of the importation of yellow fever is believed to be all but nil), arrivals from the Brazils, after a voyage of two and even three months, without sickness, were subjected to a lengthened quarantine if they had no bill of health.

Timber ships from the Baltic, after a voyage of two or three weeks in perfect health, were detained for three or five days for the same cause.

A considerable proportion of the detentions in the summer and autumn of 1858 was due to the plague at Bengazi, and to the procedures consequent thereon, in most of the Mediterranean ports.

Arrivals from Tangiers and other neighbouring places, having clean bills of health, were generally quarantined for seven days.

Arrivals from Malta at the same time seem to have been more rigorously treated; for a good many instances are recorded in the list of vessels arriving from Alexandria and Malta as "not admissible," and therefore leaving Gibraltar in quarantine, even after voyages of from 10 to 25 and 37 days, without any sickness all the time.

No explanation is given of the apparent incongruities of treatment of vessels similarly or nearly similarly situated.

In a few instances the quarantine was owing to the number of the crew on arrival not being in accord with that specified in the bill of health, although no deaths had occurred during the voyage.

Occasionally, but very rarely, a case of sickness (nature not stated) during the voyage is entered as the cause of the quarantine imposed.

It does not seem that during the whole twelvemonth a single instance of even suspected, much less ascertained, dangerous spreading illness occurred on board any of the numerous arrivals.

During the 10 years, from 1845 to 1854, there were 3,286 vessels placed at quarantine. The aggregate number of days during which all the ships were in quarantine was 13,765. The greatest number of days during which any ship was in quarantine during the different years varied from seven days in 1853, to 46 days in 1846. During the same 10 years, besides the vessels now enumerated, 2,957 other vessels arrived in quarantine at Gibraltar, and sailed again without taking pratique; the greater number remaining only a few hours to receive supplies.

In the spring of 1854 all vessels from Great Britain, with clean bills, were required to perform a quarantine of observation for eight days, in consequence of the threat of the Spanish authorities to cut off all communication with the Rock if this was not practised.

The subject attracted the attention of the House of Commons at the time, and Dr. Baly was in consequence sent out by the Colonial Secretary of State to inquire into the circumstances.

During the first 13 years of the present century, Gibraltar was the seat of repeated visitations of destructive yellow fever. It was then notoriously one of the filthiest and worst-conditioned garrison towns in the British dominions, crowded moreover excessively with troops.

The mortality among the military was often formidable.

No quarantine measures had been of any avail in keeping out the pestilence.

The last visitation was in 1828; when again its mode of development could not be traced.

Notwithstanding that, the town had been much improved since the close of the war: the evidence of Dr. Hennen, then principal medical officer of the garrison, showed that in the districts most affected, the dwellings of the poorer classes were as bad as bad could be.

Gibraltar was first visited by cholera in 1834, the year in which it first made its appearance in Spain, and also in Morocco: it began in June, and ceased in August.

There was a slight visitation of the disease in 1849, when Spain seems to have escaped altogether; and again in 1854 and 1855, on which occasions the disease prevailed to a considerably greater extent in the neighbourhood of the Rock. The frequent arrival of vessels on their way to and from the Bosphorus during the Russian War, when all impediments to intercourse were of course removed, does not seem to have occasioned any amount of imported disease, or to have affected the health of the community.

In November 1859, small-pox was introduced into the garrison by Her Majesty's ship, "James Watt;" it soon ceased.

Dr. Baly, in his report to the Colonial Office on the sanitary state of Gibraltar in July 1854, states:—

"In every part of the town in the streets, and more especially in the houses and courts inhabited by the middle and lower classes of the population, the effluvia from the drains con-

with

nected with the sewers are most offensive. Along the line wall, especially at certain parts, viz : near some of the principal forts, and at the chief landing place, the Old Mole, the emanations from the mouths of the sewers render the air intolerably foetid The foul exhalations are of course carried away more or less quickly when the wind is blowing from the west, north or south; but during the prevalence of the east wind they remain, and impregnate the then nearly stagnant and damp atmosphere, giving it a part of that oppressive quality which is complained of as so unfavourable a character of the climate at a certain season. And if at this time any germs of an infectious disease chance to be brought either by the wind itself or in other ways, the poison finds in the air abundant materials for its increase." Dr. Baly mentions also the insufficient water supply as a sanitary defect that requires remedy for the welfare of the town and garrison. In his previous report on the convict establishment, "the fact was noticed that fever and dysentery are every year more or less prevalent among the convicts, and this was attributed in part to their exposure to the foul emanations from sewers."

Deputy Inspector Dr. Paynter says:—"The general sanitary state of Gibraltar has, during the last two or three years, been good. The prevalent diseases in summer have been continued fever and bowel complaints; while in the winter and spring months, there have been pulmonary affections, with exanthematous diseases, but always of a mild form."

The average annual amount of dues from vessels in quarantine is 245 *l.* 12 *s.* 6 *d.*; two dollars being levied on each vessel. The only expense to which individuals are subject, are the fees paid to the health-guards, when employed by them, for the purpose of communicating with vessels in quarantine; the annual average of which is 314 *l.* 10 *s.* 9 *d.*

Gibraltar.

CANADA.

In 1854, 30 vessels were detained at the quarantine station on Grosse Isle:—

- 2 for cholera, during the voyage or on arrival.
- 11 for measles - ditto - - ditto.
- 11 for small-pox - ditto - - ditto.
- 3 for scarlatina, or for scarlatina and measles together.
- 3 for fever, with or without associated dysentery.

In almost every instance, deaths had occurred during the voyage, and cases of disease existed on board on arrival. The entire number of deaths during the passage amounted to 274.

The detention varied from 2 to 10 or 12 days.

In 1855, the number of vessels detained was 14; viz.—

- 5 for small-pox, during the voyage or on arrival.
- 5 for measles - ditto - - ditto.
- 3 for fever - ditto - - ditto.

There had been deaths on board during the passage in every case but one; also, cases of sickness on arrival.

The total number of deaths in the 14 vessels during the passage was 46; of which upwards of one-third was from small-pox.

In 1856, number of vessels detained was 18:—

- 3 for small-pox, during the voyage or on arrival.
- 15 for measles, singly, or associated with fever or dysentery.

The number of deaths during the voyage was 45.

In 1857, number of vessels detained was 24: with the exception of one detention for scarlatina, fever, and dysentery respectively; all the rest were for measles.

There had been 118 deaths during the passage.

In 1858, number of vessels detained was 8:—

- 5 of which were for measles, during the voyage or on arrival.
- 2 for small-pox - - ditto - - ditto.
- 1 for fever - - - ditto - - ditto.

There had been nine deaths in all during the voyage.

Of 12,810 emigrants landed during the year, 227 were received in the hospital of Grosse Isle, of whom 21 died.

Canada.

Canada.

The entire number of emigrants landed at Grosse Isle, the quarantine station of Canada, during the 25 years from 1833 to 1858, was 791,802. Of this number, 19,522 were admitted into hospital, the rest being placed in what is called the lazaret, or that part of the island where the healthy are kept to have their clothes washed, &c. before proceeding up to Quebec.

Of the 19,522 admissions:—

	307	were from cholera.
14,601	„	fever and dysentery.
1,244	„	small-pox.
3,370	„	other diseases.

The total number of deaths among the admissions into hospital was 4,538.

Almost every year a certain number of the attendants whose duties bring them into contact with the sick fall ill, and several have died in those years when fever has prevailed. This was signally the case in the disastrous year of 1847: the number of clergymen, nurses, &c. who fell victims in the discharge of their duty is given in a table furnished by Dr. Douglas, the medical superintendent of quarantine.

In the annual reports of this gentleman, more especially that for 1847, which are printed in the Blue Books, in the Report of the Land and Emigration Commissioners, as well as in Lord Durham's Report for 1839, will be found various statistics bearing upon quarantine as carried out in Canada:

“In 1847, fever followed the emigrants to wherever they located themselves. Many of the inhabitants of British North America and the United States were attacked, and several died. Previous to the establishment at Grosse Isle in 1832, certain parts of Quebec were never free from fever and small-pox; and these diseases were often conveyed by the emigrants with their foul bedding to the small settlements of the country.”

Surgeon Major Odell, writing from Quebec in July 1859, says: “Small-pox, scarlatina, and measles have been epidemic in this city and its environs during the past year, and generally in a mild form. Small-pox was very prevalent at St. Rochs, the lower part of Quebec, near the River St. Charles, and many severe cases occurred, partially in the city: only three amongst the military, much modified by previous vaccination. Measles was also very prevalent at one period in the citadel, evidently introduced by the women and children of the 100th Regiment from Toronto, on their way to England. There were also some cases of scarlatina, probably of local origin, and cases of these diseases among the women and children of the Royal Canadian Rifles, which arrived subsequently from England; the disease had existed among them during the voyage, and they landed at Grosse Isle under their influence. A few fresh cases occurred after they were sent up to the citadel; but they were soon quite healthy.”

There have been several visitations of cholera in Canada, as will appear from the following statement from the Report of the Central Board of Health, addressed to the Legislative Assembly in 1854:—

“Cholera first appeared in Quebec, and in Canada, on the 8th June 1832, and continued its ravages in that city till the 4th of November. The total mortality up to the 2d of September was 2,218.

“In 1834, the disease reappeared on the 7th July, and prevailed till the 8th of September. The total deaths were 1,282.

“In 1849, it broke out on the 4th of July, and continued till the 17th September. The deaths were 1,052, of which 195 occurred in the Marine Hospital.

“In 1851, between the 25th of August and the 2d of November, 272 deaths from cholera occurred in Quebec, 130 among the citizens, and 142 among sailors and emigrants.

“In 1852, between the 27th September, when the first case occurred in a raftsmen, and the 9th of November, 140 persons died of the disease.

“In 1845, the earliest case occurred on the 20th of June, in a German emigrant, who had arrived on the 13th by the ship ‘Glenmanna’ (a three-decked ship is never so healthy as others admitting of more perfect ventilation), with 674 passengers, among whom there had been 45 deaths during the voyage, chiefly from measles, but in some cases from diarrhoea. This was the only case admitted from the ‘Glenmanna;’ but no fewer than 18 cases were received from another emigrant ship, which had left Liverpool about the same time, had continued healthy during the voyage, and reached Grosse Isle the day after the ‘Glenmanna.’

“The entire mortality in Quebec between the 20th of June and the beginning of September, when the disease ceased, was 748; the districts which were worst drained, and had the most impure water supply, suffered most.”

The Central Board observe:—

“That, in the experience of the most careful observers of epidemics of cholera, it has been shown that internal sanitary measures have been those only which have been followed by marked and satisfactory results. The adoption of thorough drainage, sewerage, and ventilation, with a plentiful supply of pure water, attention to cleanliness, and prevention of overcrowding—means which, in the history of all epidemics, have served to mitigate their intensity, and in many cases to obviate their recurrence—have in like manner limited the ravages, and frequently afforded to communities a freedom from the operations of this formidable disease.”

The

Canada.

The Board recommend "limited quarantine, embracing a consideration of the entire system of emigration to this country, and, secondly, sanitary and remedial measures," for the protection of the health of the immigrants after their arrival in Quebec, where no suitable accommodation awaits them, and where they often contract disease, but also on board the crowded steamers in their passage to Upper Canada. Stress is likewise laid on the importance of a systematic inspection of vessels in the port of Quebec, more especially in epidemic seasons.

"Vessels," it is remarked, "arrive from sea often in a filthy condition, having had cargoes of a putrefactive tendency, whereby the ship and bilge water have been contaminated; numbers of these are congregated side by side, at wharves and mooring places, and their crews, generally indulging in every conceivable excess, soon become the subjects of a prevalent disease. No more certain means are known to prevent the extension of cholera than dispersing the occupants of the house or ship in which it occurs until it be cleansed and purified. It was with this object that the Board introduced the regulation which, it hopes, future legislative power will give efficacy to, that an inspecting health officer be appointed in each of the ports of the province, whose duty it shall be to visit from time to time all ships, steamers, and vessels lying therein, to treat cases of diarrhoea, remove cases of cholera, disperse the crew until the vessel be purified, and exercise all powers necessary for the preservation of the public health. The great utility of these measures of dispersion may be illustrated by the 'Pemberton,' and steamer 'Brantford.' Both these vessels arrived from Grosse Isle about the same time, with cases of cholera on board: in the former vessel the disease assumed within 28 hours an alarming intensity. The case was represented to your Excellency's Government, and referred by them to this Board, which recommended the immediate removal of the sick to hospital, and the dispersion of the healthy passengers by the various steamers, on their journey westward. Of the cases removed to hospital, nearly all proved fatal, the total mortality being 16. But the Board has been unable to trace any further extension of the disease among the passengers going westward, save an isolated case at Montreal. The 'Brantford' proceeded with her cargo to 'Hamilton,' and the painful results of mortality, by the time she reached Kingston, have been a matter of notoriety. Out of a total number of rather more than 200 souls, 51 fell victims to the disease ere she arrived at her final destination."

Surgeon Major Odell remarks, that Quebec "has of late years been much improved by the introduction of pipe water, in connexion with increased sewerage and drainage. The laying of the water pipes, and the cutting through the rock by blasting and otherwise, has dissipated many a deposit of subterranean filth of a most mischievous character; each pipe is accompanied by a sewer or drain at some distance. The wells, or rather reservoirs, supplied by surface and interstitial drip through the fissures of the non-porous clay-slate-rock have been known to be much tainted by the worst impurities carried into them along with the water.

"The troops are not yet supplied with the pipe water from the River St. Charles, but expect it; nor is this supply as yet quite general to the inhabitants, especially the poorer classes.

"The drainage and sewerage about dwellings of all kinds, public and private, is still seriously defective. With reference to the influence of noxious and offensive products from privies, water-closets, stables, &c., deposited on and saturating the earth and basements of buildings with moisture and impurity, the mischief cannot be estimated. The ventilation, too, of dwellings and other buildings is very imperfect, and as yet is not properly understood.

"The general sanitary state of the vessels (the average annual number of which is 1,200) frequenting the port of Quebec is, I am informed, good. German and Norwegian ships are said to be the cleanest. Of those I visited, a Norwegian vessel just arrived with immigrants was clean and well ventilated; the sailors' berths, bedding, and blankets were cleaner and in better condition than British ones, with one exception."

NOVA SCOTIA.

HALIFAX.

QUERY 16 is simply answered in the negative by Dr. Slayter, the health officer of the port. He remarks on the subject of vessels arriving from yellow fever ports, having had the disease on board during the voyage:—"As to the yellow fever, it has never been known to enter the port of Halifax under any circumstances. The most favourable winds that might drive it speedily from its most contiguous and favourite haunts in the southern latitudes never bring it nearer to Halifax than Cape Cod, upon the American shore, before it changes its type, and is no longer yellow fever, but passes into the ordinary bilious remittent type, and loses its essential adynamic characteristics."

Nova Scotia, which escaped the cholera in 1832, when Canada was first attacked, was visited on the recrudescence of the disease in 1834. Halifax was again visited by it in 1850, between the months of July and October.

Nova Scotia.

Newfoundland.

NEWFOUNDLAND.

No detailed replies have been received from this Colony.

Cholera appeared for the first time in the island in the year 1854, the earliest cases occurring about the middle of August, and the disease continued till the end of September. Throughout the summer, the disease had been prevailing in various parts of the United States, and of Canada. Its appearance in Newfoundland could not be traced to importation by vessels.

BERMUDA.

Bermuda.

DURING the last 12 months (from July 1858, to July 1859), only one vessel, the "Ocean Bird," 17 days from Jamaica, had been put in quarantine. She arrived on the 29th December, with clean bill. Two days after leaving Jamaica, five of her crew sickened with yellow fever, and died.

She was detained in quarantine for 10 days, and then sailed with a fresh crew for the United States. The crew, 10 in number, were detained in the lazaret for eight days more. No sickness occurred among them.

No record of previous years has been preserved.

The Bermudas have been repeatedly visited by epidemic yellow fever, with destructive severity. The most recent visitations were in 1843, 1853, and 1856. On none of these occasions was the disease traced to importation by vessels. Sir William Reid, who was Governor of the Colony in 1843, left an official memorandum respecting the epidemic of that year, in which, after stating his opinion that the disease was of spontaneous development upon that occasion, alludes to the want of accurate records on such subjects in the Colonies: "It seems to me a matter deserving remark, that of the many important medical reports on epidemic diseases in the Colonies, sent home to the Naval and Military Departments, no copies are, so far as I can learn, left in the localities to which they refer. On the first attack of an epidemic, there is nothing to be found as a guide from former experience of symptoms, mode of treatment, &c. I venture to suggest, that where there are established stations, either of the army or of the navy, it would be expedient to have copies of such reports made, in order to be left for reference on the spot to which they refer." It does not appear that this wise advice has been acted upon.

An official inquiry was instituted on the spot, by order of the Secretary of State for the Colonies, into the epidemic visitations of 1853 and 1856, and the elaborate reports of the Commissioners, on both occasions, have been published by Government. In 1853, the mortality among the military was excessive, a fourth part of the entire garrison, 1,294 in number, having perished in less than two months. The bad condition of the barracks, and the overcrowding of the men appear to have been the chief causes of this dreadful loss of life. Some of the quarters were declared by the Commissioners to be "totally unfit for occupation." There was also great mortality among the convicts, 161 having died out of the total number of 1,778. The position and the sanitary condition of some of the prison hulks were found to be very objectionable.

The epidemic of 1856 was much less severe than that of 1853, and on this occasion the troops suffered less than any other part of the population. Out of a force of 1,326, only 44 were attacked, and not more than four died, whereas, among 1,110 convicts, there were 134 attacks, and 27 deaths; and among the general population, estimated at 11,092, no fewer than 1,084 were attacked, and 88 died.

The comparative exemption of the military appears to have been mainly owing to the great thinning, at an early period of the season, and before the appearance of the fever, of the men in barracks, and to the camping of them out on healthy localities, moving the tents from place to place when necessary.

In the case of the convicts, the same causes were at work as in 1853, and with like effects. "The disease" reports the principal medical officer of the convict establishment, "fastened itself on the 'Thames' and 'Tenedos' hulks. The first is close, badly arranged and ill ventilated, and a notoriously unhealthy ship, having suffered terribly in 1853. The latter was found on survey to be in a very bad sanitary condition; 13 of her tanks were leaky; there was an accumulation of mud in her hold, and several of her timbers were rotten; a state of things quite sufficient to account for the spread of the fever, if not for its origin." The want of means for dispersing the convicts in epidemic seasons, is dwelt upon by all the medical officers who were examined.

Respecting the origin of the epidemics, the Commissioners in 1853 (none of them were medical men), stated that they could not discover anything like evidence to justify the suspicion entertained by some persons, that the fever had been imported by vessels from abroad; and the medical men who saw the first case, had no doubt as to its indigenous development. The Commissioners in 1856 (two members were medical) declared their conviction that the epidemic was not introduced, but that it originated in the Colony.

No information has been received respecting any other epidemic diseases in Bermuda. Isolated cases of malignant cholera have occurred, but the disease did not spread.

Deputy Inspector Dr. Rees, R. N., says:—"The sanitary state of all the towns, and of almost all the houses in Bermuda is bad. None of the towns, and few of the houses are properly

properly drained; and there will always remain the great difficulty of a supply of water. At this place, the water, for all purposes, is rain water, collected into and kept in tanks."

Dr. Hunt, one of the most experienced resident medical men in the Colony, when commenting on the very large proportion of the civil population attacked by the fever of 1856, remarks: "Persons of every class suffered in some degree; but the poor, the ill-fed, and above all, the inhabitants of low, crowded, ill-ventilated abodes, were amongst the chief sufferers. In one such dwelling, more remarkable than the rest for its bad sanitary condition, a whole family of five children fell victims."

Bermuda.

WEST INDIA COLONIES.

FROM the irregular and defective manner in which quarantine measures have been carried out in these colonies, but little reliable evidence can be had respecting the number of vessels which may have been detained, or the specific causes of their detention. Neither have any accurate records been kept of epidemic invasions of those diseases against the introduction of which, from abroad, quarantine has been instituted. The following particulars, however imperfect, will serve to show the wide extent of the field for observation, and to suggest at the same time what important results to science and to humanity might accrue from an accurate registration of epidemic visitations in the many separate but contiguous communities, whose prosperity is so dependent upon the number of their effective population.

West India
Colonies.

JAMAICA.

DURING the five years from August 1854 to June 1859, five vessels only were quarantined at Port Royal.

Jamaica.

One in October 1854, on account of cholera on board; she was released on the following day.

One in April 1856, for small-pox, during the voyage from Philadelphia. Duration of quarantine, 35 days. A second case occurred on board during the detention. The cargo was considerably damaged in consequence of the long detention, there being no lazaret to land it.

One in May 1857, for measles, during the voyage from New York.

One, a transport, with troops on board, in May 1857, for three cases of small-pox during the voyage. The troops were landed on the fourth day after arrival, and marched up to Newcastle barracks, with the exception of the sick, who were landed at Apostles' Battery, situated at the entrance of the harbour of Port Royal. While there, a child who had been landed with its parents (one of their other children having had small-pox) became affected with an eruption, which was, however, doubtful in character. Chicken-pox was frequent at the period in Jamaica, and also at Nassau, Bahamas; and small-pox was prevailing at Honduras.

One in March 1858, on account of a case of small-pox on the voyage from Baltimore; detained in quarantine for 15 days.

The number of vessels quarantined at Port Royal between 1845 and 1854 is not stated in the Parliamentary Return. No record had been kept. When an official inquiry was made by Dr. Milroy in 1851, no reliable information could be obtained, as stated in that gentleman's report to the Colonial Office on the cholera epidemic in 1850-51. "The utmost irregularity prevails in the entire machinery of quarantine throughout the island. Hitherto, there has been no code of instructions to regulate the conduct of the health officer, either as to the diseases for which quarantine is to be imposed, or as to the period of detention to be required. Hence there has been no uniformity of procedure; everything has been left to hazard or caprice; what is done in one place is not done in another, and *vice versa*. * * * It is impossible therefore to ascertain with any accuracy the results of past experience upon almost any of the points involved in this inquiry."

Jamaica has been repeatedly the seat of some destructive epidemic disease, for which quarantine has been liable to be imposed, and during the last 10 years more signally so than previously.

It was visited by cholera for the first time in the autumn of 1850; the pestilence raged with great malignancy over the island till the spring of the following year, when it subsided, to re-appear partially in different districts during the summer, and to be followed by an epidemic of small-pox. It was estimated that the population, supposed to be about 400,000, was nearly decimated by the cholera alone. The circumstances attending the development of the disease at Port Royal when it first appeared, and where the mortality was very great, were investigated with great care by the naval and military medical officers resident on the spot; and the result of their inquiries was that the disease could not be traced to importation. This opinion was shared by all the leading medical men of Kingston.

That the excessive virulence of the disease in most parts of Jamaica was mainly owing to the filth and squalor of the towns and villages, the foul, damp, and stiling condition of the dwellings of the people, their diet and mode of living, the want of medical

Jamaica.

assistance, &c., cannot be doubted; and urgent representations were addressed by the medical commissioner sent out by the Colonial Office, and subsequently by the local central Board of Health to the island Legislature, on the necessity of sanitary and hygienic measures for the defence of the public health, the arrest of disease, and the prevention of the large waste of life which, there was reason to believe, was going on at all seasons.

Dr. Milroy expressed his fears at an early period that the cholera might indigenise itself in Jamaica. "There are," he remarked, "many points of resemblance and many features in common, as respects climate and natural condition, with those parts of the East Indies where the disease is seldom long absent. The very lingering of the pestilence at the present moment (March 1851) in some places, and its re-appearance in others which had been supposed to be exempt, cannot have escaped the notice of any one; to the medical man more particularly they are full of significance. I am the more anxious to awaken public attention to the necessity of measures for the preservation of the public health, as an idea is very generally prevalent, I find, that there is little or no risk of the yellow fever ever re-appearing with virulence in the island, in consequence of its absence in the epidemic malignant form for so many years past. The idea is quite erroneous, and may, if uncorrected, prove very mischievous. The recent severe outbreak of that pestilence in Brazil, a country which had been for nearly a couple of centuries exempt from it, and its existence at the present moment in Cayenne, and also, I believe, in Demerara, are facts which should not be overlooked."

During the next four or five years, there was more yellow fever in Jamaica than there had been for 15 years before.

In 1856, it prevailed for the first time in the mountain cantonment of Newcastle, nearly 4,000 feet above the sea level. From Dr. Lawson's valuable report, the disease appears to have been of local origin, and to have spread quite independently of contagion.

The following particulars respecting the subsequent history of the cholera in Jamaica after 1851, are derived from the replies of Deputy-inspector Dr. Lawson, principal medical officer of the garrison.

In the end of 1853, cholera was prevailing again in Cuba, and sporadic cases of choleraic diarrhoea had occurred in Kingston and its neighbourhood some weeks previous to the 16th January 1854, on which day Drs. Campbell, Fiddes, and Magrath, three of the leading physicians of the city, addressed the mayor on the subject, recommending the adoption of sanitary precautions.

The Royal mail packet "Clyde" arrived on the 21st January from St. Thomas's, where cholera had appeared, it was said, on the 21st December last. Two or three hours after the "Clyde" reached the wharf, one of the stokers died of what was thought to be cholera, though some medical men had a doubt upon this point. Another man on board, however, was labouring under decided cholera; he was removed to lodgings on shore. Another mild case occurred a day or two after in the same ship, and was also landed. Both these patients recovered.

Between the 21st January and 11th February, a few sporadic mild cases occurred about the city. On the evening of that day, a seaman of the brig "Martha," of Halifax, was attacked; the crew had been healthy during the voyage from Nova Scotia. He was taken next day to the hospital on shore, and died on the 13th.

On the 15th, a man and two women, inmates of the lunatic asylum (adjoining the hospital, but separated from it by a wide road and high wall) were attacked. These persons occupied cells near the cesspools, which were in a very foul state. The male lunatics were removed to the new lunatic asylum at some distance, eastward of the Penitentiary, on the 18th, and a case of cholera appeared among them on the 20th.

On the 21st, a case appeared in the public hospital; and as the disease continued among the female lunatics, they also were removed on the 22d to the new asylum. The sick from the hospital were removed the same day to the Admiral's Pen, a mile to the north of Kingston.*

On the 24th, the disease appeared in the general Penitentiary, several cases of diarrhoea having occurred for a few days previously.

On the 18th of March, the disease appeared among the prisoners of the county gaol. From the 10th of February to this date, 34 persons had died in various parts of Kingston. Up to the 24th March, 30 prisoners and two attendants in the Penitentiary had died; in the county gaol, one prisoner; and among the patients of the public hospital and asylum, at various places, 33.

The disease appeared among the black troops at Spanish Town on the 22d of April. Some of the men were removed to camp; and among them cases commenced on the 9th of May

* On the first visitation of cholera in 1850 the mortality in the asylum was excessive; of 123 inmates 82 perished within five days. On that occasion the lunatics were removed from the building, but not until the mischief was done. In the Jamaica Report the Asylum is declared to be "altogether most unsuitable as an abode for the insane, and should be immediately evacuated."

The public hospital too, suffered severely; nearly a fourth of the patients were attacked, and one-half of the cases were fatal. Many of the inmates were then also removed to the Admiral's Pen. The sanitary condition of the hospital had long been most faulty; foul cesspools and drains were close to overcrowded wards; diarrhoea, erysipelas, and scurvy, were of constant recurrence among the inmates.

The bad state of the asylum and hospital is still the subject of strong animadversion in the Colony.

May. The black troops at Port Royal were also affected on the 18th of May. None of the white troops seem to have died of the disorder.

In 1855 cholera was again seen in Jamaica. The Royal mail packet "Atrato" arrived on the 21st of October 1855, having some cases of cholera on board. After some hours' detention she was admitted to pratique. Two of the crew, and one passenger suffering from cholera, were sent to lodgings in Harbour-street, in the lower part of the town. The ship was hauled out into the stream, cleaned and purified. No fresh cases occurred among the crew, nor among any of the inmates of the houses to which the sick were removed. The bed and table linen of the mail steamers is washed at the Penitentiary. On this occasion extra precautions were taken. After being immersed in sea water, the linen was thoroughly boiled in cauldrons at the landing place, outside the Penitentiary walls, before it was taken to the female prison to be washed. There was no communication between the boat's crew who had brought the linen, and any of the prisoners; the linen having been thrown into the water by the former; and none of the prisoners employed in receiving and boiling the linen were among those subsequently attacked by the cholera.

On the 29th of October, a prisoner employed, and sleeping in a distant part of the building, was attacked with diarrhoea, which passed rapidly into cholera, and proved fatal in 44 hours.

On the 6th of November the disease having become epidemic in the prison, 25 of the inmates being soldiers, were removed to various stations; and on the 30th all the male prisoners were removed from their cells, and placed in tents in the open yard immediately in front of them. Only three new cases occurred afterwards.

There were altogether 49 attacks, of which 27 proved fatal.

None of the female prisoners suffered from the disease.

The female portion of the prison is walled off from the male side, and the cells in it are very differently arranged.

The new portion of the male prison in which the cholera cases occurred was occupied in 1855. The cells are on two floors, facing outwards on each to an open gallery; the walls and roof are brick, whitewashed, and the floor deal. Their dimensions are eight feet in length, four feet eight inches in breadth, and seven feet nine inches to the spring of the roof, which has a rise of about a foot. Their cubic area is therefore about 300 feet. Over each door there is a barred opening of the same width as the door, with a curved top corresponding with the arch of the cell, and there was an opening with perforated metal in the upper part of the back wall of the cell, which communicated with a trunk passing down this wall to an air chamber below the basement floor; but there was no arrangement for withdrawing air from the cell, or forcing fresh air into it. These cells are now fitted with iron doors, with open bars, and the outer close wooden doors may be left open; but in 1855 these doors were closed every night.

The female cells are placed back to back, are about the same size as those in the male division, but they are open at the top to the rafters, from end to end of the building, the roof of which is provided with large louvred openings for ventilation. Besides this arrangement, there is at each side of the cell door, about four feet from the ground, an opening of about half a square foot, communicating directly with the external air.

The practical result was that the women who washed the clothing, had no case of cholera among them, while the men who had not come in contact with it, suffered severely. And as if to complete the experimental evidence, no sooner were the latter removed from their cells into tents, then the disease ceased among them.*

Among the military prisoners removed on the 6th, three were subsequently attacked at Spanish Town, but all recovered.

In the county gaol, situated in the centre of the town, five of the prisoners were attacked in the latter part of November; all in one section of the building, and nearly about the same time. Two died. How many persons were attacked in town is not known; but three deaths from cholera are entered in the sexton's record on the 2d, 8th, and 28th of November. Whether any cases of the disease had occurred in 1855 in Kingston before the arrival of the "Atrato" is not stated. On September 20th, 1857, a man of the 41st regiment was attacked at Newcastle with cholera, but recovered; and a month subsequently several cases of choleraic diarrhoea verging on cholera, occurred at Kingston.

In 1859 sporadic cases of the disease occurred in Kingston on 27th of August, 4th and 17th of September, and two on the 2d of October. All were distinctly marked cases of cholera, but one only, the first, was fatal. None of these cases were imported.

"These facts for 1859 are conclusive," Dr. Lawson remarks, "as to the possibility of cholera arising here without importation or communication with previous cases of the disease. They present a series of cases extending over a period of four months, and their nature has been vouched for by those experienced professional men, who assure me that they cannot trace any communication between them."

"The

* In 1850, among 508 prisoners in the Penitentiary on the first occurrence of the disease, 128 deaths occurred between the 15th October and the 20th November. Most of the attacks took place between 10 p.m. and 5 a.m., while the prisoners were locked up. The insufficient size and the imperfect ventilation of the cells of the male prisoners are pointed out in the Jamaica Report; and the stifling atmosphere in them at night when the doors are shut, "from the malposition of the openings for the admission of fresh air below, as well as for the escape of the impure air above. The tubs add greatly to the offensiveness of the cells. Many of the fatal cases of cholera occurred in these single cells." The prison chapel, from its thorough ventilation, was then pointed out "as a convenient dormitory in times of epidemic sickness for the purpose of thinning and dispersing the prisoners." The situation of the Penitentiary is one of great humidity.

Jamaica.

"The facts in 1855 show that cholera appeared in different places among segregated bodies of persons as well as in the town generally. The cases in the county gaol are conclusive on this point, and the experience in the Penitentiary is not such as to sanction the notion that the bedding from the "Atrato" had anything to do with its occurrence, while it shows that those who suffered were predisposed to unhealthy action by being placed in small cells with insufficient ventilation.

"Another fact which has been noticed elsewhere is the disposition of the disease to re-appear in the same localities in different epidemics. The lunatic department of the public hospital seems particularly obnoxious to these outbreaks; the Penitentiary is another; while the county gaol, which is in a direct line between these establishments, and about equidistant from them, seems to have suffered much less.

"These facts all seem to support the idea that cholera here is intimately associated with some local circumstances, of which crowding, insufficient ventilation, and foul drains and cesspools are part, which lead to the disease during certain constitutions of the atmosphere, but are all of them beyond the power of quarantine to limit or amend."

Dr. Lawson mentions, in replying to query 18, that "In 1851 the troops at the hill station of Maroon Town, were prevented communicating with the country, and they escaped cholera. The segregation was assigned at the time as the cause of the immunity; but any one acquainted with the state of information on the subject will see that the fact does not authorise the conclusion. It is necessary first to make sure that communication can propagate disease before concluding that segregation has prevented it. The segregation in the Penitentiary and gaol did not prevent its appearance, while the communication in Kingston and Spanish Town did not propagate it."

Small-pox prevailed epidemically in 1831 throughout the island, which had been free from the disease for 15 or 20 years. It was supposed by some persons to have been brought from Nassau; but its origin or channel of introduction could not be traced. It spread over the whole island, and occasioned a large mortality.

The next epidemic was in 1851, and followed upon the arrival of a vessel from the coast of Africa with negro immigrants, in Kingston harbour. In consequence of the disease having existed during the voyage, the vessel and all on board were kept in strict quarantine for 10 or 12 days, and remained in the harbour for about three weeks before she went round to the north side of the island to land the immigrants, who were dispersed over different properties. The disease did not begin to manifest itself till a month subsequently. Chicken-pox had been prevalent in many parts of the island prior to the arrival of the above vessel. Moreover, several of the other West India islands, as Barbadoes, St. Lucia, Montserrat, St. Kitt's, and Granada had suffered from small-pox during the year; and in some of them, too, a varicellar or varioloid disease had existed.

Besides these two epidemic invasions, isolated cases, or small groups of cases of small-pox had on several occasions during the interval occurred in Kingston and elsewhere in persons who had been landed notwithstanding the quarantine surveillance at Port Royal and at other ports of the island.

Vaccination, which had been for many years quite neglected among the mass of the population previous to the epidemic of 1851-52, was then extensively practised, as recorded in the Appendix to Mr. Simon's most valuable Report on Small-pox and Vaccination.

Varicella has frequently appeared, and prevailed more or less extensively in different parts of the island.

Measles has been of not infrequent occurrence in Jamaica, notwithstanding the attempts made to exclude its importation by vessels. There was a wide-spread epidemic of the disease in 1821; and it has often prevailed since in different districts. In 1851, a vessel of war was kept in quarantine at Port Royal for upwards of a fortnight on account of two cases of measles on board.

Scarlatina prevailed epidemically in 1841.

The average annual number of arrivals at Port Royal is about 450, of which 60 are ships of war and 36 belong to the Royal Mail Steam Company.

Dr. Downer, the quarantine medical officer, gives it as his opinion, that Port Royal, "although very dirty, is a remarkably healthy town." Unfortunately there is no reliable registration of births and deaths there, or in any other part of the island, to ground any trustworthy opinion. The records of our army and navy testify to its insalubrity for strangers; and the annual very instructive reports of the Central Board of Health of the island in 1852-3-4 (since discontinued by the Legislature), gave evidence of the extremely unhealthy condition of Kingston and other towns.

B A H A M A S.

NASSAU.

Bahamas.

FROM 1855 to 1859, vessels or persons were placed in quarantine on five occasions; viz.—

In May 1855, a vessel from New Orleans bound to Europe, and wrecked on one of the adjacent keys. One of the shipwrecked crew was found to have small-pox, and he was detained

detained for four weeks at the quarantine station. The rest of the crew were admitted at once to pratique.

In November 1856, the shipwrecked crew of an American vessel from Hayti, brought to Nassau by a native schooner, were detained in quarantine for four days in consequence of two of them labouring under fever.

In August 1857, a vessel from Belize, Honduras, where small-pox was prevailing, was quarantined for 10 days, to allow of the vaccination of several of the crew and passengers, and the thorough cleansing, fumigation, and whitewashing of the vessel. The vaccinated persons on board were admitted to pratique on the third day.

In September 1857, a vessel from North Carolina, in distress, with all her crew sick with remittent fever, one of whom had died. She was kept in quarantine for 10 days until the man recovered.

In December 1858, a vessel from Jamaica with three of her crew sick of remittent fever; one died the day after arrival. She was quarantined for four days until the recovery of the men.

During the 10 years from 1845 to 1854, five vessels only were placed in quarantine.

The following particulars are communicated by Dr. Black, health officer, and Dr. Duncombe, medical inspector.

In 1830, small-pox prevailed. It was believed to have been imported from Cuba. It spread extensively, and caused very considerable mortality in this and the other islands. Vaccination being adopted was attended with excellent results.

It was again introduced in 1845; this time from St. Domingo, and speedily became epidemic. Scarcely any escaped who had not been vaccinated. The disease spread to several of the out islands, and caused great mortality.

Since that year small-pox has not appeared, although imported cases have occurred on different occasions, as in February 1851, by a schooner from London, with two of her men ill of the disease. The men and passengers were landed at Athol Island, and remained there for four weeks. No other case occurred. And again in 1854, when a vessel from New York arrived with three cases of small-pox on board. She was treated in the same way as the former, and the disease did not spread.

In 1845, several cases of scarlatina occurred in Nassau; but the disease did not spread to any extent.

The first case occurred in one of the young children of a family who had had the disease before leaving Philadelphia, nearly three months before. The disease seems to have been latent in the system of the child for at least 11 weeks, if not longer, during which interval she was not altogether well, but feverish and ailing.

Immediately after the case of this child, several occurred in Nassau, the first being in the family of her nurse, and the next among her cousins.

Dr. Duncombe instances the above to show how vain it is to hope for the exclusion of epidemic disease by quarantine restrictions.

In 1851, a severe and wide-spread epidemic of influenza prevailed in the town and Colony.

In February 1853, scarlatina was introduced from New York, spread extensively, and proved very fatal among children. Dr. Duncombe says that it appeared in the latter part of 1852.

Since 1855, there have been epidemics, of varicella, measles and hooping-cough. The two last diseases appeared in 1858; the former in the spring, and the latter in October.

The measles, Dr. Black says, was introduced from Abaco (one of the Bahama group) into which it had been brought from America. The hooping-cough also was introduced from the same island; at least it prevailed there, together with the measles, before its appearance in Nassau.

The mortality was moderate, compared with that from scarlatina.

There had been a severe epidemic of measles and influenza in 1843.

With respect to yellow fever, occasional cases of it occur in summer among Europeans, but it has never prevailed as an epidemic.

No quarantine has ever been imposed on the mail steamers, though every month arriving from St. Thomas during virulent yellow fever epidemics there, and at other West India islands. Cases have repeatedly been landed from these steamers and treated on shore, without the disease spreading to any extent.

Dr. Black, health officer, states that "The cholera broke out in September 1852, being introduced, it was supposed, by a vessel from New York, where the disease was then prevailing. The disease spread very rapidly in the town, the neighbouring districts, and the out-islands. The mortality was great. In Nassau, among the black population, 1,000 died out of 9,000. Scarcely an individual escaped. The disease prevailed nine months, reaching its height in the second and third months of its prevalence."

Dr. Duncombe, Medical Inspector since 1856, states, that he saw the earliest cases of the disease in September 1852, and that he is quite satisfied that the vessel from New

Bahamas.

York (where the disease did not exist at the time of her departure) had nothing to do with the appearance of the pestilence in the Colony. One of the crew was said to have died of cholera at New York, before departure. No sickness occurred during the voyage, nor while the vessel was at Nassau.

During the months of May and June of this year (1852), there had been a partial epidemic of choleraic disease among all classes; severe in symptoms, but fatal only among infants.

Cholera had ceased in February 1853. The cholera was speedily conveyed to the different islands of the Bahama group, following apparently the course of communication by vessels, at least in some instances.

Dr. Duncombe says, that "During the prevalence of cholera, in a most malignant form at New York, in 1849, and in Cuba, in 1851, no quarantine was imposed at this port on vessels arriving from these places, and no injury resulted therefrom."

VIRGIN ISLANDS.

Virgin Islands.

CHOLERA prevailed, for the first time, to a great extent in the end of 1853, and early part of 1854. Rather more than one-seventh of the whole population was estimated to have perished. The first case occurred on the 25th of December 1853, in a black woman, who had arrived the previous afternoon at the town of Tortola, from St. Thomas, where the disease was then raging. The disease continued till the following March. It was not confined to the low lands, but raged equally over the heights.

In 1843, small-pox prevailed to a slight extent.

Yellow fever is almost unknown in these islands, although frequently so violent in the adjoining island of St. Thomas.

MONTSERRAT.

Montserrat.

In 1849, the small-pox appeared here; it was supposed to have been imported from Trinidad; where the disease was then raging.

Out of a population of 7,000 persons, 5,000, it is believed, passed through the disease, and of these 200 died.

No general system of vaccination existed in the island previous to the breaking out of the disease, and the mass of the people were consequently unvaccinated.

A full narrative of this visitation will be found in the West India Blue Book Reports for 1850.

In the spring of 1850, small-pox prevailed to a great extent. "The most appalling scenes of disease, destitution, and misery presented themselves on every side."

NEVIS.

Nevis.

On the 4th and 5th December 1853, the earliest cases of cholera occurred, in Charlestown, the first victim being a child, and the two next being the father of the child and a servant in the same house. Within a few days the mother and another child were attacked, but recovered. In the meantime, however, other fatal cases had occurred, not only in the immediate neighbourhood, but in an adjoining village near the town.

Doubts had at first been entertained as to the true nature of the sickness, but these soon vanished, and the utmost consternation prevailed, many of the inhabitants seeking refuge in the country. Ere long no part of the island was exempt. In Charlestown, with a population of 1,400 or 1,500 souls, the mortality had steadily increased, and on Christmas-day as many as 33 deaths took place. In some of the villages, near the town, the disease was equally fatal.

It was impossible for the only two medical men on the island to afford the necessary assistance to the sick, and a physician from St. Eustatius, who had offered his services, was unhappily prevented from coming by the quarantine obstacles. The result was that numbers fell victims without any medical aid whatever. Much mischief too was done by ignorant empiricism; and to add to the miseries of the time, the sick were often abandoned by their nearest relatives, and left to perish with no one beside them. Many horrible scenes occurred. The disease ceased in Charlestown and its immediate neighbourhood in the second week of January, but it continued to exist in several of the rural districts till the beginning of March.

The total mortality in the several parishes of the island amounted to 891.

That the ravages of the pestilence were very greatly aggravated by local causes could not admit of doubt. The town of Charlestown abounds in low and ill-ventilated houses, often

often surrounded with accumulations of all sorts of filth. In the rural districts, the same evils existed; collections of manure, pigsties, and pens for cattle and sheep are close to the dwellings of the people.

As to the origin of the disease, it was attributed by many to importation by an emigrant ship, the "Glenmanna," from Liverpool, which anchored on the 23d November in Charles-town roads on her way to New Orleans. A number of the emigrants had died of cholera on the voyage, and several were sick at the time of arrival.

Other persons had grave doubts as to the connexion between the arrival of this vessel and the appearance of the disease, and it was at the time remarked that of more than 20 persons who went on board (some of them too visited the sick), only one subsequently fell a victim to the disease; he, it is to be remarked, was the second that was attacked on shore.

Nevis.

ST. KITT'S.

THIS island escaped the cholera in 1853, while it prevailed in the adjoining island of Nevis, from which it is distant only six miles. A strict quarantine had been kept up, nothing being allowed to be landed from Nevis except letters, which were first fumigated. Cholera appeared in the island at the beginning of November 1854. Dr. Cooper, then one of the medical inspectors in the West Indies, visited the island in the course of that month. He states that, notwithstanding the alleged strict quarantine against Nevis at the beginning of the year, communication continued the whole time, but that St. Kitt's remained unscathed for many months after its cessation in the adjacent island. The disease first appeared on an estate about a mile from the town of Basseterre; next, on another estate, about a quarter of a mile off. In less than a week after the second case it commenced its ravages. Several deaths had occurred in the town of Basseterre before the arrival of the steamer "Conway" from England, which was believed by many persons to have imported the disease.

St. Kitt's.

In Basseterre and the neighbourhood, with a population of 6,200, the number of deaths on the 22d December was 110. The entire mortality, from the beginning to the end of the epidemic in the last week of January 1855, amounted to 3,920, out of a population estimated at 24,571, which gives a per-centage of 15.78, or between a sixth and a seventh of the whole inhabitants of the island.

Dr. Cooper considers that the attacks were probably about three to every death. As in the other West India Islands, the white residents suffered very little; not more than five fatal cases occurred among them.

Besides the unwholesome character at all times of the dwellings of the black and coloured native population, rendered still more unwholesome at night by the crowding together of the inmates and the careful exclusion of every breath of fresh air, Dr. Cooper alludes to their diet and mode of living as greatly aggravating the ravages of the pestilence. "The diet of the black and coloured population is almost entirely vegetable, with little or no animal food, not even milk; and if any substance other than vegetable does at any time enter into the composition of their meal, it is occasionally fish, and that generally salted. They seldom eat more than one meal (supper) in the 24 hours, and they then distend their stomachs with immense quantities of this bulky food. This of itself tends to debilitate the stomach and bowels, they are wholly unable to digest the large amount of food suddenly thrust upon them, and nature relieves herself by much of it passing away undigested in the form of diarrhoea. . . . It is well known how great a mortality occurs among the native inhabitants in the autumnal season. Dysentery and diseases of the bowels generally at such times are almost always fatal. It was at such a season (the fall of the year) when the state of the weather for the last two seasons had been of an unusual character, that the epidemic cholera fell upon the people." The disastrous effects of the visitation were increased by the want of sufficient medical assistance to arrest the disease in its early stage; since the abolition of slavery the number of resident medical men has much diminished. "Both the labourer and the class who can afford to pay will be left without any qualified medical attendant whatsoever, much less a choice, unless some means are provided other than at present exist. The wisdom of expending large sums in the importation of labourers is not very apparent, whilst those already on the spot are left unprovided with the means of preservation against the attacks and ravages of sickness and disease."

A varioloid disease prevailed extensively in St. Kitt's in the spring of 1850.

BARBADOES.

In 1854, three vessels from Bristol were quarantined for one day each, in consequence of a case of small-pox having occurred during the voyage.

In 1855, two vessels from Bahia were detained for one day each, in consequence of cases of yellow fever during the voyage.

In 1856, one vessel from Philadelphia was detained four days, in consequence of cases of small-pox on the voyage.

Barbadoes.

Barbadoes.

In 1857, 31 vessels from Demerara were placed in quarantine, which varied from one to five or six days, in consequence of the existence of cholera in that Colony. No case of the disease occurred in any of the vessels except one during the voyage, or while they were detained.

In 1858, two vessels, one a troopship from Portsmouth, were quarantined for a day or two for small-pox having occurred during the voyage.

During the 10 years from 1845 to 1854, 44 vessels were placed in quarantine. The aggregate number of days for all the vessels was 139. The longest detentions were for 24, 17, and 31 days, and were in the case of troopships arriving in 1846, 1847, and 1848. After 1849, quarantine detention seems to have scarcely ever been imposed.

Towards the end of 1852, H. M. S. "Dauntless," with 33 cases of yellow fever on board, was admitted at once to pratique, the sick landed and removed to the military hospital of St. Anne's, where they rapidly recovered. They were mingled with the other inmates in the wards of the hospital; no instance of the disease being communicated to the latter or to the attendants occurred, and the garrison remained healthy. The disease had been very fatal in the "Dauntless" before her arrival. Occasional sporadic cases of the fever occurred, not only in the town but also in the country districts, during the stay of the ship, but they were considered to be independent of and unconnected with her arrival. The disease was prevalent at the time in British and in French Guiana.

The principal seat of yellow fever in Barbadoes has very generally been in the barracks of St. Anne's, and most of the victims have been among the military. There have been no fewer than six outbreaks since 1836, whilst only once in this time has it been epidemic in the town.

In 1847-48, and again in 1849, it prevailed extensively among the troops, but the rest of the community were entirely exempt; and although many of the officers who contracted the disease in the barracks sickened in their lodgings in the town, not a single instance occurred of a second inmate being attacked who had not inhaled the poisonous malaria of St. Anne's.

In 1852, yellow fever assumed a comparatively partial epidemic form; but there was no evidence, nor even any rational conjecture, that it was then imported from abroad, any more than on any former occasion. Some of the earliest cases occurred among the garrison, and appeared in the same barrack, and in the same room of the barrack, in which it broke out in 1848.

In 1851, Dr. Linton, then principal medical officer in the island, drew up a report, addressed to the Commander of the Forces, on the sanitary evils of the garrison, and suggestions for their correction.

In his reply to some queries issued by the local Board of Health, Dr. Linton said, in reference to the garrison and neighbourhood of St. Anne's, that "the sanitary condition of the locality is bad, and the drainage and sewerage are very defective. There is a bad swamp near the garrison, and others about two and a half miles off; and, intermediately along shore, salt and fresh water marshes, and almost the whole of the neighbouring land to windward, is liable to be flooded and to take on the nature of temporary swamps."

The reports of (now Inspector General of Hospitals) Dr. Linton and also of the late Dr. Gavin on St. Anne's were forwarded to the Secretary of State for the Colonies [but no copies are preserved among the papers of the local Board of Health]; and they were subsequently referred to and reported on by a Board of officers on the island, who forwarded to the authorities at home a report on the sanitary condition of St. Anne's, which was submitted to Colonel Tulloch for his opinion.

In 1854, out of a garrison of about 1,500 men and officers, 219 deaths occurred from cholera among the men. There were no fatal cases among the officers. This fact is very significant.

"It is much to be regretted, for the sake not only of the island, but of the West Indies generally," writes the secretary of the local Board of Health, "that no comprehensive report was made of the dreadful visitation of cholera which ravaged this Colony from May to August 1854, carrying off, it is believed, fully 16,000 persons out of a population of 130,000."

The great majority of the victims were among the lower orders of the town population, and the labourers on the estates. Everywhere the disease manifested a peculiar tendency to appear more or less virulently where certain local conditions known to be unfavourable to health existed. The people were generally crowded together, utterly neglectful of attention to sanitary requirements. Bridgetown abounded with impurities, notwithstanding that much had been done in 1851, when "hundreds of cart-loads of filth which had been accumulating for more than a century were removed," and when overcrowded graveyards, piggeries, &c., were placed under control.

The pestilence suddenly broke out about the middle of May, in one of the native villages or districts of the town, where the people were packed together in the most miserable huts, dark, dirty, and unventilated, destitute of all appliances for decency and cleanliness, some with the bare earthen floors, which absorbed whatever was thrown upon them, others with boarded floors only sufficiently raised to allow of accumulated refuse under them, but not for its removal.

This was the general character of the native villages, both town and rural. "The abominations," wrote Dr. Clarke, one of the leading medical men, "which everywhere localised the disease and aggravated its malignancy, rendered futile all endeavours to arrest its march. Panic pervaded the entire community; trade was paralysed, agricultural operations suspended, and gloom and misery prevailed everywhere." For some time after the earlier cases occurred, there was some difference of opinion whether the "real disease" was in the island.

"Although Bridgetown is now (June 1859) cleaner than ever it was, its sanitary condition is far from being such as to warrant the hope that a second advent of cholera would find those localities where it last established itself better prepared against its assaults, or the lower classes of the population a less easy prey than in 1854."

A large amount of highly instructive information respecting the sanitary condition of Bridgetown, and of the island generally, accompanies the replies.

Besides the yellow fever and cholera, small-pox has on several occasions of recent years proved very destructive in Barbadoes.

In 1840 a fatal epidemic prevailed. The disease was again prevalent in 1846.

Towards the end of 1850, influenza was followed by much varioloid disease and by measles.

In 1852 measles and whooping cough prevailed extensively over the island; and in 1853 small-pox, but in a mild form, existed in several districts.

That quarantine regulations have not succeeded in Barbadoes in the object for which they were established would appear from the following statement in the report of the Secretary of the local Board of Health:

"The enlightened portion of the public here are convinced that quarantine furnishes no protection against infection, and that, whilst its enforcement interrupts commerce, it is further injurious in encouraging a false and delusive sense of protection, inasmuch as it prevents that due attention to internal sanitary improvements which experience has proved to be the only security against the worst consequences of epidemic outbreaks."

Moreover it was found here, that when the most stringent regulations were in force, it was notorious that they were being constantly evaded, and that they were not, and never had been, duly carried out. Accordingly, in 1849 the Board of Health adopted a report of their committee, which recommended "the abolition of the existing quarantine laws, and the substitution in lieu thereof of sanitary and precautionary measures."

Barbadoes.

DOMINICA.

SMALL-POX occurred in 1848. It was introduced from Martinique and Guadeloupe, where it existed. The disease was mild, and did not spread very extensively. Vaccination had been general.

Dominica.

The previous occasion in which small-pox was in the island was in 1830. Its ravages were then extensive.

Dominica escaped cholera in 1854.

ST. VINCENT.

SMALL-POX prevailed with severity in this island in 1847 or 1848. In 1854 the cholera prevailed in the months of August, September, and October.

St. Vincent.

ST. LUCIA.

In 1848 small-pox appeared in the autumn, and prevailed to a considerable extent. The disease had been existing previously in Martinique, and a quarantine had for some time been instituted against that island.

St. Lucia.

In the spring of 1850 small-pox continued to prevail.

On the 14th May 1854 cholera appeared in Barbadoes, and on the 20th June quarantine was established against arrivals therefrom.

On the 10th July 1854, Grenada was declared here to be infected.

St. Lucia.

On the following day the disease appeared in St. Lucia, where it continued till the beginning of November. The number of deaths was computed at 2,022; but there is reason to believe that this number is short of the actual mortality, as the deaths in the interior could not be ascertained. The population of the island was estimated at 24,185.

In the town of Castries there was alarming mortality in a low filthy district, where the houses are miserable and densely inhabited. "To quiet the panic, upwards of 100 rounds of artillery were fired in the district, and seemingly with advantage."

GRENADA.

Grenada.

IN 1837 small-pox was introduced from Martinique, and spread with great violence.

In 1849 it was again introduced from one of the neighbouring islands; but it was prevented spreading.

In 1854 the cholera appeared in June, and continued to prevail till August. There was no evidence of its importation; but some believed that it had been introduced from Barbadoes.

TOBAGO.

Tobago.

IN 1836 yellow fever was most destructive among the garrison.

In 1839 the same disease prevailed among the European civilians, especially in Scarborough, and was very fatal.

In 1845 (Christmas), scarlatina prevailed over the length and breadth of the island.

In 1851 measles prevailed very generally, and ushered in hooping cough, which was very common in 1852.

In 1853 the yellow fever appeared among the garrison. It was supposed to have been brought from Barbuda, where it was raging with violence. The troops had to be camped out.

In 1854, when cholera was prevailing in Barbadoes, Trinidad, and Grenada, a strong choleraic tendency manifested itself by bowel complaints, and a few cases of spasmodic cholera, which however were not fatal.

TRINIDAD.

Trinidad.

IN 1854, from June 17th to September 3d, 39 vessels, all from either Barbadoes or Grenada, in which islands cholera was prevailing, were detained not for any fixed number of days, but only to have the ships cleansed, and the clothing of the crews, &c. washed, when pratique was given. Cases of diarrhoea occurred among some of the crews.

In June 1858, one vessel from the Cape de Verdes was placed in quarantine; cause of detention was that small-pox had broken out during the voyage among the immigrants, who were landed on "the five islands," five or six miles from the Port of Spain. The disease continued to spread among them for some time afterwards; but the number of fresh cases is not given. None of the officials were attacked. No other instance of a vessel having been placed in quarantine has occurred since.

Besides the small-pox in the immigrant ship "Penelope," from the Cape de Verdes, in 1858, the small-pox was introduced in 1857 from Martinique, where it was then raging. Several thousand persons perished of the disease, and some Indian villages were entirely depopulated.

Also "some years ago a varioloid disease appeared in the island; it proved fatal in a few cases. It prevailed principally in the town of San Fernando. The disease had been previously reported to exist on the Spanish Main.

"In former years, during the administration of Sir H. Macleod, an immigrant ship from St. Helena, with Africans on board affected with small-pox, was put in quarantine. Some 60 cases died while the ship remained in quarantine, which lasted for three months. The disease did not extend at that time to the island, nor appeared for some years after."

During the administration of Lord Harris also, an immigrant ship from St. Helena, with Africans infected with small-pox, arrived, and was treated in the same manner, with like results.

In

In the autumn of 1854, the cholera appeared for the first time. It was introduced, it was believed, by fishing boats from La Pena on the Spanish Main. It was prevailing at the same time in Barbadoes, and made its appearance whilst vessels were in quarantine from infected ports.

Surgeon Major Dr. Clarke states, that a quarantine had been established against Barbadoes and other islands affected with the cholera, and that the appearance of the disease in Trinidad could not be traced to importation, although many of the inhabitants thought otherwise. Isolated cases had occurred several weeks before the existence of the disease was distinctly recognised.

Dr. Anderson, Inspector of Health of Port of Spain, Trinidad, says:—

“The accommodations are not so good as they ought to be on board most British ships, and are inferior in general to foreign vessels in this respect, especially the Americans.”

Trinidad.

GUIANA.

DURING Governor Light's administration, the small-pox spread over all the Colony.

It has been prevalent and fatal, more particularly among the coloured and Portuguese population, during the present year, 1859. The first case occurred in a seaman on board a vessel from Liverpool, admitted into the hospital on shore on the 24th March. The disease soon afterwards spread, “and the lower classes, being totally unprotected by vaccination, soon became a prey to the disease.”

Guiana.

Cholera.—The first case occurred on the 22d November 1856, in a black man from on board a vessel, the “Parker,” which had arrived eight days previously from Liverpool. The symptoms were mild, and he recovered. He was admitted into the seamen's hospital, the second time, on the 16th December, and died on the following day. The next two cases were four and five days afterwards in black men, who had been working on board the above vessel. After these cases the epidemic spread rapidly to every part of the Colony, and committed great ravages both in town and the country.

The colonial surgeon, who communicates these particulars, adds, that it was reported that two fatal cases of the disease had occurred on board a vessel from the Orinoco a few days before the first case from the “Parker.” The report, he says, although probably true, was never authenticated.

It also appears that, as far back as the month of April, there had occurred three cases, all within a few hours of each other, of what the medical attendant regarded as malignant cholera, in a family on the opposite side of the river from Georgetown.

Yellow fever has prevailed, on several occasions, with epidemic force, in British Guiana during the last ten years.

Dr. Johnston, the health officer, says:—

“The general sanitary state of vessels frequenting this port is very bad indeed. The forecables (except in American ships) are generally dark, confined, dirty, and badly ventilated, so much so that, as a rule, the sailors sleep on deck, to their great detriment. They are kept too much on salt provisions; and whenever they have a chance of getting to a grog shop they are poisoned with new and generally inferior rum.”

HONDURAS.

Only one vessel, a transport, having on board a detachment of the 2d West India Regiment, sent from Jamaica, has, during the last five years, been subjected to quarantine. Two cases of smallpox had occurred among the soldiers. The whole detachment were landed at Newtown barrack, and there placed in quarantine for 21 days. The two patients were kept in a ward of the garrison hospital, and the measures taken to prevent the further spread of the disease were happily successful.

Honduras.

Cholera prevailed in this settlement in 1836 and 1854. “On the first occasion,” says Dr. Young, “the earliest cases occurred on the 6th September, simultaneously in the northern and southern districts of the town, and in localities whose sanitary condition had been much neglected. The disease went on increasing in intensity until the middle of October. From this period it began to decline, and had entirely disappeared from the town of Belize by the 20th November. A second outbreak, however, took place on the 15th December, which attained its acme on the first week of January. By the end of the month it had left the town, but in other parts of Honduras it continued its ravages to the end of March.

“The number of deaths, as nearly as could be ascertained (there being no mortality returns), amounted to about 400 in a population of between 8,000 and 9,000. The chief sufferers were the native coloured population, Africans and Indo-Spanish inhabitants. Europeans and the upper classes generally enjoyed almost complete immunity. Not more

Honduras.

than six Europeans died with choleraic symptoms, and of these three were persons of dissipated habits.

"On the advent of cholera in 1854, the first two cases occurred on the 15th of January, in the northern district of the town where the drainage then was and still remains very defective, many of the houses being on the confines of an unwholesome swamp. In the southern district, three days after the first reported cases, the epidemic appeared, and in similar localities where swamps and open drains abounded. The disease did not disappear from Belize till the end of April. The mortality was not so great in the town as in 1836; but in other parts of British Honduras, it was greatly more fatal. This, however, was in a great measure owing to the population of the entire settlement being more than doubled. In the absence of mortality returns, the want of house visitations, and systematic arrangements generally, I am unable to say, with any approximation to accuracy, what was the total mortality. The upper classes, although they did not on this last occasion obtain such exemption as in 1836, were yet comparatively sufferers in a small degree."

Dr. Young, who has been long resident in the colony, remarks that Belize, although its position seems calculated to engender disease, is decidedly less unfavourable to health than the West India Islands. "The town is about a mile in length, its width irregular, and at no part exceeding a third of a mile. It is bounded by the sea on its eastern and an extensive swamp on its western side, beyond which the country is densely wooded. The land surface in the most favoured localities of the town is not more than a foot and a half above high water mark. The soil is sandy and admits of almost the immediate subsidence of the heavy rains during the wet season; and to this peculiarity and to the prevalence of either easterly, north-east, or north-easterly winds during ten months in the year, driving from the town malaria, generated in the swampy ground on the west, it is indebted for its comparative salubrity. The most unhealthy periods are at the commencement and the end of the rains; and then the most prevalent diseases are intermittent and remittent fevers, rheumatism, chronic derangements of the liver and dysenteric affections, the latter occurring chiefly among the native labourers, and mainly attributable to the difference of diet."

"The crews of vessels arriving from Europe suffer chiefly from intermittent and remittent fevers, the latter occasionally in an exacerbated form, assuming all the characteristics of yellow fever; and I have frequently observed that when remittents are most disposed to put on this character, the European inhabitants of the town and seamen suffer in common, showing the cause to be more local than climatorial."

Staff-surgeon Sunter, principal medical officer of the garrison, has communicated similar information to that now recorded.

COAST OF AFRICA.

GAMBIA.

Coast of Africa.

"THE Colony," says Dr. Hardley, 1st West India Regiment, "is seldom entirely free from small-pox; but its origin is from within, and is, I believe, owing to the practice of inoculation, which, although not extensive, is at times resorted to by the natives. Occasionally, but rarely, the disease breaks out with much virulence, as it did last year, 1858. This is the only infectious disease which this Colony has known since 1837, when it was visited by yellow fever. For many years there has not been a suspicion of contagious disease existing in any vessel touching at this port."

Asiatic cholera has never visited this nor any other of our West African settlements.

SIERRA LEONE.

"Small-pox is a disease for which quarantine is liable to be imposed, and the whole of the cases mentioned in this report have occurred among the inhabitants of Freetown and its neighbourhood. The Colony is scarcely ever free from the disease; but during the past year, 1858, it has raged with great violence." Its ravages were confined almost exclusively to the natives of Africa.

ST. HELENA.

St. Helena.

No list of vessels detained in quarantine is kept. Not above eight or ten vessels having any sickness on board arrive here in the course of the year.

Eighteen years since, measles was introduced by a man from the African station, then in quarantine, and going to see his friends. The epidemic was very fatal; many adults were attacked. 20 years had elapsed since any former epidemic had occurred in the island.

Small-pox

St. Helena.

Small-pox was introduced about the same time by some workmen employed there; the visitation was not then in quarantine. It did not spread.

Hooping cough occurred two years ago; its mode of introduction is unknown.

One case of scarlet fever took place a month back (June 1859); the period of incubation, dating back from the first appearance of the rash, corresponded to the arrival of a troop ship, which gave a certificate of having had no infectious disease on board. The disease did not spread. The child, it was stated, had been with the children from the ship.

Asiatic cholera has never visited the island.

"The sanitary state of the lower town," says Mr. Muir, surgeon of the military hospital, "where the respectable inhabitants reside and the drainage also is good, I consider sufficiently satisfactory; but the centre portion, where the drainage (though in a state of progress) is in a most unsatisfactory condition, and where also a large portion of the houses—low, mud-roofed—are constructed in utter disregard to ventilation (some indeed being little better than excavations into the sides of the mountains), which in the tropics bears so largely on health, cannot be viewed as otherwise than in a most unhealthy condition. The upper town, from the habitations being less crowded, and more directly in the current of the south-east trade winds, would appear more happily circumstanced."

"The disease mostly prevalent in the town is fever of a low typhoid character."

CAPE OF GOOD HOPE.

DURING the last five years eight vessels have been quarantined: two in 1856, five in 1858, and one in 1859.

Of the two vessels in 1856, one was from the Mauritius, and had had two cases of small-pox during the voyage of 23 days. She was ordered to sea forthwith.

The other was a troop ship from England, and which had had small-pox and measles during the voyage of 70 days.

Of the five vessels in 1858, three were for measles and two for small-pox on the voyage; and the single vessel in 1859 was for measles in an immigrant ship from England.

With the exception of one of the vessels in 1858, on board of which four fresh cases of measles occurred, no sickness took place during the detention, which usually varied from three to six days.

In 1856, all the troops, women, and children were landed from the troop ship at the Chacoonni battery; and in 1858, 40 of the immigrants from on board a Dutch ship were landed there. The disease, small-pox, was communicated to the inhabitants of Cape Town, through which it spread with great rapidity. None of the *employés* of the establishment seem to have been attacked.

Cape of Good Hope.

CAPE TOWN.

The diseases most dreaded in this Colony are measles and small-pox.

Measles were introduced in the beginning of 1839 from the Mauritius; and as there had not been a visitation of the disease for nearly 30 years, it spread through the Colony and Kafirland, and almost all were infected with it. The mortality was very great, chiefly amongst adults, the ratio in Cape Town being probably about 10 per cent.

In 1840 small pox was introduced (whence, it is not stated), and from the neglect of vaccination proved equally fatal.

The next visitation of measles was in 1851; the cases were few, and the mortality small.

In 1858 small-pox was again introduced; this time from Holland. The vessel arrived the 13th June, and was kept in quarantine till the 23d, when the immigrants were allowed pratique; no case of disease having occurred, and all the bedding, clothing, &c. having been properly washed and cleansed.

On the 27th July a case of small-pox occurred in a coloured girl, who had not been vaccinated. The mother was a washerwoman, and she traced the infection to some foul linen. She lived at a considerable distance from the lazaretto, in one of the narrow lanes of Cape Town. Between the 23d July and 23d August several other cases occurred in the same locality, none of the persons attacked having been vaccinated. The first fatal case was on the 27th of August. The disease was very malignant, and spread with great rapidity.*

Asiatic cholera and yellow fever have never visited the Colony.

Cynanche maligna is at times epidemic, very intractable, and fatal, occasionally carrying off several members of the same family.

"The sanitary state of Cape Town," says Staff Surgeon Summerstead, "is in many respects very indifferent. The back and overcrowded lanes, with numerous families inhabiting the same small dwelling, greatly increases the liability to epidemic diseases, aided by want of cleanliness, want of ventilation, and filthy open ditches. The pollution of the beach by the daily emptying of tubs adds to the insalubrity of Cape Town, which by its site ought to

* At the end of the year and beginning of 1859 it continued with great severity; the Kaffirs died by hundreds.

Cape of Good
Hope.

to be most healthy, being situated on a sloping gravelly plain, supplied with an abundance of excellent water."

"The crews of almost all vessels, whose average annual number during the last six years is 640, arrive in a healthy state; but during certain seasons numerous cases of dysentery occur in vessels from the eastward."

PORT ELIZABETH.

"Small-pox was conveyed here," says Staff Surgeon Dr. Scott, "by a coasting vessel, which was not liable to quarantine, from Cape Town (the voyage had been three days) during last year, 1858. The passenger conveying the contagion had no appearance of the disease on arrival; but doubtless he had the poison in his system, as the eruption manifested itself in a few days afterwards. This case was not heard of until several Malays in the family where he lodged were attacked; and from this centre the disease continued to spread to all the filthy parts of the town, carrying off great numbers of the drunken Hottentots and many of the unvaccinated coloured races. It still lingers (August 1859) in different parts of the town, but as a rule only now attacks those newly arrived in town: this remark applies to white and coloured people. Several of the immigrants lately disembarked were attacked with the disease in a very mild form."

Dr. Scott says of Port Elizabeth, "The general sanitary state of the town is tolerably good, probably owing to its recent origin; but during the last few years, as the population increases rapidly, so do the ill-cleansed and ill-ventilated houses; and the streets, of course, in such localities are too often neglected."

PORT NATAL.

Mr. Holland, health officer, says, "that no diseases for which quarantine is liable to be imposed have occurred at any time in the port of Natal, or of the neighbourhood."

MAURITIUS.

Mauritius.

THE annual number of vessels arriving in Port Louis has been rapidly increasing of late years; in 1858 it was 1,100.

In 1856 the total number of vessels put in quarantine was 16; of these, 10 were immigrant ships, with coolie labourers, chiefly from Calcutta and Madras, and the remainder were arrivals from Madagascar and the island of Bourbon or Réunion, where small-pox was prevailing at the time of their sailing.

Of the 2,874 coolies embarked, 125 had died on the passage, which averaged from 30 to 40 days, and 323 died in the lazarets after arrival, or between a sixth and seventh of the entire number. The chief diseases were diarrhoea, dysentery, fever, small-pox, and cholera.

In 1857 ten vessels were quarantined, nine being immigrant ships, and all from India. The number of coolies on embarkation had been 3,013. During the voyage 191 deaths occurred, and 99 on shore; or little less than a tithe of the whole in the course of a few weeks.

In 1858, 17 vessels, all coolie transports, were quarantined. Of 6,192 taken on board, 245 had died between Madras or Calcutta and the Mauritius, and 33 subsequently in the lazarets there. The ratio of deaths this year was therefore under one-half of what it was in the previous one.

In 1859 up to the month of October, 60 vessels had been quarantined; most of them had coolies on board. The original number of these immigrants, 11,429, was reduced by 384 deaths during the transit, and 128 subsequently, a rate of mortality about the same as in 1858.

In all years the diseases above named were the chief causes of sickness and death, varying however in relative fatality in different seasons.

Complaints were frequently made by the captains of the vessels as to the sickly state of many of the labourers on embarkation, and the want of competent medical assistance during the voyage.

During the 10 years from 1845 to 1854, 89 vessels had been put in quarantine, the longest duration of which varied from 13 to 46 days. The aggregate number of days during which all the ships were in quarantine was 1,258. The aggregate number of passengers on board was 9,798; almost all of whom were coolies, with the exception of 706 of Her Majesty's 5th Regiment.

The number of persons landed in lazarets during the last four years has, on account of the large immigration, been very great, amounting to 14,036, out of 24,691 passengers.

Each of the three Indian Presidencies has its own endemic diseases, with which ships bringing immigrants thence to Mauritius are frequently infected; viz., cholera from Calcutta, small-pox from Madras, and from Bombay remittent fever, sometimes appearing epidemically on board, and of a very fatal type. As one case of contagious disease causes the detention of all the passengers of a ship for 21 days from the termination of the last case of cholera or small-pox, and for 15 days from that of the last case of other contagious diseases,

diseases, the number detained is necessarily very large, and among these many diseases have, of course, occurred.

As to contagious diseases, epidemic cholera has, with very few exceptions, run its course during the voyage; but in a few instances cases have continued to occur after the landing of the immigrants in the lazaret; and on two occasions the disease has been epidemic in the lazaret, having only commenced towards the end of the voyage, and having consequently its whole course to run. Cases of small-pox have frequently occurred in the lazaret, but always soon after the landing, the infection having taken place on board ship. Quarantine for fever has been very rare. The emigration from Bombay is comparatively small, and the fever seldom assumes such a type as to call for quarantine, although it is universally believed in this Colony that remittent fever imported from Bombay may and does spread epidemically here after its importation. In one recent instance of quarantine for Bombay fever of a severe type, the disease continued as an epidemic among the immigrants for some time after their reception into the lazaret.

The number of deaths in the lazarets during the last four years amounted to 548; with the exception of three, all occurred among immigrants.

None of the officials or police force in the lazarets ever caught either cholera or small-pox from the immigrants; but the wife of the lighthouse-keeper at Flat Island died of cholera during its prevalence there; and one of the crew of a steamer employed in carrying supplies to the lazaret at Flat Island, in 1856, took the disease and died on board.

During the last five years, two severe epidemics of Asiatic cholera and one of small-pox have occurred in the Colony, each of them prevailing over the whole island.

In 1819, when epidemic cholera for the first time appeared in the island, it could not be traced to importation by vessels. Since that date no other visitation occurred till 1854, notwithstanding the increasing communication with India and other countries where the disease was known to prevail, and the frequent occurrence of cases in vessels during their transit. It began in May, and continued to the end of August. Out of an estimated population of 181,876 there were 7,650 perished.

A committee of seven members, of whom five were experienced resident physicians, were appointed by the local Government to examine into the history of the epidemic. They failed to trace the introduction of the disease to any infected arrivals from abroad, as stated in their elaborate report, which was published by order of the local Government in 1856. An immigrant vessel from Calcutta arrived on the 25th March; cholera had prevailed during the voyage, and cases occurred during her stay in the roadstead of Port Louis, before the immigrants were landed at the lazaret. There they continued healthy until they were liberated on the 1st of May. The crew of the vessel had remained healthy all the time.

The earliest cases in Port Louis occurred on the 14th of May, among the inmates of the prison, "which was at the time much crowded, and badly drained." On the 21st, the gaoler's wife, having left the prison, died in the town; after this the disease spread through Port Louis, and thence to the country districts. Five cases of cholera had occurred in the town between the beginning of the year and the arrival of the suspected ship from Calcutta.*

In 1856 there was a fresh visitation of the cholera. On this occasion it began in March, and continued till the middle of May. The total number of deaths in the Colony amounted to 3,203. A special committee of the Legislative Council (among whom there was no medical men) was appointed by the Governor "to inquire into and report upon the probable cause or causes of the recent outbreak of cholera," and "whether it be expedient to make any change in the quarantine laws now in force." A lengthened report was published in the following year. Notwithstanding the gravest doubts expressed by the leading medical men of the Colony, the committee, with one dissentient (who drew up an elaborate argument for his views), did not hesitate to ascribe the epidemic directly to importation by a steamer from the quarantine station, on board of which one of the crew had sickened, although no communication could be traced between this man and the earliest attacks in Port Louis, and none of the officials or police of the lazaret were ever affected. The result was that still more stringent quarantine regulations were adopted in the next session of the Legislature.†

Deputy

* It would appear that the Government of Madagascar imitated the example set to them by that of the Mauritius on the occasion of the cholera in 1854, only going a little beyond their teachers.

† So determined was the Government to prevent, if possible, the introduction of the pestilence, that a proclamation was issued, ordering that all articles of trade which had been landed from ships should be exposed to the sun and wind for 40 days; that all the dollars received in payment should be buried in the sand for 40 days, in order to secure the removal of any contagion which might attach to them; and that all vessels arriving at any port of Madagascar, from whatever part of the world they might come, should be put into quarantine for the same period. A vessel came in from the Seychelle Islands, but was obliged to leave without supplies before the time of quarantine had expired; and another vessel from the Cape of Good Hope, with horses on board, was subject to the same restrictions.—*Ellis' Three Visits to Madagascar*, 1858.

† The steamer *Abeona*, with invalid troops from Calcutta, was, in August 1858, prevented from coaling at Mauritius, the coals being refused her unless she would lay there under quarantine for 12 days, on account of having had some deaths from cholera.

Mauritius.

Deputy Inspector General of Hospitals, Dr. Clerihew, the health officer of the Colony (whose replies are, from the care with which they have been prepared, most valuable), adds,—

"Since the above was written (September 1859), Asiatic cholera has again appeared in an epidemic form in the Mauritius. This time it originated on two sugar estates in the elevated district of Plaines Wilhaus, between six and seven miles from Port Louis, and without any appearance whatever of its having been imported, although such might nevertheless have been the case, by means of infected clothing having been received. The cause or origin of this epidemic is totally unknown. After a lull from 25th November to 13th December it re-appeared; and finally ceased at the end of February 1860."

With respect to the epidemic of small-pox in 1855-56, Dr. Clerihew states:—

"For several years the disease had existed very frequently in the lazaret of Port Louis, there being sometimes 20 or 30 cases at one time; but for 14 years it had never been introduced into the island until August 1855, when a creole mason at work on the new fortifications outside the palisade of the lazaret, when there were cases of small-pox there, caught the disease, and from him it spread all over the Colony. It could not be ascertained how he had contracted the disease, as he persisted in asserting that he had had no communication whatever with the inmates of the lazaret, and no proof could be obtained to the contrary."

The epidemic of small-pox, in 1831-32, was believed to have been introduced from Madagascar. In 1840, the disease was introduced by Her Majesty's ship "Lily," with slaves on board, through an infraction of quarantine.

In 1852 the disease appears to have been widely diffused in the Pacific, and very fatal in many places. The Loochoo Islands suffered severely at the beginning of that year; the Sandwich Islands in the spring and summer. Consul Miller, in a Despatch to the Foreign Office from Honolulu, in August 1853, says, "The small-pox continues to rage in this island. The horrible sufferings of the poor natives are heart-rending. I never saw anything half so distressing before. I fear that half of them at least will disappear by this awful contagion." A previous statement had been made that no person who had been vaccinated had been attacked.

Zanzibar and other places on the east coast of Africa suffered first from cholera, and afterwards from small-pox, in 1852. The small-pox spread into the interior, and caused great loss of life. All classes of the natives suffered dreadfully; the Europeans remained exempt.

The disease was at Sarawak, in Borneo, in the spring of 1853.

"The general sanitary state of the town of Port Louis (Dr. Clerihew says) is not good, two great causes of disease, filth and overcrowding, both existing to a great extent, and the rate of mortality of the town being much higher than that of the country districts. From the character of the mixed population, there is a great deal of filth, chiefly in the private yards of houses; and as there is no drainage, excepting in a small portion of the town near the harbour, the poor have no means of getting rid of their night-soil.

"The diseases most prevalent among the shipping and on shore are diarrhoea, dysentery, and fever, the last being of a continued type. Tropical remittent fever is extremely rare at Mauritius."

Respecting the sanitary and hygienic condition of vessels, Dr. C. remarks:

"The ships bringing immigrants from Madras and Bombay are generally extremely healthy, particularly those from Madras, in which it often happens that there is not only no death, but not even a single case of sickness among either the crew or the coolies during the voyage. This is not the case however with the ships bringing coolies from Calcutta, which are often unhealthy, the immigrants suffering severely from diarrhoea, dysentery, fever, and sometimes cholera; but it rarely happens that the crews participate in the sickness prevailing among the coolies.

"The much greater sickness in cooly ships from Calcutta than in similar ships from Madras or Bombay, is equally apparent when the vessels have gone to the West Indies, and is attributable, I am of opinion, not as some have supposed to the grain cargoes of Calcutta ships, but, first, to the original difference in the constitution of the men, and, secondly, to the climate of Calcutta, the port of embarkation, and thirdly, to the polluted water of the Hoogly."

CEYLON.

Ceylon.

Dr. Charsley, Civil Medical Officer, says:—

"SMALL-POX is more or less always prevalent in some part of Ceylon, and it is introduced by the immigrant coolies, who flock annually to the island to assist in the cultivation and picking of the coffee.

"All the large towns have isolated hospitals for the reception of small-pox patients.

"Experience has shown the necessity of having separate hospitals also for cholera, as instances are by no means solitary in which the immigrant coolie seized with this disease on the highway has been taken to the local hospital, and the disease has distinctly spread from him to other patients.

"Of

"Of late years its visitations have been more frequent, and while it once confined itself to particular seasons, it now appears at all seasons of the year, and during all kinds of weather. It follows one rule without exception: wherever large bodies of people are congregated together, such as at the annual Kattregam festival, and the pearl fishery at Aripo, it makes its appearance among them, and afterwards spreads to the towns and villages on or near to the high roads which lead to these places.

"I do not think that any system of quarantine could be adopted to prevent this state of things."

At the beginning of 1850 small-pox prevailed with great fatality in Calcutta. As many as 400 deaths took place in a week from this disease alone. In the population of London this number would be equivalent to 2,800.

Ceylon.

HONG KONG.

DR. DICKSON, of Her Majesty's ship "Chesapeake," in a letter addressed to Sir John Liddell, March 1860, states, on the authority of Dr. Murray, then colonial surgeon, that "Cholera appeared for the first time in Hong Kong in 1858; its origin was not traced. Small-pox generally visits the Colony every spring and autumn. The most prevalent diseases are intermittent and remittent fevers, diarrhoea, and dysentery; and even more so than these, syphilis. I would suggest that it would be very desirable to have a recognized health officer to visit every ship coming into port, and that infected vessels should be required to anchor at Green Island, which would make an excellent quarantine station."

Hong Kong.

NEW SOUTH WALES.

SYDNEY.

THE following particulars are derived from the valuable Annual Reports of the Health Officer of Port Jackson, Dr. Alleyne, printed by Command of the Legislative Assembly of the Colony.

New South Wales.

1853.—The total number of vessels visited by the health officer was 569; of this number many were from the neighbouring Colonies.

During the year 17 vessels were placed in quarantine; of these, five were Government emigrant ships from England, the cause of detention being the existence of measles, small-pox, or typhus fever, either on arrival or at a very recent period previously. In the latter case, the detention did not exceed the time required by the people to wash their clothes, &c.

The other 12 vessels had either had cases of small-pox during the voyage, or had come from San Francisco, or other ports where the disease was prevailing at their departure.

In consequence of the attempt made by masters of vessels from California to evade the quarantine laws, by giving false statements to the health officer respecting the health of the people on board their vessels, the Government directed that all vessels from California, and those islands in the Pacific where the small-pox has for some time past been prevailing, shall be detained for 48 hours, to enable the health officer to satisfy himself whether they can be safely admitted to pratique.

The tabulated list of the above 17 vessels is as follows:—

No.	Name of the Vessel.	From what Port.	Nature of the Disease causing the Quarantine.	Duration of the Quarantine.	Number of Deaths while in Quarantine.	Whether Emigrant or other Vessel.
1	Beejapore	Liverpool	Measles and scarlet fever	54 days	68	Emigrant vessel.
2	Trafalgar	Plymouth	Typhus fever	42 "	7	- ditto.
3	Pacific	San Francisco	Small-pox	10 "	Nil.	Private passenger vessel.
4	Edward	ditto	ditto	42 "	Nil.	- ditto.
5	Hammett	London	Measles	20 "	Nil.	Emigrant vessel.
6	Director	San Francisco	Small-pox	79 "	Nil.	Private passenger vessel.
7	President	ditto	ditto	2 "	Nil.	- ditto.
8	York	ditto	ditto	2 "	Nil.	- ditto.
9	Talavera	Southampton	Measles	12 "	Nil.	Emigrant vessel.
10	David M'Ivor	Liverpool	ditto	7 "	Nil.	- ditto.
11	Abbott	San Francisco	Coming from infected port	2 "	Nil.	Private passenger vessel.
12	Jessie Byrne	ditto	ditto	2 "	Nil.	- ditto.
13	Volant	ditto	ditto	2 "	Nil.	- ditto.
14	Damblat	ditto	ditto	2 "	Nil.	- ditto.
15	John Ormond	ditto	ditto	2 "	Nil.	- ditto.
16	Destruzione	ditto	ditto	2 "	Nil.	- ditto.
17	Envelope	ditto	ditto	2 "	Nil.	- ditto.

New South Wales.

Of the total number of deaths, 75, stated in the return, no fewer than 68 occurred from measles and scarlet fever among the passengers of one emigrant ship, under the following circumstances:

The "Beejapore" was a remarkably fine ship, of 1,672 tons, and made a quick passage of 85 days, but she was deficient in the means of affording due ventilation to the 1,023 human beings that crowded her decks, and her passengers embarked from a dépôt in which both scarlet fever and measles prevailed, some of them actually labouring under these diseases when they went on board the ship. Under circumstances so unfavourable for the preservation of health as an ill-ventilated, over-crowded ship, these diseases spread rapidly, and assumed a very severe and malignant type. Fifty-six deaths occurred during the voyage, and there were 84 cases under treatment when the vessel arrived in harbour; most of these soon sunk under the effects of a severe disease, acting on constitutions greatly impaired by the circumstances attending the voyage."

The only other deaths, seven in number, occurred in the "Trafalgar," from Plymouth, and were caused by typhus fever.

1854.—The total number of arrivals this year at Sydney was 1,058; of which 443 were visited by the health officer, and 35 were put in quarantine. Among those which were detained were 10 emigrant vessels, on board of which cases of measles, scarlet fever, or small-pox had either occurred during the voyage, or existed upon arrival; and all the rest were arrivals from San Francisco or Honolulu in consequence of small-pox in those places at the time of departure.

Only one death occurred this year among the emigrants landed, and this was from scarlet fever.

The following is the list of the vessels quarantined:—

No.	Name of the Vessel.	From what Port.	Nature of the Disease causing the Quarantine.	Duration of the Quarantine.	Number of Deaths while in Quarantine.	Whether Emigrant or other Vessel.
1	Julia Ann - -	San Francisco	Coming from a port proclaimed to be infected.	2 days -	None -	Private passenger ship.
2	Arrow - - -	ditto -	ditto -	2 " -	" -	ditto.
3	John Farnworth -	ditto -	ditto -	2 " -	" -	ditto.
4	Governor - - -	ditto -	ditto -	2 " -	" -	ditto.
5	Senorita - - -	ditto -	ditto -	2 " -	" -	ditto.
6	Rover's Bride -	ditto -	ditto -	2 " -	" -	ditto.
7	Matchless - -	ditto -	ditto -	2 " -	" -	ditto.
8	North Star - -	ditto -	ditto -	2 " -	" -	ditto.
9	Armand - - -	ditto -	ditto -	2 " -	" -	ditto.
10	Ellen Simpson -	ditto -	ditto -	2 " -	" -	ditto.
11	Augusta Ariana -	ditto -	ditto -	2 " -	" -	ditto.
12	Auckland - - -	ditto -	ditto -	2 " -	" -	ditto.
13	Star of the East -	Honolulu	ditto -	2 " -	" -	ditto.
14	H. T. Hartle - -	San Francisco	ditto -	2 " -	" -	ditto.
15	Robert Syers - -	ditto -	ditto -	2 " -	" -	ditto.
16	M. A. Jones - -	ditto -	ditto -	2 " -	" -	ditto.
17	Fanny Major - -	ditto -	ditto -	2 " -	" -	ditto.
18	Staghound - - -	ditto -	ditto -	2 " -	" -	ditto.
19	Seleno - - -	ditto -	ditto -	2 " -	" -	ditto.
20	Ellen Francis -	ditto -	ditto -	2 " -	" -	ditto.
21	Grecian - - -	ditto -	ditto -	2 " -	" -	ditto.
22	Lucy Ann - - -	ditto -	ditto -	2 " -	" -	ditto.
23	Isabella - - -	San Francisco	ditto -	2 " -	" -	ditto.
24	Alice - - -	Honolulu	ditto -	2 " -	" -	ditto.
25	Archibald Gracie -	San Francisco	ditto -	2 " -	" -	ditto.
26	Hanover - - -	London	Measles and scarlet fever	2 " -	" -	ditto.
27	Tantivy - - -	Southampton	ditto -	3 " -	" -	Government emigrant ship.
28	Switzerland - -	Liverpool	Measles - - -	4 " -	" -	ditto.
29	Sabrina - - -	ditto -	Scarlet fever -	2 " -	" -	ditto.
30	Araminta - - -	ditto -	Measles { Ship - 7 " -	7 " -	" -	ditto.
31	Columbia - - -	ditto -	Small-pox { People - 18 " -	18 " -	" -	ditto.
32	Kate - - -	Southampton	Scarlet fever { Ship - 30 " -	30 " -	" -	ditto.
33	St. Helena - -	Liverpool	ditto - { People - 51 " -	51 " -	" -	ditto.
34	Marchioness of Londonderry.	London and Isle of Wight.	Small-pox, early portion of voyage.	8 " -	1 -	ditto.
35	David M'Ivor -	Liverpool	Scarlet fever, measles, and cholera, early portion of voyage.	22 " -	none -	ditto.
				3 " -	" -	Private passenger ship.
				5 " -	" -	Government emigrant ship.

1855.—The total arrivals were 1,152, of which number 409 were visited by the health officer.

The number of vessels put in quarantine was 12. Of these, nine were emigrated ships, two were private passenger ships, and the remaining one was Her Majesty's ship "Juno," from Singapore, having small-pox on board.

"Although

"Although cholera and small-pox have prevailed extensively at Mauritius during the past year (1855), I have not considered it necessary," says Dr. Alleyne, the health officer, "to recommend that vessels from thence should be subjected to quarantine, as was the case with vessels from San Francisco, as I have found no difficulty in obtaining from the masters of the vessels a correct statement of the health of the people on board."

New South Wales.

The following is the list of the vessels quarantined:—

No.	Name of each Vessel.	From what Port.	Duration of Quarantine.	Number of Deaths.	Nature of Disease.	Whether Emigrant or other Vessel.
1	Ebba Brahe	Plymouth	22 days	2	Measles	Emigrant vessel.
2	Queen of England	Southampton	12 "	nil	Small-pox	ditto.
3	Resistance	Rajasthan	11 "	nil	Measles	ditto.
4	Juno H.M.S.	Singapore	30 "	nil	Small-pox	Man-of-war.
5	Abdallah	Plymouth	2 "	nil	Measles	Private passenger ship.
6	Bengal	Southampton	19 "	nil	Small-pox	Emigrant vessel.
7	Sultana	Plymouth	6 "	nil	Scarlet fever	ditto.
8	Gem	Hamburgh	5 "	nil	ditto	Private passenger ship.
9	Constitution	Southampton	65 "	13	Small-pox	Emigrant vessel.
10	Golden Era	Liverpool	5 "	nil	Scarlet fever	ditto.
11	Mangerton	Plymouth	39 "	nil	Small-pox	ditto.
12	Chowringhee	Southampton	16 "	1	Scarlet fever	ditto.

1856.—The total arrivals throughout the year were 1,143. Visits were made by the health officer to 327; of which number 103 had arrived from Great Britain, and 224 from other countries.

The number of emigrant ships from the United Kingdom which arrived at Sydney was 17, having 5,945 passengers on board. Among these, 60 deaths had occurred during the voyage, chiefly from measles, scarlet fever, diarrhoea, and bronchitis; two were from typhus, and one from common continued fever.

During the year eight vessels were placed in quarantine. Of these, six were Government emigrant ships from Great Britain, one a private passenger ship from Hamburgh, and one a private merchant ship from Manilla.

The eight vessels were as follows:—

Name of Ship.	From what Port.	Nature of Disease causing Quarantine.	Duration of Quarantine.	Number of Deaths while in Quarantine.	Whether Emigrant or other Ship.
David M'Ivor	Liverpool	Small-pox	8 days	1	Government emigrant ship.
Cæsar Goddefrey	Hamburgh	ditto	15 "	none	Private passenger ship.
Sultana	Liverpool	Measles	5 "	none	Government emigrant ship.
Ben Nevis	ditto	Small-pox	9 "	none	ditto.
Ellen Baird	Manilla	Small-pox (Quarantine of observation).	3 "	none	Private merchant ship.
Bermondsey	London	Scarlet fever and typhus fever.	6 "	none	Government emigrant ship.
Herald	Liverpool	Measles	4 "	none	ditto.
Lloyds	London	Small-pox	6 "	none	ditto.

"The sanitary state of the emigrant and other vessels arriving in this port has been generally good, and the emigrants have been singularly exempt from those diseases which are the result of crowded and ill-ventilated decks.

"This is, no doubt, attributable to the excellent arrangements made to secure the health and comfort of the passengers during a long voyage; to the great attention paid to the ventilation of the 'tween decks; and to the system at present pursued of sending a smaller number of emigrants by each ship.

"Small-pox had prevailed, to a greater or less extent, among the passengers of no less than five of the emigrant vessels.

"In four of these cases the disease was, no doubt, brought on board the ships by persons already infected by it, as in these instances the eruption appeared within a few days after the date of sailing.

"In the case, however, of the "Cæsar Goddefrey," the first case of small-pox did not occur until the vessel had been at sea seventy-three days. Seven days previous to the appearance of the eruption in the first case, a box of clothes was taken from the hold of the ship, and the contents of it distributed among a family of five persons; each of these (none of whom were vaccinated) were attacked by small-pox, but by being kept apart from the other passengers, the disease was confined to them.

"There are other instances in which the disease has made its appearance so late in the voyage as to render it highly improbable that it could have been introduced by any infected passenger, and to leave no other mode of accounting for its origin than that the contagion had been derived from clothing brought into use during the voyage.

New South Wales.

"I am, therefore, in the habit of recommending that all vessels on board which small-pox has prevailed at any time during the voyage, should be subjected to quarantine, for the purpose of having their clothing and bedding washed and cleaned. And I am of opinion that it would be attended with very great advantage, and the emigrants be much benefited, if a regulation were made that all emigrant ships should, on their arrival, be required to proceed to some suitable spot, where they may be furnished with the means of washing their clothing before landing.

"As the occurrence of small-pox on board the emigrant vessels is generally to be traced to the existence of the disease at the depôts from which the emigrants are drafted, and its progress among the passengers to the circumstance of many of them never having been vaccinated, and as both these sources of diseases are avoidable, and should be arrested, I would beg to recommend that the subject be brought under the notice of Her Majesty's Land and Emigration Commissioners."

1857.—The number of arrivals was 1,100; the number visited was 394. 29 emigrant ships arrived from different parts of the United Kingdom, having 10,338 passengers on board. Among these, 142 deaths had occurred during the voyage, chiefly from diarrhoea, inflammation of the lungs, marasmus, and other disorders of dentition; and a few from measles, scarlet fever, and croup. The only vessels placed in quarantine during the year were six of these emigrant ships, in consequence of cases of measles, scarlet fever, typhus, or small-pox, on arrival, or immediately before.

"The sanitary state of both Government emigrant ships and other vessels arriving in this port has been generally good; and the rate of mortality among the passengers by Government emigrant ships contrasts most favourably with that of the passenger ships from England to North America, and other parts of the world.

"From the greater attention paid to the inspection of the immigrants previous to embarkation, and to the sanitary condition of the depôts in England, small-pox has not been of such frequent occurrence on board of emigrant vessels as it was during the year 1856; and, notwithstanding its prevalence in the neighbouring Colony of Victoria, we have as yet been happily preserved from its introduction into this port."

"The ships, with the healthy portion of the passengers and crews, were released from quarantine as soon as all the clothing and bedding had been washed, and the ships thoroughly cleansed; the sick people remaining at the quarantine station until they were perfectly restored to health."

"It has seldom happened," says Dr. Alleyne, "that any new cases of disease have occurred among the persons received, and in no instances at longer dates than within three or four days of their reception."

The following is the list of the vessels placed in quarantine :—

Name of Ship.	From what Port.	Nature of Disease causing Quarantine.	Duration of Quarantine.	Whether Emigrant or other Ship.	Number of Deaths while in Quarantine.	REMARKS.
Mary Ann	Southampton	Measles	9 days	Government emigrant	1 from measles.	The sick remained at the Quarantine Station 20 days after the release of ship and healthy people.
John and Lucy	Liverpool	Small-pox	8 "	ditto	-	No fresh case of small-pox; ship and people released after they had washed their clothes.
Golconda	ditto	Typhus fever	8 "	ditto	3 ditto	Sick and convalescent remained at Quarantine Station 33 days after release of ship and healthy people.
Regina	Southampton	Measles	6 "	ditto	-	Ship with crew and healthy people released as soon as the people had finished their washing; the sick remained for 22 days.
Admiral Lyons	Liverpool	Scarlet fever	6 "	ditto	-	Ship with crew and healthy passengers released as soon as they had finished their washing; sick people remained 15 days at Quarantine Station.
Boanerges	ditto	ditto	6 "	ditto	-	Ship and all the passengers released as soon as the washing had been completed.

No deaths have occurred among the officials of the establishment. No instances of disease spreading from persons undergoing quarantine, or among the inmates of the lazaret have occurred.

1858.—

1858.—The number of vessels visited by the health officer was 432, of which 98 arrived from Great Britain. With the exception of three, the health of all the vessels was good. Besides these three vessels, two others were placed in quarantine, as small-pox had occurred during the voyage. Two vessels had measles on board on arrival, and the third, also a Government immigrant ship, had four cases of fever, not contagious, when she arrived.

New South Wales.

The accompanying Table gives the particulars of the vessels that were quarantined:—

No.	Name of Ship.	Port of Departure.	Disease.	Number of Deaths in Quarantine.	Number of Days the Sick remained in Quarantine.	Number of Days Ship and healthy People remained in Quarantine.	REMARKS.
1	Northern Light -	Liverpool -	Measles -	1	21	10	Government immi- grants.
2	Macduff -	- ditto -	Small-pox -	-	-	7	Private merchant ship.
3	Arnim -	Bremen (calling at Cape of Good Hope).	- ditto -	-	-	10	German immigrant ship.
4	Forest Monarch	Portsmouth -	Measles -	5	38	10	Government immigrant ship.
5	Admiral Lyons -	Liverpool -	Fever -	4	50	5	- ditto.
				10			

During the year 17 British emigrant ships arrived and landed 5,889 passengers; 82 deaths and 41 births had occurred during the voyage. Three German emigrant ships arrived and landed 739 passengers; four deaths and 16 births occurred during the voyage.

"Although the passengers by these vessels were better provisioned, and suffered less from sickness than the German immigrants which arrived in previous years, there is still much room for improvement in the arrangements under which German immigration is conducted. The most striking defects on board these ships being want of space, deficiency of ventilation, and a total absence of any system for ensuring order and cleanliness among the passengers."

Twenty-four vessels arrived from Hong Kong with Chinese emigrants; 11,827 embarked. Thirty-one had died during the voyage; 10 on board one vessel from acute dysentery, contracted during her long detention at the port of departure.

"The causes of death were chronic dysentery, and delirium tremens, induced by want of the accustomed quantity of opium. The ships were well provisioned, and in most instances clean, and although the Act of Parliament regulating the Chinese Emigration from Hong Kong does not provide for the effectual ventilation of the 'tween decks, and is in other respects faulty, it cannot be said that the ships were over-crowded, or that the health of the people suffered in any way from the effects of the voyage.

There were only two women among the entire number embarked.

Dr. Alleyne contradicts the report, as respects Port Jackson, at least, that leprosy and other loathsome skin diseases are prevalent among the Chinese immigrants, than whom no immigrants, he says, suffer less from sickness during the voyage, or present a more healthy and cleanly appearance on arrival.

The total number of immigrant vessels placed in quarantine at Sydney during the last five years (from 1854 inclusive to 31st August 1859) was 29; the number of immigrants, sick and well, landed at the lazaret, was 9,938, and the number of the deaths which occurred among these while in quarantine was 18.

The number of vessels placed in quarantine during the six years from 1849 to 1854 was 64; the greatest number of days that any one ship was kept in quarantine varied from seven days in 1851 to 54 days in 1853.

Dr. Alleyne says:—Emigrant ships, on board which there may be cases of measles or scarlet fever would be liable to quarantine, and both of these diseases have been common in Sydney. Scarlet fever, for the last 12 years, and measles, were introduced from Melbourne in 1853. I have been informed by medical practitioners, who have resided in the colony for more than 30 years, that these diseases were not known in the colony previous to the dates mentioned, but that a disease, having much the appearance of measles, occurred in the district of Illowalla about 25 years ago.

"No case of small-pox has ever been known in this colony."

Mr. Lawrence, surgeon, R. N., says:—

"The general sanitary state of Port Jackson is very good, and the city being built on a series of ranges of moderate elevation, forming several small coves or bays, affords the
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New South Wales. greatest facility for thorough drainage; but, unfortunately, in two of those small coves, whose neighbourhood is densely inhabited, the common sewers open and discharge their contents on a muddy flat, and consequently give rise to the most noxious effluvia, which, if not sufficient to create disease, must still be injurious to health. * * * During the last three years there have been no epidemics in Sydney, and the only disease which may be considered as decidedly prevalent is rheumatism, while in the interior or the bush a very severe form of ophthalmia is frequent, which, if not attended to in time, rapidly destroys the coats of the eye and produces total blindness."

VICTORIA.

Victoria.

MELBOURNE.

THE following data are taken from the annual reports on the sanitary station at Melbourne by the chief medical officer, printed by order of the Local Legislature.

During the three years of 1856, 1857, and 1858, 32 vessels in all were quarantined; 12 in 1856, 11 in 1857, and 9 in 1858.

Half the entire number were detained, usually for three days of observation, in consequence of having come from or having touched at ports infected with the cholera, viz., the Mauritius and Rio Janeiro. In one instance only had any cases of the disease occurred on the voyage, and that was in a passenger ship from Plymouth, in 1856, with 429 passengers and 60 crew on board of which 25 cases (18 proved fatal) occurred after leaving Rio. She had been detained there two months, and during that time the disease broke out. It had ceased a short time before she reached Melbourne, but as the people were weak and dirty, and as there had also been three deaths from typhus on board, the ship was detained at the quarantine station for 16 days. The expenses of the detention amounted to 364 *l.*, or about 1 *s.* 3 *d.* per day per head.

The other vessel, which had to land her passengers at the station, was also a Government emigrant ship from Liverpool, with 386 passengers and 48 crew. Forty-nine cases of fever had occurred during the voyage. On arrival 13 sick were landed, and the ship then proceeded to Geelong where some of the other passengers fell sick of fever. The expenses incurred amounted to 50 *l.*, at the rate of 1 *s.* 6 *d.* per head per day.

These were the only two vessels from which it was found necessary to land the passengers.

1857.—Of the 11 vessels detained on arrival, seven had to land their passengers; three on account of small-pox, and four on account of typhus on board. The other four vessels were detained only for a day or two. The total expenses incurred by the seven ships amounted to 446 *l.* One ship alone, which had small-pox and fever on board during the voyage had to pay upwards of 400 *l.*

1858.—Of the eight ships placed in quarantine two were from having had small-pox; three for typhus; and one for scarlatina on board. The other two had come from infected ports, viz., Rio Janeiro, in March; and London, in November. The total expenses on the above six vessels amounted to 272 *l.*

During the three years ending 31st December 1858, 1,334 persons had been landed on the sanitary grounds from vessels in quarantine, and of these 171 were admitted into the hospital there. Four fresh cases of disease, three of typhus and one of small-pox, occurred among the persons landed.

The total number of deaths was 17, of which 16 were from typhus, and one from scarlatina.

In February 1854, two persons, a nurse and a builder, caught fever from persons in quarantine, and died. These are the only cases of the spread of any disease to the residents of the sanitary station and its environs.

In December 1852, the Government emigrant ship, "Ticonderoga," arrived, with 715 passengers. A malignant contagious fever, very similar to that which was introduced into Boa Vista by Her Majesty's ship, "Eclair," had prevailed on board. No less than 82 deaths occurred, while the vessel was in quarantine.

A low form of typhoid fever has occasionally appeared amongst the immigrants while in *dépôt*, soon after their arrival; but the disease has not spread.

Small-pox made its appearance in Melbourne, in 1857. The origin of the disease was distinctly traced to the ship, "Commodore Perry," which had evaded quarantine by false representations to the health officer; the presence of the disease being wilfully concealed by the master. She arrived on the 7th September, and the disease manifested itself on the 22d, in Melbourne. Sixteen cases, in all, occurred, viz., 13 in the city and one of the suburbs, three at Gisborne, a town 30 miles in the interior. The last case was convalescent on the 7th of January. Active measures had been taken by the Central Board of Health, to prevent the spread of the disease by a general vaccination, and removing the patients

patients to a temporary hospital in the neighbourhood of the city. The expenses incurred were upwards of 900 *l*. "Had the disease spread," says Dr. Macrae, the chief medical officer, "in this colony, as it has since done in the Mauritius and the Cape of Good Hope, 20 times that amount would have been required for its eradication."

Victoria.

From November 1851 to February 1852, influenza prevailed extensively throughout the colony; it continued to exist, and in some places to cause considerable mortality, in other settlements of the continent, throughout 1852.

The malignant cholera has never appeared either in Victoria or in any of the Australian colonies.

SOUTH AUSTRALIA.

ADELAIDE.

South Australia.

SINCE the beginning of 1855, only one vessel has been subjected to strict quarantine, viz., the "Taymouth Castle," 682 tons, from Southampton, with 299 Government emigrants, arrived 24th June 1855, after 100 days at sea.

The vessel was supposed to have been quite healthy on departure; but it was afterwards discovered that a sailor with small-pox had secreted himself.

A great many cases occurred during the voyage, and there were six cases on board on arrival. Three new cases occurred a few days after arrival; in all, 55 cases of small-pox from the date of leaving England till free pratique was granted, about six weeks after arrival.

All the passengers were landed at Torrens' Island, and put in tents until all risk of infection had ceased, to have their clothes thoroughly washed and fumigated. Since that time a few cases of fever in emigrant ships have been temporarily landed from time to time. No diseases have occurred subsequently, and only three deaths have taken place from fever during the present year, 1859. There has been no instance of disease spreading from sick to well.

"Fever is occasionally epidemic," says Dr. Duncan, the health officer; "but no case of small-pox has ever occurred in this colony. Since I have been health officer, one vessel only has arrived in this port, with small-pox actually on board, and two or three vessels in which one or more cases had occurred during the voyage, but in which the disease had ceased before arrival.

"Measles and scarlatina are occasionally epidemic."

WESTERN AUSTRALIA.

FREEMANTLE.

Western Australia.

"SICKNESS of an infectious nature is as yet unknown in Western Australia, and no disease for which quarantine is liable to be imposed has occurred since I have been health officer, January 1849, among the inhabitants.

"The port of Freemantle is extraordinarily healthy."

The number of vessels arriving in the port was 51 in 1856, 42 in 1857, 52 in 1858.

NEW ZEALAND.

New Zealand.

Dr. White, surgeon of the 65th Regiment states, "this country is comparatively free from epidemic disease, and as yet has never suffered from infectious disease introduced from without," in a report addressed to the Army and Medical Department, November 1859.

Dr. Thomson, surgeon major of the 58th Regiment, in his recent work on New Zealand, 1859 states, "febrile diseases, generally of a low continued form, are three times more frequent among the natives than among the Europeans; a result attributable to their ill-ventilated sleeping huts, poor diet, and insufficient clothing. Consequently, many of the attacks might be prevented. Ague and remittent fevers are almost unknown.

"Small-pox has not yet appeared in the Colony; but the intensity of the vaccine vesicle, and the fatality of small-pox among other Polynesian races, leads to the inference that the New Zealanders are strongly predisposed to the disease. Fortunately two-thirds of the natives have been vaccinated.

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"Measles,

New Zealand.

"Measles, an introduced disease, appeared at Otago in 1838, and did not then spread to the North Island; but in 1854, it was believed to have been introduced from Tasmania by an American vessel, and appeared first at the Bay of Islands. It broke out there, and rapidly spread over the country and proved fatal to 4,000 natives. Few settlers perished. The Polynesian races appear to be peculiarly susceptible of this malady. Most of the New Zealanders who have visited England have been attacked by the measles.

"Scarlet fever appeared among the settlers at Auckland in 1848, and did not spread among the natives; but in 1854, during the prevalence of measles, scarlet fever appeared among them.

"In 1844, influenza was prevalent; in 1847, hooping cough; in 1851, mumps; and in 1854, measles and scarlet fever."