

THE QUARANTINE SERVICE AND THE LAZZARETTO OF MALTA

by

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Malta is a densely populated island in the centre of the Mediterranean Sea on the trade route between East and West. One of its natural assets is a safe harbour offering shelter and security against storms and tempests. Navigators of all times have availed themselves of the safe anchorage found in the harbours of Malta, and sailed therein to seek refuge from the raging sea, to rest their weary crews, to victual their ships and to land sick members of the crew or passengers for treatment in the hospitals of the Island.

Archeological remains seem to indicate that in prehistoric times Malta was considered to be a sacred island with magnificent temples in which people from the Mediterranean basin prayed for solace in their distress and for miraculous healing in their sickness. In Roman times a temple on one of the promontaries jutting inside the Grand Harbour, was famous for the rich votive offerings treasured in it.

It is reasonable to presume that all kinds of patients came to Malta in the hope of being cured, and amongst them there must have been those suffering from contagious diseases. Practically nothing is known what arrangements were made for the reception of infectious patients in our Island in those distant times when epidemiology had not yet developed as a branch of medical science, and only the four major infections roused holy fear and induced the authorities to take special measures.

Plague, smallpox and cholera were considered as visitations of evil and were accordingly admitted into special hospitals and given much spiritual administration but little clinical attention. Lepers were treated as outcasts; they were either herded into compounds or were scared away from inhabited areas. The fact that some of the old guilds, e.g. the Archconfraternity of St. Joseph of Rabat, (1) assumed the charitable duty of collecting and burying corpses, possibly indicates that there were fatal contagions that scared people away from the dead.

Towards the end of the Middle Ages some sort of administrative machinery was established in the Island; it was the germ of an idea of social services amongst which, protection against infection must have received serious attention, because there are records that drastic measures were taken by the local Government (the *Università* of Notabile) against the spread of disease.

To mention one instance, an infected ship in 1523 gave rise to an outbreak of plague at Birgu. That town was encircled by a quarantine barrier, and the ship itself and all its cargo were burned and destroyed. (2)

The opening of the sixteenth century brought much activity into the harbours of Malta. There were ships and vessels flying the flag of all maritime nations of the Mediterranean; some were engaged in peaceful trade and commerce, others were armed for piracy. The latter brought prize cargoes and slaves. Those slaves were all Moslems from the Barbary Coast where the major infections were endemic. There was therefore great risk of the introduction of contagious diseases into the Island, and appropriate measures had to be taken for the protection of the people.

It appears that ships arriving from the North African littoral were directed to anchorage at Marsamxett Harbour, (2) where they had to remain isolated for a certain period for purification. Quarantine was then unknown; the period of isolation was referred to as the period of purification (*purgazione*).

It is to be noted that even in those distant times, more than four hundred years ago, the suitability of Marsamxett Harbour for the purpose of isolating ships, was recognized. The little island in the middle of the harbour is an ideal place for the segregation of contaminated cargo, passengers and crews. The islet was subsequently developed as a Lazzaretto and Quarantine Station by the Knights of St. John, during their rule over Malta, but even before the advent of the Knights, Marsamxett waters surrounding that islet, were reserved solely for ships undergoing purification. During their period of purification, the ships had to remain isolated and no one was supposed to approach them or go on board; but it was known that in spite of those injunctions, many traders found some means of communication with the ships, and traded cargoes and slaves, that were even landed stealthily and scattered over the Island thus risking the spread of infection.

The local Administration took action to prevent such abuses and in 1521 the *Università* (Municipality) issued a "*banda*" or official enactment for the protection of the health of these Islands. (2)

That enactment may be considered as the first sanitary regulations in Malta, and also one of the earliest published in Europe. It contained the following provisions: Any person who boarded a ship undergoing purification at Marsamxett Harbour, or bought anything, or landed any cargo, from such ship, was guilty of an offence punishable by a fine of fifty 'ounces', also by the seizure of the merchandise acquired by him and by burning of his residence. It was also ordained that all ships arriving from suspected ports were to undergo purification, and those ships actually carrying infectious diseases were to be considered as infected and refused pratique. Health Guards were also posted in harbours and bays and coves wherever vessels could be berthed.

Those regulations remained more or less operative until the arrival of the Knights in Malta in 1530, and even for some time after, because at first the Knights were mostly concerned in consolidating their position in the Island and besides, they were also worried about the threat of invasion by the Army of Suliman the Magnificent. Until that threat passed away after

the Great Siege of 1565, the Knights directed their energies against military defeat rather than against epidemic outbreaks.

When the Knights came to Malta they established themselves at Birgu, that fortified township under the walls of Castle St. Angelo, where the Grand Master took residence and held Court. Birgu thus became the city of the Order, and the Knights built their auberges and establishments, one of the earliest and most important of which, was the Hospital of the Order erected on the bastion on the East side of the city.

There is no record of any accomodation for patients suffering from contagious or pestilential diseases, but considering that in the hospitals of the Order the prevailing system was the grouping of various manifestations of diseases into separate wards, (3) it is not unlikely that a section for infectious diseases was set up in the old hospital of the Order.

It is also known that soon after their arrival, the Knights took steps for the protection of the Island against the introduction of contagious diseases. On the 10th of October 1534 a Commission was set up consisting of two professed Knights and three Maltese gentlemen who had the duty and the authority to regulate and control the pratique of foreign ships. (4) Those Commissioners exercised wide powers and made stringent regulations which implied severe punishment, even the penalty of death, for those who disobeyed the health regulations, (5)

Infected ships and ships coming from infected ports were fumigated and disinfected at Marsamxett Harbour; the patients were landed on Bishop Island, as the islet inside that harbour was called, and they were lodged and cared for in hutments where they were exposed to the inclemency of the weather. (6) But during epidemic outbreaks, infectious patients were also admitted into the wards of the hospital at Birgu, the chief seaport town of Malta before Valletta was built. In 1592 cases of plague appeared at Qormi and Birkirkara from where the disease spread in epidemic form, and dragged well into the following year. The Vice-Roy of Sicily becoming alarmed lest the infection should reach his Island, instructed one of his doctors, Dr. Pietro Parisi, to go to Malta and enquire about the epidemiology of the disease.

In his report Dr. Parisi included important information about the preventive measures taken in dealing with the spread of the disease, measures which were more ostentatious than effective. For instance, a petition was submitted to the Commissioners of Health requesting the transfer of plague patients from the islet of Marsamxett Harbour to some other place, because the restricted area, the cold weather and the wind were having an adverse effect on the patients. To relieve the patients, the Commissioners thought fit to have them transferred into the old infirmary at Birgu. Apparently they did not wish to contaminate the new hospital in the city of Valletta. Dr. Parisi, who incidentally received three hundred 'scudi' a month for his advice, tried to justify the action of the Commissioners by stating that the old infirmary was separated from habitation because it was built on a bastion and had a tunnel opening into a gate by the seashore through which plague patients could be carried into the hospital wards. (6)

Valletta was founded in the 1566, and plans were made to include in the new Capital of Malta all the amenities prevailing at the time. The Order

of St. John, then ruling over the Island, being prevalently hospitaller in nature, provided for the building of a large hospital, and it also established a quarantine station. Passengers and goods arriving on ships, even with a clean bill of health, were required to remain under observation for a short period of quarantine. The site selected for that purpose was very convenient; it was on the south side of the new city below Castile bastion and the Lower Baracca, along the Valletta wharf of the Grand Harbour. There was a row of stores and warehouses, above which residential accommodation was erected for the passengers and crew kept under observation. A special loggia was also built for the benefit of distinguished passengers. Few yards away from the isolation quarters, the wharf was bounded by a row of bollards forming a barrier to keep away unauthorised persons from entering the quarantine area. That barrier gave rise to the name by which the wharf is now known i.e. "Il-Barriera". (7)

The Barriera station was not meant for passengers and crews actually suffering from infection; such patients were referred to the Lazzaretto or to the hospital. In emergency, however, patients suffering from plague were sent for isolation and even treatment in the Barriera. (6) Incidentally severe manifestations of the disease were called in Maltese "*Baqila*". (6)

The Lazzaretto in Marsamxett Harbour was primitive and provided meagre accommodation and comfort, but full use of it was made on the various occasions when plague afflicted Malta in the first half of the seventeenth century.

In 1623 a case of plague occurred in the household of one of the Guardians of the Port. The contagion spread rapidly and infected other persons. The Commissioners of Health acted with alacrity; they sent all the patients and contacts to the Lazzaretto, with the result that the disease was overcome after a loss of only fortyfive dead.

Another outbreak occurred ten years later, in 1633. The infection was traced to a trader whose house stood near the Harbour Gate (now called Victoria Gate) in the vicinity of which ships arriving from the Levant were moored. The whole family was infected and the disease spread into the countryside, but prompt precautionary measures were adopted and the infection did not assume epidemic proportions. (7)

The indiscriminate admission of plague patients into different isolations continued up to the middle of the seventeenth century, when Grand Master Lascaris took definite steps to develop the little island in the middle of Marsamxett Harbour as a regular quarantine station.

The necessity had been felt for some time of having a proper quarantine station and a Lazzaretto to avoid dispersal of patients and of infective material. Grand Master De Paule had tried without success to secure the Bishop Island in Marsamxett Harbour for that purpose, but it was left to Lascaris to negotiate an agreement with the Church Authorities, as the islet was the property of the Cathedral of Mdina. By a deed entered into the acts of Notary Lawrence Grima on the 18th July 1643, and with the approval of Pope Urban VIII on the 2nd November of the same year, the Order acquired possession of the islet in exchange for lands at Fiddien, a fertile valley west of Mdina, owned by the Order. (8) (9)

Soon after the the acquisition of the Bishop Island, the Grand Master ordered the erection of suitable apartments and accomodation for the reception of patients and contacts. Additional buildings were erected from time to time in accordance with the exigencies of the moment. In 1670, Grand Master Nicholas Cottoner made some improvement to the Lascaris building. They were constructed just in time to be utilized on the occasion of the worst visitation of plague that ever afflicted Malta. The disease made its appearance in 1675, ten years after the Great Plague of London. The first cases were discovered in 1675 and the incidence spread rapidly throughout the country. In nine months the disease killed 11,300 victims out of an estimated population of 70,000. Among the dead were 16 surgeons, 10 physicians, over 1,000 hospital attendants, as well as many priests who administered to the sick.

A contemporary Maltese doctor (10) wrote that the highest mortality occurred in the slum areas (*Manderaggio*) of Valletta and Cottonera, but it is quite possible that some of the dead were the victims of poverty, malnutrition and exposure brought about by the epidemic itself.

The large number of patients remitted to the Lazzaretto necessitated the erection of additional accomodation, and in order to find space for the sick, the contacts were kept on ships anchored in Marsamxett Harbour or in the storehouses of Fort St. Elmo.

In 1683, Grand Master Gregory Garaffa authorized new works for the benefit of contacts and suspected arrivals from abroad.

Then in 1723, Grand Master Manoel Vilhena built a Fort on the eastern end of the Lazzaretto island, for the protection of the harbour from hostile attack. The Fort was named Fort Manoel after the Grand Master who built it and endowed it liberally, (11) and thereafter the whole island was called Manoel Island.

The new Lazzaretto on Manoel Island was planned in accordance with the best concepts of quarantine measures prevailing at the time. It occupied the block of buildings now called "Old Palace" and provided accomodation for groups of passengers or families undergoing different periods of observation and isolation. There were ample stores and warehouses for merchandise originating from infected ports. There were facilities for disinfection, for fumigation, and last but not least, for spiritual comfort, the Grand Master having erected a chapel on the opposite side of the harbour. That chapel dedicated to St. Roque, the Protector against plague, was built on top of the bastion; its front was wide open so that the inmates of the Lazzaretto across the harbour, could follow divine service. (12)

From time to time concurrently with the increase in trade and commerce of the country, additional accomodation was built for patients as well as for passengers, and new warehouses were erected for merchandise. A section was also set apart for the quarantine of animals, mostly hoof. It consisted of a large courtyard with stone troughs in the centre, and surrounded by large sheds with stone mangers. Two or three rooms were built on the first floor to house the cattlemen.

From the very beginning of its rule in Malta, the Order of the Knights of St. John set a high standard of security, utility and efficiency in the running and maintenance of the Lazzaretto. An English chaplain, the Rev. Henry

Teonge, serving on H.M.S. "Assistance", who visited Malta in August 1675 wrote: "The Lazzaretto is extremely neatly kept and provided for." (13)

The quarantine regulations issued by the Council of the Order were very comprehensive and strict; they were incorporated in the Statute Book of the Order and were enforced by an Authority called the Commissioners of Health. The following are some of the enactments embodied in Vilhena's Code of Laws:— (14)

Every ship not provided with a clean bill of health entering port for shelter or for supplies, was obliged to anchor below Castile Bastion near the Barriera. Two quarantine boats had to remain on watch around the ship day and night. If the master of such a ship wished to discharge cargo or to acquire a clean bill of health, he was directed by the Captain of the Port to proceed to the Lazzaretto in Marsamxett Harbour, where he landed his merchandise and afterwards remained anchored for the requisite period of quarantine. Likewise ships returning from a privateering cruise were directed to the Lazzaretto anchorage where they discharged cargo or slaves, and remained for a period of observation; meanwhile all passengers and crew on board such ships were requested to send to the quarantine station their personal effects for disinfection and fumigation. Whilst a ship was undergoing quarantine restrictions no one without a permit from the Commissioners of Health, was allowed to approach it or buy or receive any object from it. Cargo and merchandise were discharged into warehouses allotted by the Guardian of the Lazzaretto, and were to remain there until he gave his permission for release. All passengers kept in quarantine had to undergo disinfection twice, so also all the cargo in storage had to be disinfected two times: the first time, on admission, was carried out under the supervision of the Guardian, and the second time, two days before release, was under the supervision of the Officer in charge of disinfection, who was styled "*Purificatore*". (14)

The Commissioners of Health had ample means to enforce their authority. They had under their command patrol boats carrying gun crews and fully armed soldiers to police the harbour. One of the boats was always moored by the Barriera wharf to watch for ships entering the Grand Harbour, and every craft sailing in or going out, of the Harbour was bound to report to the Master of the patrol boat. Strict discipline was maintained on the boat, shore leave was only granted to two members of the crew at a time and they had to return on board in the evening because during the night, the full compliment of men had to be available. Every week each patrol boat was inspected by one of the Commissioners.

The staff under the Commissioners of Health consisted of Guardians of Health some of whom did duty afloat, others were employed at the Lazzaretto. Originally there were twelve of them, but later their number was increased to eighteen; they were selected for their honesty and integrity and were prohibited to engage in any other trade or occupation. Before their appointment, those Guardians of Health promised under oath to be diligent and honest in the performance of their duties. One of them acted as their Senior.

In addition to the Guardians of Health, there were the crews of the patrol boats and of the watch boats, the latter kept a constant watch on ships held in quarantine. Two watch boats were detailed for duty with each ship, so that if one of the boats had to carry some message from ship to shore, or was engaged on some other errand, there was always the other boat to keep watch. The Master paid a tariff of nine "tari" (one shilling and three pence) for the service of each boat; later the tariff was reduced to four "tari". All the fees thus collected were passed to the boatmen as part of their salary. The watch boats had the duty of preventing any communication with ships undergoing quarantine. No other vessel was allowed to approach a ship held in quarantine, or to drop anchor near it. On no account were foodstuffs or other articles to be collected from such ships or dropped into the sea. Provisions were delivered on board only with the permission of the Guardian of Health.

Orderlies were employed for duty at the Barriera Quarantine Station in the Grand Harbour, or at the Lazzaretto in Marsamxett Harbour. They were engaged on domestic work and received strict injunctions not to mix unduly with persons kept under observation.

There were also the nursing staff at the Lazzaretto hospital, but very often they were raw recruits who learned by experience how to take care of the patients and administer to their needs.

The principal officer at the Lazzaretto was called "Purificatore"; he was appointed by the Grand Master on the recommendation of the Commissioners of Health. That Official had overall control; he was responsible for the smooth running of the establishment, the strict isolation and proper disinfection and purification of persons and things. He was a very important man and later, during the early British occupation, he was allowed almost absolute power.

Heavy penalties were contemplated against infringement of the quarantine regulations, they included fines, imprisonment, corporal punishment, penal servitude on the galleys of the Order, and even death by hanging or by other means. (*perdere la vita irremissibilmente in una forca or sia punito colla pena dell'ultimo supplicio*). (14)

Those regulations remained operative throughout the rule of the Knights over Malta.

On the 23rd December 1782, Grand Master De Rohan appointed a Commission to revise the laws of Malta, and a code of laws for municipal affairs was published in 1784. (15) The quarantine laws and regulations were not relaxed. Some provisions were amended and brought up to date, and others were introduced to enforce preventive measures. For instance, the fouling of harbour waters, or the discharge therein of any material, even with the intention of lifting it again after some time, was made an offence punishable by a heavy fine, and in cases of relapse by seizure of the vessel itself. One third of the fine, or of the sale of the vessel, was to be paid to the informer, if there happened to be one. The Guardians of Health were to be selected and appointed by the Grand Mastter from a list submitted by the Commissioners of Health who first considered the merits of all applicants.

The new Code empowered judges to inflict severe penalties not only for the perpetration of, but also for any attempt to commit, quarantine offences, in

conformity with the principle: "*Sola facti veritate inspecta more militari*". (15)

When in 1785, John Howard of the Royal Society of London, the hospital reformer, was making a survey of the Lazzarettos of Europe, he came to Malta and described the quarantine measures prevailing at the time. (16) There were two kinds of quarantine restrictions. One, called the petty quarantine, for ships with clean bill of health; its period was eighteen days during which the ships were moored at the Barriera inside the Grand Harbour, and passengers and crew were allowed a measure of freedom in that they could buy victuals and see friends or traders, although they were kept separated by a barrier made of rails and palisades, and two soldiers were posted at each end of the palisade to prevent communications and contacts.

The other kind of quarantine was called major quarantine which was applied to ships with foul bill of health; its period lasted eighty days but after forty days, if the crew remained in good health, the Master and others were allowed to go ashore.

At that time the Lazzaretto consisted of two wings: the old part which was the original structure built during the reign of Grand Master Lascaris, and the new part which comprised additional structures erected from time to time after Lascaris. When Howard visited the Lazzaretto he described the building as follows: "The old part is inconvenient and too close to admit of a proper ventilation of cottons and other merchandise. It has sixteen rooms on two floors. On the higher floor there are eight, which open into a balcony and have opposite windows: but all were very dirty.

In the other part of this building there are two courts, with rooms and sheds much more convenient for passengers, and airy for merchandise. Both these courts are one hundred and one feet by sixtythree. Two other buildings and a chapel were just begun; and these erections when finished, will make of the lazaretto capable of allowing a proper separation of cargoes of six or seven ships on quarantine together."

The new part referred to by Howard is the last block of building towards the East. It consists of a row of warehouses built round two central courtyards on ground floor. On the first floor there are apartments and wards with a portico facing the sea and open spaces for the recreation of contacts and travellers. (17)

The old part is that building now called "*Il-Palazz*" which stands round a very large central courtyard from which an imposing stairway leads to the first floor. That is today utilized as a hospital for infectious diseases, whilst the ground floor serves as a laundry and houses other ancillary services. On the front of the building there was fixed a marble tablet bearing the characteristic and significant warning: "**CHI ARDISCE DI MARCARE O GUASTARE LE MURA IN LAZZARETTO FARA QUARANTENA DOPPIA**" *

In Howard's time, yarns and cotton material were the chief export from Malta; their industry was most prosperous and it absorbed not only the locally grown cotton crop but also imported foreign cotton which sometimes required disinfection. The manner of disinfecting cotton was curious enough

* *Whoever spoils or damages the walls will be held in quarantine for twice the normal period.*

in comparison with modern methods. Howard writes: "The cottons are taken out of the bags containing them, and placed in rows of piles, upon boards laid on stone pillars about eighteen inches from the floor; and in repacking they are flunged over a man who gets into the bags, in order to tread down the cotton; the consequence of which must be exposing him to great danger should any infection remain."

Towards the close of the eighteenth century, when the rule of the Order in Malta was coming to an end, the quarantine service had become a heavy burden on the local exchequer. During the decennial period 1779-1788, (18) it cost 12532 *scudi*,* whilst during the same period the capital expenditure amounted to 28083 *scudi*. During the same decennium the income derived from Lazzaretto was 13117 *scudi*; it came mostly from fees for the storage and disinfection of cargo and merchandise at the rate of one per cent of their value. Another source of revenue derived from the lease of lands on Manoel Island. On the 13th July 1782, the lands were leased by the Government of the Order to one, Maximilian Laferla, for 200 *scudi* a year. The lease was renewed at the same rent on the 15th August 1798. (19) It will thus be seen that the Lazzaretto was more or less self-supporting as regards current expenditure. The extent of the quarantine charge on the local revenue may be measured from the vote for the *Castellania* or Courts of Justice, which for the same period amounted to 2227 *scudi*.

The Order always maintained the quarantine service in a state of efficiency. A complete record was kept of every ship subject to quarantine restrictions. (20) In the archives of the Council of the Order one often meets with records relating to the management of the Lazzaretto and to matters of quarantine, as well as measures authorized by the Council following advice by the Commissioners of Health, such as quarantine restrictions for passengers, and periods of quarantine for ships arriving from Levant. (21)

In 1785, extra pre-cautionary measures were adopted to prevent the spread of plague from an infected French ship that had arrived in Malta. In the same year assistance was sent to the inhabitants of Lampedusa where an epidemic of plague was raging, and precautionary measures were taken concurrently with the dispatch of assistance.

The Knights were always very particular as regard the upkeep of the Lazzaretto. Owing to strict quarantine regulations, passengers and visitors in Malta very often had to remain isolated for the quarantine period, and the Authorities provided suitable accommodation with comforts and amenities. A marble tablet bearing the date 10 October 1797 fixed on one of the walls of "Il-Palazz" commemorates the gratitude of Captain Charles Christian De Holek, commanding His Danish Maesty's ship "Sarpen", who was treated with much respect and generosity whilst undergoing quarantine at the Lazzaretto.

The quarantine establishment was never allowed to fall in a state of disrepair; improvements and repairs were effected from time to time in accordance with the prevailing needs. In 1783, under Grand Master De Rohan, extensive repairs were carried out at the Barriera Quarantine Station in the

* One *scudo* was equivalent to 20 pence.

Grand Harbour, and also in 1783, at the Lazzaretto, new accommodation was erected for passengers and new stores were added for cargo and goods. On the 13th January 1797, the last year of the Order in Malta, the Council authorized the renewal of the quarantine barrier at the Barriera Wharf in the Grand Harbour to prevent loiterers from encroaching over the quarantine boundaries. (22)

The Knights lost Malta in 1798, when Napoleon Bonaparte, on his way to Egypt, captured the Island and turned it into a French base for the support for his army fighting in the East. The brisk change from one regime to another caused commotion and consternation amongst the people and swept away many of the old regulations whilst it introduced new measures and provisions. The quarantine service was however in no way relaxed. In one of his earliest decrees, Napoleon ordered that "Les lois de la santé à Malte ne seront ni plus ni moins rigoureuses que les lois de la santé de Marseille". (23)

Soon after his occupation of Malta, Napoleon ordered the Commissioners of Health, whom he styled Magistrates of Health, to report, together with other High Officials of the Local Government, to General Berthier at noon of the 26 Prairial (14th June 1798) for the purpose of expressing their loyalty to the French Republic and to receive instructions about their Office. (24)

On the 18th June, Napoleon issued a schedule of official tariffs. Article 10 of the list empowers the Magistrates of Health to establish and collect fees from vessels and passengers arriving in Malta. (24)

It appears however that Napoleon was not satisfied with the location of the Lazzaretto on Manoel Island because on the 16th June he gave instructions to the General Officer commanding the Malta division, to the Commissioner of the Civil Government and to the Commissioner of the Maritime troops, to meet together and find a place for the erection of a new Lazzaretto. The selected site had to measure at least 400 *canses* long and to be of the same width, so that the new Lazzaretto could be planned to accommodate 600 soldiers and to provide quarters for Officers. It was also projected to have a fine house and a garden attached to the Lazzaretto for the comfort and relaxation of convalescent Officers and men. Evidently Napoleon had in mind the isolation of infected soldiers in Malta before their return from the Egyptian campaign to their homes in France. He also directed that meanwhile ships and passengers should continue to undergo their period of quarantine at the old Lazzaretto. (24)

The rising of the Maltese people against the French suspended all the schemes for the erection of a new Lazzaretto. General Vaubois, the French Governor of Malta had other matters of a pressing nature to deal with, and because of the blockade of the Island by the British fleet, there was little risk of the introduction of the contagious diseases from abroad: the prevalent diseases were due to Avitaminosis. (25) Since the French had retreated behind the fortified bastions, the Lazzaretto was not available for patients from the country side, hence it fell more or less in disuse during the two years of French occupation of Malta. Finding himself unoccupied, Mathew Pulis who was in charge of fumigation at the Lazzaretto, became involved in a conspiracy of the insurgents to seize the city of Valletta by surprise. He was shot with other patriots in the Palace Square at dawn on the 29th January 1799. (26)

Following the British occupation of Malta, the Lazzaretto resumed its activity. The Island became a favourite port of call for ships trading in the Near East. Passengers and merchandise arrived from the Levant and from North Africa, which countries during the rule of the Knights were closed to Malta trade, consequently there arose the risk of introduction of infection from those ports where contagious diseases were endemic. Strict preventive measures had to be adopted.

The first restrictive order under the British was issued by Major General Pigot on the 9th of May 1801, (27) whereby Captains and Skippers of ships were instructed not to land passengers and discharge cargo except under the direction of the Port Authority. That order was followed on the 5th of August of the same year by more specific instructions (28) which were published by Mr. William Eaton who, as Superintendent of Lazzaretto, wielded absolute power in matters of quarantine. The new instructions referred to the hoisting of the yellow flag, the proper place for anchorage, identification of quarantine waters, means of communication with shore establishments as well as with other vessels and the functions of the Officers of Health. Infringment of these regulations was punished by the penalty of death "without the benefit of Clergy"!

It appears that maritime trade was flourishing and that many casualties or sick members of the crew required treatment in the hospitals of Malta. For this reason some directors of English trading firms together with certain Captains of the Mercantile Marine, on the 5th June 1801 submitted a petition to the British Commissioner of Malta, Sir Alexander Ball, proposing that sick and wounded seamen in the merchant service be admitted into Maltese hospitals on payment of a fee of 3 *tari* of Malta ($7\frac{1}{2}$ pence) a day for seamen of British vessels, and 6 *tari* for those serving on board of Privateers "as more casualties are likely to happen on board the Privateers".

More stringent regulations were issued on the 12th September 1806. (29) Vessels subject to quarantine entering the Grand Harbour had to anchor under Corradin Hill and had to take on board a Guardian from the Health Office. Captains who did not wish to incur the expenses for a Guardian, or whose vessels were actually under quarantine because of diseases or infection on board, had to moor their ships in Marsamxett Harbour near the Lazzaretto and to keep the yellow flag hoisted; the service boats of such vessels were chained to their ship and secured with a lock at sunset. Directives were also included as regards the information to be given to the Physician of the Health Office. Request for medical assistance had to be approved by the *Protomedico* (Chief Doctor) of the Health Office. Instructions were also given as regards the discharge of merchandise and its purification and fumigation. Disobedience of any of these instructions was punishable by the penalty of death.

At that time the Principal Officer of the Quarantine Service was called the Superintendent General of the Quarantine Department and Captain of the Lazzaretto. He was a very important man and he wielded very extensive powers; his was the final word in matters connected with the administration of the Lazzaretto and the control of the quarantine harbour and anchorage. Because of his authority, the Superintendent resented interference from the Highest Officers and conflicts often arose between the Superintendent

General of the Lazzaretto and His Majesty's Commissioner in Valletta. Those conflicts came to a head during the term of Office of Mr. William Eaton who clashed first with Sir Alexander Ball and afterwards with Sir Hildebrand Oakes.

Mr. Eaton was a quarrelsome person and his disputes with the Commissioners of the Civil Government were not always motivated by matters of quarantine. (30) He must have rendered himself particularly unbearable because on the 25th September 1811, he was dismissed from his office by the Secretary of State, and a Public Notice was issued on the 27th February 1812, announcing his dismissal and naming Mr. William Pym his successor.

At that time Napoleon Bonaparte had tried to disrupt British trade and commerce, and England retaliated by launching the Continental Blockade. That blockade caused hardship to many countries in Europe, but it brought great affluence to Malta which became "the hub of Mediterranean commerce as, to be exempt from capture from British ships, the vessels of all nations had to come here to obtain a licence." (31)

The influx of foreigners and the frequent arrival of ships with cargoes from many countries gave rise to the necessity of reorganizing the maritime services of Malta and revising the preventive measures against the introduction of disease from abroad.

At that time the Water Police at the Grand Harbour were under the Captain of the Port, who also acted as Magistrate for port offences, whilst the Water Police at Marsamxett Harbour formed part of the Quarantine Department under the Superintendent of Quarantine. The Royal Commission of 1836 considered that the division of responsibilities between the Police and the Quarantine Department was not conducive to the smooth running of the maritime service in Malta and therefore recommended and brought about the amalgamation of the two Departments under the Superintendent of Quarantine, who thus became a Very Important Person in the Administration of the Island and was included amongst the seven High Dignitaries who were entitled to residence in a rent free palace as recommended by the said Royal Commission. (32)

The revision of preventive measures against diseases gave rise to a most comprehensive set of regulations published by General Oakes (33) which has set the pattern for future legislation on the matter. Those regulations were subsequently consolidated in a special ordinance (34) which has now been embodied in the laws of Malta.

The Oakes Regulations came out at a most opportune time, because soon after their publication an epidemic of plague hit the Island. The infection was introduced by the English brig "*St. Nicholas*" arriving from Alexandria on the 28th March 1813. (35) The first case occurred in Valletta on the 14th April 1813, the victim was the daughter of a well known vendor of smuggled articles who had acquired some linen from the "*St. Nicholas*". (36) The disease was not diagnosed until the 5th of May 1813, when the patient died. On the same day of the girl's death a Government Notification was issued by command of His Excellency the King's Civil Commissioner, who with the advice of the Board of Health, extended an embargo on shipping

in the Port of Malta and ordered the removal of patients and contacts to the Lazzaretto. The epidemic flared up and spread rapidly. In a few weeks hundreds of patients were notified and they together with their contacts were remitted to Lazzaretto.

At first the patients were kept separately from the contacts, but then the incidence rose rapidly and in order to make room for the patients, the contacts were transferred to Fort Manoel, close to the Lazzaretto, which was placed at the disposal of the Quarantine Department by the Army Authorities. (37) Later on, however, the admission of cases increased to such an extent that no more patients could be accommodated at the Lazzaretto, and the overflow was transferred into the Fort.

The resulting conglomeration inside the Fort was appalling. There was no separation of the suspect from the confirmed cases; there was no adequate service, there were not enough doctors and nurses. An Army doctor who was in Malta at the time wrote thus about the condition at Fort Manoel: "Unhappily, towards the latter end of June, the Hospital of the Lazzaretto was incapable of admitting more inmates; consequently, all those subsequently attacked, so long as there was space left at Fort Manoel, were received at that establishment; which, in a very short time, changed its general aspect, and became the focus of disease. Here the sick of both sexes and all ages together with the suspected, were hourly crowding; and the scenes of terror, disease and mortality, can better be imagined than described". (38)

Conditions were becoming desperate and in order to relieve the pressure at the Lazzaretto, the little island of Selmun at St. Paul's Bay, was turned into a quarantine station, and temporary hutments were erected for the reception of sick and suspected crews of vessels performing quarantine, and for the purification of goods. (35)

Remedial measures proved of little avail, and the distress and affliction at the Lazzaretto remained agonizing. To make matters worse, it was whispered that patients on admission at the Lazzaretto, were being administered a tranquillizing draught which not only calmed them, but silenced them for ever! (*Jatuhom it-tazza!*). The rumour spread like wildfire and caused much alarm and serious ferment, so much so that a Proclamation by the King's Commissioner, was published on the 23rd May 1813, warning the public against rumour mongers and offering a reward of 1000 *scudi* to any person giving information that might lead to the discovery of one or more offenders.

Most of the patients arrived in hospital agitated and delirious; they were given a dose of some soothing mixture; this was followed by an aperient consisting of cream of tartar, manna and almond oil. Sudorifics were much in use, the most common being spiritus Mindereri and theriaca Andromache. Those medicines were administered liberally in every form and stage of the disease. A board was hung on the wall of the ward on which was written the medicines prescribed for the patients, i.e. spiritus Mindereri during the day, and theriaca during the night, without any direction as regards age, sex and constitution of the patient. (35) Toxaemia and delirium were frequent, and considering the indifferent nursing available, serious incidents and complications were unavoidable. It is recorded that a patient in a state of delirium ran out of his ward and plunged into the sea. He was immediately

taken out of the water and conducted back to his bed, but no sooner replaced there than he took the opportunity of repeating his rash act. To the great surprise of all who had witnessed his deplorable sufferings before the immersion, he became almost immediately convalescent and recovered. (35) His method however was not adopted by the hospital authorities!

Fumigation was freely used for the disinfection of contacts and purification of fomites. Nitrous fumes were believed to offer some defence against plague and were profusely applied. Useless linen and other material were incinerated. For their protection, expurgators as well as nurses and attendants were provided with a special outfit which was made of oiled silk or canvas; it consisted of a jacket which covered the whole upper part of the body, having a hood to fall over the head, and with gloves of the same piece attached to the sleeves. A pair of trousers also made of oiled canvas and long enough to descend to the ankle, completed the outfit. (35)

The gravest problem was raised by the shortage of trained staff. Owing to the ignorance of the epidemiology of the infection, no effective prophylaxis was adopted; the staff were exposed to very serious danger and most of them succumbed to the infection. Their replacement was not easy owing to wastage by death and disease. Under those circumstances, conditions in the hospital were really deplorable. An English doctor who visited the Lazzaretto at the height of the epidemic, observed twentyeight cases under treatment, with only two individuals (convicts) to attend upon them as nurses. (35)

In order to encourage recruitment for service at the Lazzaretto, the Board of Health issued regulations for better conditions of service and an increase in wages, but there was negligible response, and the Authority had to accept the service of incompetent employees some of whom were of questionable character. (37) Later on even those workers failed and the Government pressed into service for duty at the Lazzaretto, vagrants and jailbirds and also foreigners, Jews, Greeks and Turks recruited abroad; they were later stiffened by the employment of troops and guardians. It was no wonder that with such doubtful and disreputable employees, transgressions and abuses were not rare and discipline had to be maintained with an iron hand. Summary punishments were inflicted, the death penalty being even resorted to.

At the Lazzaretto on the wall of one of the arcades facing the sea, there is a marble tablet recording the rigorosity with which discipline was enforced. It is written in Italian and the following is a literal translation:

“This scaffold was erected — on the 26th March of the year 1814 — to hang — Felice Camilleri — one of the guardians of the Lazzaretto — who had been condemned to death — for having broken quarantine — but — who received a free pardon — from the Governor for His Majesty — for having been the first person — condemned to suffer death — after the Sovereignty of these Islands was taken over — by His Royal Highness the Prince Regent — in the name and on behalf of the King.”

The tablet was originally fixed to a stone scaffold which had been erected facing the sea in a prominent position where it could be seen by all ships entering harbour. When the scaffold was dismantled, the tablet was fixed in its present position.

Under the chaotic conditions of inexperience and incompetence, it was natural that the mortality at the Lazzaretto should be high. There were 529 deaths in all, at the Lazzaretto and Fort Manoel; all the fatal cases were buried in the cemetery within the quarantine enclave.

The epidemic raged for eighteen months in the Islands of Malta and Gozo and mowed down 4,568 victims. By a Public Notification of the 29th January 1814, Sir Thomas Maitland, Governor of Malta, declared the Island free of infection, but the disease lingered in Gozo for eight more months, until the Government notified its arrest on the 8th September 1814.

On the cessation of the epidemic, Fort Manoel was vacated by the Quarantine Department; it was cleansed and disinfected and returned to the Army, as Headquarters for garrison units. (39) The first regiment to take up quarters at Fort Manoel after the plague was the Royal Lincolnshire Regiment which moved in in 1819.

The great cholera of 1837, which claimed 4,152 victims placed a heavy strain on the Lazzaretto, but for some reason or other, the bulk of patients were not referred to that place; they were moved into Fort Ricasoli, (40) and later other patients were treated in the hospital of Valletta. (41) Strangely enough the isolation of patients in their own homes was also permitted. (42) It appears that the Lazzaretto was reserved for the isolation of contacts and observation of suspected cases, for disinfection and for cleansing.

The cholera epidemic of 1837, revealed the necessity of a proper hospital for the treatment of contagious diseases; for obvious reasons such a hospital could not but be built inside the quarantine enclave. The Government yielding to public opinion, undertook in the same year, the construction of a plague hospital in the open space at the western side of the quarantine station. That hospital remained functional for over a century until 1941, when it was destroyed during the Second World War.

The quarantine station was well supplied with water for cleansing and other purposes, because at the time of the Knights, a large underground cistern was excavated, the surface of which together with the roofs of other buildings, served as a catchment area for rain water. The cistern was reached by a flight of steps from behind the warehouses, and its size was so large that a small boat was tied by the stairs to serve for the periodic inspection of the cistern and the water collected in it.

In the early half of the nineteenth century, the British rule was firmly established in Malta, and the Army wanted to consolidate its position. The Military Authorities had their own plans for Manoel Island and prevailed upon the Civil Government to transfer to the Ordnance Department, certain works and lands on that island. The transfer was given effect by a Notarial deed on the 9th August 1836. That deed afterwards became the subject of discussion between the War Office, the Colonial Office and the Malta Government, and then on the advice given by Sir Adrian Dingli, the Crown Counsel, it was in 1858 abrogated by despatch of the Secretary of State.

The Military Authorities were not slow in profiting by the deed of transfer. On the plea that plague had died down in Europe, they occupied the new hospital and turned it into married quarters for the troops. The Military families

however, left when cholera broke out amongst them in 1865; and the building was again turned into an isolation hospital.

In 1860, the tense political situation in Europe justified an increment of the Armed Forces in Malta. The garrison at Fort Manoel was considerably increased, and as there was not enough space for the additional drafts, the East block of the Lazzaretto was temporarily occupied by the garrison as married quarters. Part of the first floor looking towards the Fort, was later on, in 1891, used as a school for the children of the married families quartered there. The ground floor was turned into barracks; there were about 200 men billeted there in 1861. (43)

Towards the close of the nineteenth century the quarantine station at the *Barriera* in the Grand Harbour, had fallen in disuse and was closed. Quarantine Services were concentrated at the Lazzaretto in Marsamxett Harbour, where in 1870, great improvements and reconstruction were carried out especially at the Eastern block which meanwhile had been vacated by the Army. Those improvements were undertaken at the insistence of Dr. Ghio, who was Police Physician, and for many years the upper apartments of the block were called "Ghio Rooms."

Following the mournful events of 1813-1814, the Government was determined to avoid the evil consequences of heedless control. Henceforth the quarantine regulations were to be administered in earnest. The brig "*St. Nicholas*" on arrival had been directed to the Lazzaretto harbour to remain in quarantine there, but after thirteen days during which the Captain and one of the sailors died of plague, that ill-fated ship was permitted to leave the Island and sail again to Alexandria. (37) Such inordinate practice had to be discontinued once for ever and strict injunctions were issued as regards ships and passengers arriving from the East or from the North African littoral or from a suspected port anywhere.

Although the Island was free from epidemic outbreaks, the risk of introduction of contagion was ever present. Between 1819 and 1841 twelve ships arrived with infection on board, and several deaths amongst the crew occurred at the Lazzaretto; sometimes members of the Quarantine staff and other contacts, fell victims of the infection (1819-2 deaths; 1821-12 deaths; 1835-6 deaths; 1837-4 deaths; 1840-2 deaths; 1841-25 deaths). In view of the constant danger, quarantine restrictions had to remain tight.

None was exempted from the quarantine restrictions however important he was. The first experience of passengers arriving in Malta from a suspected port, was a period of detention at the Lazzaretto, which varied in accordance with the port of origin and the bill of health. For instance, passengers arriving from Egypt and Syria and the ports of the Ottoman Empire, on ships with clean bill of health, were kept in quarantine for nine days, but if their bill of health was foul, the period of quarantine was between twelve and fourteen days. Arrivals from Tunis and Tripoli were subject to nine days quarantine, and those from Greece and Morocco, for only four days provided their ships carried clean bill of health, otherwise the period was extended to fourteen days. The day of arrival was included in the period of isolation, provided the passenger opened his luggage to give an airing to his personal belongings, if he failed to do so, he ran the risk of being detained a day

longer. On the closing day of the quarantine, passengers who behaved, were allowed to leave in the early morning. (44)

Detention at the Lazzaretto was considered more as a restricted residence than an isolation; it was irksome but it was not unbearable like in most quarantine stations in other ports. (45) The Lazzaretto in Malta because of its location, its accommodation, its system and its establishment, was equipped to satisfy the most fastidious requirements and had reached well nigh perfection as regards comfort and discipline. (46) In 1822, Dr. J. Hennen, Inspector of Military Hospitals, wrote that the Quarantine Department of Malta was one of the most effective in Europe. (47)

A century ago, a new concept regarding prophylaxis against contagion was being formed, and Europe was becoming aware of the need for a radical change in the method of quarantine protection. The idea of a co-ordinated effort was mooted: it was proposed to set up a screening base through which all sea traffic between East and West would pass. That base was to serve as a barrier for the protection of the countries of Europe and to substitute all the Lazzarettos of the Continent. Malta, because of its geographical position, and in view of its excellent Lazzaretto, was considered to be most convenient as a screening base (46), but owing to international distrust, nothing materialized.

At that time the Lazzaretto of Malta ranked amongst the best appointed quarantine stations in the world. It provided decent board and lodging, and the passengers enjoyed certain facilities not available in other countries, it was then considered as a "model" Lazzaretto. (17) It is asserted that "..... in no part of Europe, are the sanitary laws more impartially administered than they are in Malta; and more, than in no other parts of Europe, are sanitary regulations better understood, better defined and executed, than they are here.....". (48)

Passengers arriving by the same ship were housed separately from others already undergoing quarantine. The accommodation was related to the status of the passenger, V.I.P.'s and first class passengers were allowed private suites, whilst third class and deck passengers were housed together in large wards. As many as nine hundred passengers could be housed at the same time. Each division had its own open space for the recreation of its inmates. The V.I.P.'s suites and apartments had their own verandah overlooking Marsamxett Harbour.

The passengers spent their time idling about or sunning themselves in the courtyard; some of them scratched their names on the walls of the yards, wrote inscriptions or sketched figures of ships on the stone walls. Those graffiti and writings in various languages and in different styles, some of them dating from the time of the Knights, reveal the boredom and frustration under which those held in quarantine laboured. There is a name "Byron" scribbled on the wall of the Verandah reserved for important passengers, which is said to have been etched by the poet himself when he was in Malta, in 1811.

The diving rooms were provided with essential pieces of furniture consisting of a table, two chairs, a bed and a trestle, but if the passengers pre-

ferred better outfit, he could hire additional furniture from a contractor serving the Lazzaretto, who usually charged a pretty high rate for his supplies.

Those who were fastidious about food could order their meals from a restaurant attached to the Lazzaretto. They could have breakfast (1s. 2d.), lunch (3s.) or dinner (4s. 4d.); they could order lunch or dinner *a-la-carte*.

Health Guards were detailed in every division, with duties to ensure the observance of the regulations and to help and look after the passengers. If any passenger preferred to be waited upon, he could hire a servant from the many who were always hanging about near the gate of the Lazzaretto, waiting to be hired. Their fee was 1s. 8d. a day with meals, or 2s. 3d without. (44)

Those passengers who had business to transact were taken by a special boat called *gondola*, to a meeting place or "*Parlatorio*" situated on the Valletta side of Marsamxett Harbour, below the Marsamxett Gate. It is a large building the upper part of which was then occupied by the Health Officer and by the Captain of the Port; the ground floor was divided into separate compartments each of which was subdivided into two bays, one for the passenger under quarantine, the other for his acquaintances; a double railing separated each side from contact with the other.

There was also a small "*Parlatorio*" at the Lazzaretto; it was a room at sea level below the office of the Superintendent, which was reached by a flight of steps from the office, and was meant to offer facilities for communication between members of the crew held in quarantine and their shipmates; the "*Parlatorio*" was open towards the sea, and the person inside it could see and speak with his friends on a boat held at some distance from the sea shore.

Whilst undergoing quarantine, passengers were expected to observe the house rules; they had to follow the instructions given by the Superintendent, they had to open for inspection their trunks and baggage, and wash and cleanse any article as directed. They had to deliver to the Health Guard all letters and parcels for disinfection before forwarding to their destination. Every passenger was obliged to report without delay whenever he felt ill or out of sorts. On no account was a passenger permitted to encroach beyond the limits of his division or mix with passengers housed in other divisions. (49)

A doctor did his round and visited passengers every day; he at once removed to the hospital any passenger showing signs of ill health, and kept under strict observance the other inmates of the same division.

Merchandise imported from infected ports was discharged at the Lazzaretto and kept in separate warehouses pending disinfection which was carried out by means of sulphur fumigation; such merchandise consisted chiefly of animal fodder, but sometimes clothing and household commodities were also disinfected by formaldehyde.

In accordance with the theory of contagion then prevailing, the disinfection of letters was given much prominence as a prophylactic measure against infection. In Malta at the time of the great plague of 1675 letters and documents were disinfected by immersion in vinegar. As far back as 1749, there are records of correspondence between the Government of the Knights of Malta and the Authorities at Marseilles, regarding the purification of mails, and in 1786 the Knights referred to the Health Authority of Marseilles for advice on the

fumigation of letters. (50) It is known that to increase the safety margin, letters fumigated in Malta were also subject to the same prophylactic measure at Leghorn, Genova and Marseilles. (50)

At the Lazzaretto there were special chambers or cupboards built in the thickness of the walls, for the fumigation of mails. Each chamber was about five feet high and two feet wide, and was partitioned into two intercommunicating spaces: the upper in which there were racks and trays for holding letters, and the lower in which there was a container for the disinfectant. (17)

In former times fumigation was effected by sulphur fumes, the sulphur being burnt inside the lower partition and the fumes dispersed into the upper partition. Later on, letters were disinfected by nascent oxygen resulting from the addition of formaldehyde to potassium permanganate. Letters were slit or perforated before being exposed to the fumes, and then they were kept closed inside the chamber for thirty-forty minutes, afterwards they were franked by special mark showing that they were "purificated at the Lazzaretto of Malta". (51)

The quarantine restrictions in Malta about the middle of the last century, earned notoriety amongst travellers and writers, many of whom referred to it in their books. Byron, Newman, Thacera, Disraeli all of them had something to say about their detention at the Lazzaretto, there were those who tried to make the best of their term of isolation, like Newman who read Homer and Vergil and wrote six poems during his stay at the Lazzaretto; (52) but some others were simply exasperated, or suffered ennui, although books and newspapers were easily available.

In the latter half of the nineteenth century, when scientists had obtained precise knowledge about the cause and spread of infectious diseases, it became possible to find less drastic and more effective ways of preventing epidemics. The French convened two international conferences (1851 and 1857). It was the first time that the principles and rules for a draft International Sanitary Convention were formulated to promote uniformity in quarantine procedure. Subsequently more conferences were held in Europe and in America.

Whilst efforts were being made to streamline the quarantine service in Europe, action was taken to reorganize the health services in Malta. At that time the quarantine service and Lazzaretto formed a more or less independent unit in the public service of the Island: they were linked with the Police and with the Port Authority, but acted independently of them. It was considered opportune to follow the trend prevailing in Europe, and the Government established a Department to take charge of public health. In 1885, the Public Health Department of Malta came into being. It was later empowered and consolidated under Ordinance No. XIV of 1900, and charged with responsibility over the quarantine services and the Lazzaretto on Manoel Island.

With the opening of the twentieth century, phenomenal progress was made by bacteriological and epidemiological discoveries regarding the pestilential and most of the other infectious diseases. This gave such a fillip to interest in international health matters that in 1907, an international organization called the "Office International d'Hygiène Publique" was established in Paris.

In 1912, the powers of Europe signed a new Convention on quarantine practice, but owing to the First World War, the Convention did not become

operative until 1920, and it was further modified in 1926. In 1946 a new and more enlightened era started when the World Health Organization, was given authority to formulate and adopt regulations to prevent the international spread of disease. The regulations included the freedom from quarantine of ships with clean bills of health, agreed minimum periods of quarantine for the different pestilential diseases, acceptance of infected ships at ports, and the raising of the status of quarantine stations from prison to hospital standards.

The World Health Organization created an Expert Committee on International Epidemiology and Quarantine to review existing conventions and combine them into a single body of regulations covering the needs of all travellers, including sanitation at airports. As a result, the International Sanitary Regulations were adopted by the World Health Assembly in May, 1951, and came into force on 1 October, 1952. Malta, while conforming with the International Sanitary Regulations, had never agreed to become a signatory to the International Sanitary Convention; this attitude gave her a free hand to deal by local regulations with any abnormal situation that arose from time to time.

In normal times when the Island was free from epidemics, the Lazzaretto remained open for the reception and treatment of infectious cases. Contacts of such cases were remitted for disinfection and disinfestation or ablution; so were also sent for disinfection and ablution at the Lazzaretto, stevedores, coal-heavers and other labourers and visitors who worked on, or boarded, ships in quarantine. Midwives attending cases of puerperal sepsis were debarred from seeing other patients before they had undergone personal disinfection at the Lazzaretto, where their bags and instruments were also sterilised.

Following the reorganization of the Veterinary Service in Malta, provisions were made for the quarantining of cattle imported from countries affected with Foot and Mouth disease and other epizootic diseases. Within the grounds of the Lazzaretto new sheds were built in 1867 for animals held in quarantine, and a section of the old cattle sheds was turned into an abattoir. Likewise kennels were erected for dogs kept in quarantine and for stray dogs.

Since the beginning of the current century, the quarantine service at the Lazzaretto has developed into four branches, i.e., a hospital for the treatment of infectious cases, quarters for contacts under observation, disinfection and disinfestation units, warehouses for merchandise and sheds for cattle.

The hospital built in 1837 was a self contained unit, detached from the other buildings, it was situated on the side of the Lazzaretto nearest to the bridge joining the Quarantine Islet with the mainland, for the convenience of incoming patients. Its front part facing the sea, contained the reception rooms, the dispensary and the kitchen, as well as accommodation for the resident doctor, and separate apartments for the Sisters and for the orderly staff. Behind the front or administrative part, there was a large courtyard with wards on either side, one side for men the other for women patients. Each ward was on ground floor and was separated from the others, having its own pantry, bathroom and an open space at the rear. At the back of the yard there was the division reserved for pestilential diseases; it was self contained and separated from the rest of the hospital by a high wall. The mortuary built adjacent to the hospital was reached from outside; there was also a

chapel, and in the grounds behind the hospital, there were two cemeteries, one for the Catholics, the other for other denominations. In a high walled courtyard behind the cemeteries there was a pyre for the cremation of cadavers.

The hospital has been totally demolished by bombing during the Second World War, and the remaining portion of the administrative block has now been converted into a residence for the Medical Officer of the Lazzaretto. The Protestant cemetery has been desecrated, but the Catholic one, with its lovely little chapel of St. George, has escaped damage.

In July 1910 a British ship arrived from India with a member of the crew suffering from plague. A great alarm was raised and for some reason or other, the Health Authorities were prevailed upon to land the patient at Kemmuna instead of the Lazzaretto, where he should have been admitted. Kemmuna is a very small island lying between Malta and Gozo; it was ideal as a venue for isolation because it was almost uninhabited, but its distance away from the centre of administration and its lack of essential amenities, were great drawbacks. After the patient was landed, all the passengers, 490 in all, as well as the pilot, boatmen, porters and cargo heavers were taken to the Lazzaretto and kept there under observation. The patient was housed in the old barracks built by the Knights, and was cared for by a doctor and a nursing staff who patiently lived on the desert island until the patient recovered and was discharged cured. Meanwhile Health Guards continuously patrolled round the islet in their boats.

In our century the first time that the Lazzaretto sprang into feverish activity was in 1911 when the Italians invaded Tripoli. The invasion drove Maltese residents away from that country, they were evacuated and brought to Malta on the 2nd October when they were accommodated under canvas in a meadow at Mgriet outside St. Vincent de Paule Hospital. Cases of cholera soon cropped up amongst the refugees. The first case was notified on the 15th of the same month, and henceforth the infection spread amongst the inhabitants of neighbouring towns and villages. Patients and contacts were admitted into the Lazzaretto which resumed its awesome importance and spread terror in the heart of the people; the old rumour about patients being administered the lethal draught (*tazza*) was again whispered, and many a patient showed marked reluctance to go to the Lazzaretto. The relatives of a patient from Qormi flatly refused to permit his removal to the Lazzaretto, and threatened the Health Officers with firearms. Action was taken under Section 22 of Sanitary Ordinance of 1908, to ensure the removal of the patient to Lazzaretto, and a large contingent of Police was dispatched to enforce the order of the Courts of Justice. The only instance, as far as I can recollect, when Police action was called for the execution of the regulations for the prevention of diseases.

During the First World War, the Lazzaretto became the clearing house for cases or suspected cases, of infectious diseases arriving from the Near and Middle East. During the Balkan and Mesopotamian campaigns, where large contingents of Maltese served with the Labour Corps, many patients returning from Greece and Palestine, were admitted under observation, but no alarming outbreak occurred. The few sporadic cases of Plague (1917), Malaria (1918-19) and Smallpox (1919) did not assume epidemic proportion, but Influenza

(1918-19) hit the Island with the severity of a pandemic and taxed all the resources of the Quarantine Service.

In 1919 during the height of the Influenza epidemic, three ships arrived in Malta with cases of plague on board; one of them was a troop carrier and was heavily infected. Strict precautionary measures were taken to deal with that contingency. The troops were landed on Manoel Island, they occupied all the apartments and some lived under canvas. Deratization, fumigation and disinfection were carried out on a large scale. Although several cases and deaths occurred among the troops and crew, the infection did not spread to the personnel engaged at the Lazzaretto or to the civilian population.

The Lazzaretto was again in the limelight during the Greco-Turkish War when certain communities were evacuated from Smyrne. Hundreds of refugees fled to Malta. First the British Hospital Ship "*Maine*" arrived on the 15th September 1922, with 407 refugees on board and took up her moorings alongside the Lazzaretto. More refugees arrived in the next three days aboard H.M.S. "*King George*" and other Naval ships; they were mostly British subjects, but there was also a good proportion of other nationalities, Greek, French, Italian and Spanish. Because it was suspected that some of the arrivals might be carriers of infection, they were sheltered at the Lazzaretto and at Fort Manoel which was thus converted again into a quarantine station as it had been during the great plague of 1814.

Some alarm was raised in 1925 when Smallpox was introduced into the Island; there was a brisk spread of the disease which however was rapidly contained. 104 cases were notified, of which 9 proved fatal. Compulsory vaccination as provided for by the Sanitary Ordinance of 1908, was enforced over all the population and proved highly effective to cut short the incidence.

Following the Smallpox scare of 1925, there was comparative calm at the Lazzaretto. With the exception of the usual cyclic outbreaks of endemic infections, there was nothing to disturb the normal routine at the Lazzaretto. Some excitement was raised in 1930 when plague occurred in Tunis; and isolation of arrivals from Tunis, as well as disinfection of cargo and mails was resorted to.

In 1936 the Lazzaretto was roused into a feverish activity for the last time. Plague was introduced in Malta and threatened to invade the Island. The patients were not numerous, there were 36 of them, but for thirteen months their admission into hospital as well as the isolation of their contacts, caused a good deal of work and worry.

That was the last flutter of the Lazzaretto grim and foreboding as known to past generations. Two years later the Second World War was declared and the Lazzaretto lost its pristine influence and individuality.

At that time the Lazzaretto occupied the Southern half of Manoel Island, and was separated from the rest of the Island by a high boundary wall. The main entrance was at the Western end just beyond the bridge. On the right of the gate was the porter's lodge and next to it there were the cattle sheds and cattle yards. A drive skirted the seashore, and all the buildings were on the left side as one drove inwards. On entering through a gate in a high wall, one reached the hospital. Behind the hospital was the Protestant cemetery, and next to the hospital was St. George's chapel and graveyard. Further on,

through another gate, the Guardians' quarters were reached; then there were the kennels, at the back of which stood the old cattle sheds and the abattoir. Proceeding along the water front, one passed the disinfecting station and ablution rooms, and further on, there was a row of courtyards and warehouses above which stood emergency wards, and the residences for the Medical Superintendent, the Hospital Engineer, the Police Officer and the Supervisor of disinfection. Next to the warehouses was a shed containing cupboards for the disinfection and purification of mails, and adjacent to it, there was the garage. In front of the garage, there was an open space on the seaward side of which, stood the Superintendent's and Police offices, with the small "*Parlator'o*" underneath both. An archway led from the Superintendent's office into an arcade facing the sea and running in front of another row of warehouses and courtyards, above which were the rooms and apartments for people undergoing quarantine. At the East end of the arcade, there was a stairway leading to the first floor which was divided into suites for important passengers and contacts.

Contrary to what happened during the First World War, in the Second one, the Lazzaretto ceased to function as an establishment of the Health Department; it was taken over from the Civil Authority and was incorporated into the defence scheme of the whole of Manoel Island, which became a naval base. At any rate, owing to its location in a militarized zone and to the strategic value of the little island on which it stood, it would have been imprudent to maintain the Lazzaretto right in a target area.

The Naval Authorities converted the Lazzaretto into a submarine base. In May 1940 the whole quarantine enclave on the South of Manoel Island enclosing the Lazzaretto and the isolation hospital, was evacuated by the Health Department, and the Navy moved in immediately; thus when Italy declared war on the 10th June, there were four British and one French submarines anchored in the quarantine waters, whilst a skeleton staff and shore-based offices and messes were housed in the erstwhile hospital.

With the increase in the intensity of warfare, the Lazzaretto was fully developed as a base and shore establishment of the submarine flotilla operating in the Mediterranean Sea. A Naval Officer writes: "Maltese labour under the direction of the Superintending Civil Engineer, had cut caverns into the limestone rock so that our workshop, power plant, sick bay and dormitories for 300 men were all under 30 feet of rock; furthermore an organization which allowed people to continue work until five minutes before the bombs started dropping, had been perfected". (39)

Submarine crews on returning from patrol had to be rested and refreshed. Whilst the depot staff carried repairs, half of the crew were given shore leave in the country, and the other half remained to man the ship, but they found rest and relaxation in shelters dug deep in the rock under the old warehouses.

Those submarines made an excellent contribution towards ultimate victory, (53) but not without sacrifice. Of the four submarines stationed at the Lazzaretto at the start of hostilities, only one returned from their first war patrol. Their exploits shed lustre on the Lazzaretto. "In any history of Manoel Island the part played by the submarines which operated from the

Island during the dark days of 1940-42 must be given prominence, The failure of the Italians, and later the Germans, to get to the Suez Canal, was due chiefly to our submarines, operating from the Lazzaretto." (39)

In June 1941, the submarines stationed at Lazzaretto were grouped into a flotilla, the 10th Submarine Flotilla, and the Lazzaretto itself was named H.M.S. "Talbot".

The mounting of the German offensive on the Lazzaretto in 1942 and the great damage done to the 10th Submarine Flotilla, brought about the proposal to excavate submarine shelters in the rock on the Valletta side of Marsamxett Harbour just beneath the bastion on top of which stood the quarantine chapel of St. Roque. Work was commenced on three tunnels, but after the victory of the Western Desert, the whole projects was shelved.

The invasion of Sicily was preceded by much activity at the Lazzaretto, where intense preparations were made for the momentous event. A base for the maintenance of landing craft was established on Manoel Island, where accommodation was also found for Combined Operations personnel.

In May 1949 the Lazzaretto was vacated by the Navy and handed back to the Civil Authority. The war had wrought havoc; the hospital was obliterated, the disinfecting station was destroyed, the quarantine apartments and halls were extensively damaged and most of the warehouses were rendered useless. The place was all in ruins, and its reconstruction raised formidable problems both financial and administrative. Its utility however had not abated; in fact when in 1946 cases of smallpox cropped in Malta, the Health Authority was faced with a serious problem as regards isolation of patients and contacts. An agreement was hastily reached with the Military Authority who placed at the disposal of the Civil Government the new hospital and barracks which had been hurriedly built at Ghadira, the distant North of the Island, during the last year of the War, in preparation for the invasion of Sicily.

Patients and contacts were remitted to Ghadira under the care of Maltese personnel. Fortunately the disease was well contained and did not assume epidemic proportions, but the incidence proved the impellent necessity of having a place for the reception of infectious diseases in an easily accessible position, in time of emergency,

The Health Authorities cast their eyes on the old Lazzaretto. Some minor repairs were hurriedly carried out, and makeshift arrangement was made for the reception of patients, but the usefulness of the establishment has been permanently impaired and it is no longer adequate for the modern conception of prevention, isolation and treatment of contagious diseases.

The indications are that the Lazzaretto, like other old and worthy institutions, will fade from the Malta scene, but it will not fall in oblivion!

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