

### Chapter 3. CHANNEL ISLAND AS A QUARANTINE STATION 1914-1931~

#### DISEASE AND QUARANTINE IN NORTHERN AUSTRALIA

Before being used as a leprosarium (a place to house and treat leprosy patients), Channel Island was a quarantine station. At the turn of the century Australia was ringed with a series of quarantine stations designed to accommodate ships' passengers who had developed symptoms of an infectious disease during the voyage. Those who had been exposed to the disease and may have become infected were likewise subject to quarantine until the incubation period of the disease was over.

Channel Island was officially declared a site for a quarantine station in 1884 but no facilities were installed on the island except for some flimsy bamboo structures for use as shelters. At times old ships were hired by the government for quarantine use and were anchored near the island.

When the Commonwealth Government took over control of the Northern Territory in 1909, it was obliged to construct a station at Darwin to become part of Australia's quarantine system strung out around the 19636 km of the nation's coastline. The major stations were at Sydney, Melbourne, Adelaide, Fremantle and Brisbane. The minor stations at Townsville, Broome, Thursday Island and Channel Island were to accommodate people with quarantinable disease (or contacts with such cases) until a ship was cleared of infective materials prior to moving on to a major station.

The major quarantine stations were substantial complexes and many are listed on the Register of the National Estate. The station at Sydney is located on North Head near Manly. It had quarters for 1st, 2nd and 3rd class passengers and crew. There is a landing jetty, isolation hospital, luggage store, disinfecting block and a 71 cm gauge tramway line running through the grounds. It was declared a quarantine site in 1837 and a small section of it is still used for that purpose. Passengers carved their names in the soft sandstone rock, and some of the carvings are in Arabic and Chinese.

In 1910 part of the Larrakeyah peninsula had been gazetted (officially declared) for use as a quarantine station. It was an ideal location, readily sealed off for isolation and having the sea on three sides. The Defence Department, however, declared that it wanted the site and so Channel Island continued in its quarantine role, despite the lack of water at the site.

Three buildings were erected in 1914: a medical clinic and a ward each for men and women passengers and a rubble and concrete jetty was built to allow access across the mud flats. White ants soon ate the original cypress pine lining of the three buildings and fibro cement was used as a replacement.

The quarantine station was little used between the time it was built and the time it was taken over as a leprosarium in 1931. The first occasions were at the time of the 'pneumonic influenza' epidemic that swept the world in 1918.

Thirty-seven contacts were taken off the ship SS Matarani from Singapore, and a Chinese woman was taken off the SS St Albans a month later. The local quarantine officer, Dr Harris placed himself in quarantine with the patients and all survived. The next record of the island being used for quarantine measures was during a whooping cough epidemic in 1931.

## **DISEASE AND SOCIETY**

The influenza epidemic mentioned above is a good example of what havoc a disease could cause in the days before modern drugs and medical treatment. It also explains why people were terrified of diseases of any kind. The 1918 influenza, sometimes called Spanish 'flu, was of a particularly deadly strain. It affected every country in the world and, with an estimated 20 million victims, killed more people than the four years of fighting in World War I had. It was an epidemic stunning in its magnitude. Society came to a standstill and shops, factories and offices closed because of staff shortages. The epidemic doesn't receive much attention in the history books, but at the time it served to reinforce the dread and horror that all people had of infectious and contagious diseases.

It is perhaps difficult to appreciate the depth of people's feelings about disease before the 1950s. Today, we have a different range of medical and social concerns. Given the observance of reasonable health rules and precautions, the average adult is not so much worried about 'catching' something as checking cholesterol levels and detecting the presence of diabetes or cancer.

Half a century ago, most likely well within your grandparents' memory, things were very different. If you developed pneumonia or caught meningitis, dysentery, typhoid or tuberculosis you very likely died. With infections such as blood-poisoning caused by a burst appendix or an untreated cut you had practically no chance at all. Diphtheria and whooping cough took many children in their early years, and at the back of all parents' minds was the fear of disease striking at any time. In 1937 Australia's worst polio epidemic broke out, and the schools in Victoria closed because children were kept at home. Nearly 70 000 students did their education by correspondence in that year.

If you can appreciate even a little of the terror people once had for diseases, you will be able to understand the inflexible, even harsh, attitude that the authorities adopted in dealing with them. This attitude was evident in the quarantine laws and their enforcement, and it also influenced the official policies in the control of leprosy.

## **ACTIVITIES**

### **Activity 1. Quarantine Measures**

In the text, quarantine is mentioned as a measure of protection against diseases brought into the country by people. However, there is a wider application of the term. It can include plants, animals, plant and animal products and a range of other goods and articles. Research the subject and working in small teams, describe the quarantine, screening and protective measures that are observed in the following cases. Identify the government agency or agencies involved in each case:

- a person with 12 months work permit and visa arriving by plane in Australia
- cargo ships entering and tying up in port. Australian tourist returning by plane with assorted souvenirs - wooden mask, plant cuttings from Kew Gardens, smoked Scottish salmon, shell necklaces, straw dolls
- a foreign fishing vessel detained for fishing in Australian waters escorted into Darwin harbour
- crates of Asian foodstuffs being imported by an Australian wholesale food merchant and being flown in as cargo
- a refugee vessel full of 'boat people' entering port
- a pleasure yacht (on a voyage around the world) tying up in the mooring basin

- a light plane, privately owned, landing at Darwin airport on a return trip from Ambon
- a group of sponsored immigrants arriving to live in Australia
- tourists arriving from overseas for a short visit

After identifying the organisations and routine processes involved in the above scenarios, your team may care to discuss the overall effectiveness and efficiency of Australia's quarantine and health screening policies. Were there any loopholes in evidence? Was there any duplication of effort? Is the public fully aware of the manner in which the various protective measures operate? In what ways could the effectiveness of the policies and procedures be evaluated?

For information see the following pamphlets/booklets that are produced by the Australian Quarantine and Inspection Service (AQIS). They are available from the NT Department of Primary Industry and Fisheries (Tel. 8981 8733)

Quarantine Information for Vessel Masters What Can I Bring Back to Australia? Important Facts About Importing Food Into Australia

The head office of the AQIS can be reached on a free inquiry line on 008020504.

A booklet entitled Protocol for Health Screening of Boat People Arriving in Australia is available from: the Publications Officer National Health and Medical Research Council GPO Box 9848 Canberra ACT 2601 (Tel. 06 289 7646)

Other sources of information are:

The Department of Immigration and Ethnic Affairs is at 40 Cavanagh St, Darwin (Tel. 89463 100).

The Commonwealth Medical Officer, who carries out medical examinations on behalf of the Immigration Department, is with the Australian Government Health Services, 43 Cavanagh St, Darwin (Tel. 8981 7492). The Disease Control Unit of Territory Health Services also has a specific role in protecting Australia's shores. Its address is PO Box 40596, Casuarina NT 0811 (Tel. 8922 8044).

## **Activity 2. Isolated Australia**

As an island nation, Australia is in a position that isolates it from the world and gives protection against a number of diseases, especially those that plague tropical countries. A bite from a monkey in Bali could possibly lead to a painful death from rabies. Malaria occurs in most of tropical Asia, Africa, and America and is responsible for untold misery in those countries. Sleeping sickness, typhoid fever, bilharzias, cholera, and yellow fever are all foreign to this country and the overseas traveller needs to be vaccinated for protection against the last two mentioned before leaving Australia.

Working in the same teams, investigate the diseases named in the above account. Make a retrieval chart which sets out in table form the names of the diseases and their symptoms, the causes and modes of transmission, the courses the diseases take and their effects, their distribution and their treatment. Much of the information is available in a good dictionary or encyclopaedia. In your research you may find a number of different strains of the disease and, likewise, a number of treatments. Keep your chart simple by being selective about the information you gather. Keep to the original strains and treatments if in doubt.

Summarise what the chart tells you about tropical diseases in general, their causes and their modes of transmission. Discuss: what are the implications for planning public health programs aimed at controlling these diseases?

### Activity 3. Meanings

Explain what is meant by the following terms:

infectious disease      communicable disease      lazarette

contagious disease      incubation period      leprosarium

notifiable disease      pathogens      epidemic

### LEPROSY

To understand public and official reaction to leprosy (government policies, site choices) it is necessary to understand some of the main features of the disease. Leprosy is a chronic infectious disease caused by a bacterium, *Mycobacterium leprae*. For ages it was thought to be highly contagious, but it is now known to be transmitted by person-to-person contact over a long period of time.

*M. leprae is present in nasal secretions and air droplet spread is the presumed mode of transmission.* (NT Communicable Diseases Bulletin, 1996)

The disease is difficult to detect in its early stages and has an incubation period of 1-20 years, with the average being about 5 years. Modern treatment is usually effective in halting the progress of the disease and the most contagious of patients becomes non-infectious after a few days. It is thought that only five percent of the world's population is susceptible to leprosy.

Since the late 1940s sulphone drugs such as diasone and dapsone have been used in the treatment of leprosy. In recent years the drugs rifampicin and clofazimine have been introduced successfully as part of multiple drug therapy (MDT). The average number of new patients detected in the NT over the last eleven years has been between two and three.

Leprosy attacks the peripheral nerves (those near the skin), the skin itself and the eyes. As a result of nerve and blood vessel changes, bones in the hands and feet may shrink, causing them to become deformed. There is also a loss of muscle strength in the hands making the fingers curl up. The disease may cause lesions (sores) and discoloured swellings to appear on the face, neck and limbs. In some cases, as the disease runs its course the lesions may grow larger, leaving disfiguring scars on the face. Because of loss of sensation of pain in the hands and feet injuries may go unnoticed. They then become infected and develop into ulcers which may in extreme cases cause the loss of fingers or toes. Although there is loss of feeling at the body's extremities, if infection sets in the pain is intense.

These symptoms apply only to the course of the disease when untreated. Early detection and modern treatment prevents most of the symptoms described above. Although left untreated the disease usually caused death, some patients became non-infectious in time because the disease had simply burnt itself out. On Channel Island smear tests were taken at irregular intervals to identify those patients in which this had occurred. There is only one record of this happening over the first ten years.

There are many references to leprosy in the Bible. Moses set out a code of behaviour for the 'cleansing' of a person from leprosy at about the same as he handed the Israelites the Ten Commandments, and in the New Testament Christ is reported to have healed a leper who asked to be 'cleansed'. These records show that not only had leprosy been regarded with fear for over three thousand years, but that it had usually been associated with sin and

uncleanliness. This belief was held (with varying degrees of conviction) for centuries. Those suffering from leprosy were ostracised from society not only because of the fear of infection but because they were thought of as being morally corrupt. The attitude to leprosy was also probably the result of human nature reacting against deformity and facial disfigurement.

If the afflicted were most often from the poorer classes or, as happened with European colonisation were members of a native and therefore considered an inferior race, the belief was reinforced and given a practical reality. Any disease which resulted in isolation for the sufferer would be feared but when segregation was combined with gross disfigurement and certain death the fear was intensified and the isolation policy in turn strengthened. (Saunders, 1989)

Although leprosy is thought of as being a tropical disease it has occurred in all types of climates. Throughout the Middle Ages leprosy was widespread in Europe and many of those with the disease were confined to lazarettos or 'pest houses' built by the Church. By the end of the 1800s there was little leprosy remaining in Europe, although isolated cases still appeared and a small foci of infection existed in some Mediterranean countries in the late 1980s. It is thought that there are over 12 million people in the world with leprosy today and it mostly occurs in Africa, Asia, Central and South America.

Although leprosy has a low transmission rate this will increase in situations where people's immune systems are compromised because of poor nutrition, chronic infection and infestation, inadequate medical services and insanitary and overcrowded habitation. (Dr W Tracey, Darwin, personal interview)

In 1855 a Chinese male in Queensland was the first case of leprosy to be reported in Australia. The disease reached all other states except South Australia and Tasmania.

In the NT leprosy was found in a Chinese immigrant and by 1889 there had been 20 cases recorded amongst the Chinese who by then were established in Palmerston (Darwin), Pine Creek and Borroloola. After that date the number of cases amongst the Chinese grew less. Most of these were repatriated to China, the last being in 1906. It is, however, quite possible that the Chinese were not the first to bring leprosy to the NT. Macassans had been visiting the northern shores of Australia gathering sea cucumbers or trepang for over a hundred years and they came from an area where malaria, yaws, smallpox, venereal disease and leprosy were common (Powell, 1982).

In 1890 the first case of an Aborigine with leprosy in the NT was officially recorded and another case was detected in the Alligator River district in 1894. Various attempts over the years to determine the extent of the threat to the Aboriginal coastal communities met with little success and the accounts of surveys are vague and inconclusive. Today one gains the impression that after the first few cases of leprosy were identified by white officials, the Aborigines simply hid leprosy patients from visitors.

## **ACTIVITIES**

### **Activity 4. Levitical Law**

Throughout the Middle Ages the Church enforced its laws and exercised considerable power through its own courts. A section of the laws were termed Levitical Laws after the third book in the bible, Leviticus. Working in pairs consider:

- the connection between the book of Leviticus and leprosy? (Ch 13,14)

- the prescribed treatment of people with leprosy given in Leviticus? (Ch 13, verses 43-46)
- how this prescribed treatment, laid down as Hebrew Law about three thousand years ago, affect the subsequent treatment of people with leprosy for centuries to come
- what may have been the original intention of the directives (laws, policies) outlined in the above verses
- if the Old Testament was written in Hebrew, then translated into Latin and then translated into English, the possibility that some of the meanings of the original words could have been distorted? (see Saunders, 1989, p. 1)
- the extent to which church courts had power over the lives of people in the Middle Ages? (research 'the Inquisition').

#### Activity 5. Social Attitudes: Summary

The influence of religion in shaping official and social attitudes towards leprosy has been discussed, but what other influences and factors can you think of as being possibly relevant? (You may need to discuss this question at some length.)

To what degree would social attitudes towards leprosy through the ages affect attitudes towards other diseases and disabilities?

To what degree are attitudes perpetuated from generation to generation? What can change entrenched attitudes?

#### Activity 6. Aborigines and Leprosy

Once the Europeans had effectively displaced the Aborigines, the latter were forced into 'intelligent parasitism'. They camped in the vicinity of centres of European population and begged or performed menial tasks for the means of subsistence. In the sight of the Europeans the Aborigines became lazy, apathetic, and degraded (Donovan, 1981)

Discuss the implications of this extract as regards health. In what ways does it relate to Dr Tracey's account of the factors influencing the transmission rate of leprosy? Write a short essay examining the possible reasons why there more Aboriginal leprosy patients on Channel Island than there were non-Aborigines. The following extract should also be of help.

*A handful of Aborigines know that Europeans believe that leprosy is caused by a bacillus. Whether they believe it themselves is another question. Almost all Aborigines are totally ignorant of the infectious nature of the disease. They believe in several different causes: some imagine that they have erred at ceremonies or that their parents have sinned; most suspect their enemies or sorcerers. (Hargrave, 1980)*

#### MUD ISLAND LEPROSY STATION

Leprosy patients had up until 1931 been placed in isolation on Mud Island at the tip of Middle Point in Darnin Harbour. Not really an island except at times of very high tides it was, however, backed by an impenetrable belt of mangroves. Mud Island was at first used as a holding station for Chinese immigrants who had leprosy. These people were being repatriated to Hong Kong where they had first been recruited as construction workers on the Pine Creek railway line. The first leprosy sufferer was taken there in 1884 and in 1885, under an Act of Parliament, leprosy was declared a 'dangerous, infectious and contagious disease'.

The few Aboriginal patients that were detected in the early 1900s were sent back to their homelands, but a new policy was introduced in 1916 making isolation permanent.

Mud Island reflected society's attitude towards the disease of leprosy in those times, for the disease was something mysterious and threatening. The public didn't want anything to do with the subject, let alone be concerned about the welfare of patients. Consequently, the conditions on Mud Island belonged more to the Dark Ages than the 20th century.

There were only a few roughly built huts on the island and food and water were supplied weekly, weather and circumstances permitting.

- There was no resident medical staff although from 1922 patients who wanted it did receive treatment from a visiting doctor.
- There were 26 escapes between 1923 and 1927 and the fate of the escapees is unknown. If Aboriginal patients ever made it back to their homelands, they certainly didn't advertise the fact.
- There were no toilets, washing facilities or means of disposing of garbage. Sanitation was at the most primitive level. Patients buried those patients who succumbed to the disease.
- There is no record of how many died there or where they were buried over the forty-two years that Mud Island was used.

Around 1925 there was a gradual change in the public's attitude. The people of Australia were becoming aware of the situation on Mud Island through the media and the efforts of concerned Territorians and church missions.

*For several years public attention and condemnation continued causing the government considerable embarrassment. The urgent need for reappraisal of the leprosy policy and for increased expenditure was realised but bureaucratic indecisiveness kept leprosy patients on Mud Island for a further six years. In 1931 the move to Channel Island was made, opening a new era full of hope and promise for leprosy patients in the Northern Territory. (Saunders, 1989)*

## **ACTIVITIES**

### **Activity 7. Human Rights**

Discuss what is meant today by the term 'Human Rights'. Working in small teams read the account of Mud Island's use as a leprosy isolation station and list the ways in which the leprosy sufferers may have been deprived of human rights.

However, it is necessary to remember that historical events take place within the context of their age: the social norms and values of the community in any given time and place. List the various ways in which 'social norms and attitudes' would need to have been changed for conditions on Mud Island to have improved.

### **Activity 8. Conceptual Model**

Create a conceptual model showing factors affecting treatment of people with leprosy in the Northern Territory in the 1920s. Use boxes, symbols, captions, and arrows to show links between elements of the model. Select the factors you think are relevant from the list below and arrange them in your model so that cause and effect relationships are clearly shown. When your team has completed the conceptual model, be prepared to show it to the class and explain the meaning of its layout, the connections between the factors and their relative importance as perceived by your team.

- lack of awareness of the situation on the public's part racial attitudes viewing treatment as apparently hopeless fear of leprosy spreading through the community unquestioning acceptance of official policies lack of financial resources
- low priorities for leprosy sufferers lack of medical staff experienced in treatment of leprosy official indifference and apathy little media exposure authoritarian attitudes on the part of health officials
- different values of society in the 1920s, e.g. interpretation of 'harsh' treatment
- some humane considerations e.g. supplying food

Hint: photocopy this sheet, cut out the factors involved and move them around to create various groupings before settling on the framework of your model.

For further information contact:

Human Rights and Equal Opportunity Commission, LMB 4 Darwin NT 0801 Tel. 89819111

#### OPENING CHANNEL ISLAND AS A LEPROSY HOSPITAL 1931

Opening a leprosy hospital on Channel Island was not an isolated event. There were a number of factors which influenced both the timing of the opening and the location of the leprosarium on a waterless island in a remote corner of Darwin Harbour.

The quarantine station had outlived its usefulness on Channel Island. The head of the newly formed Commonwealth Department of Health decided that a quarantine station should be on the mainland at a more accessible spot, and in 1928 an area of land on East Arm was officially declared the site of a new quarantine station. The buildings of the new station were not ready for use until 1931 but by that time the chief medical officer for the Northern Territory, Dr Cook, had decided to use the facilities at Channel Island as a leprosarium.