

## THE SOLOMON ISLANDS TRAGEDY—A TALE OF EPIDEMIC POLIOMYELITIS

by

A. B. CROSS\*

### BACKGROUND

THE RAVAGES OF epidemic poliomyelitis have been well documented in the industrial world since the turn of the century, but it is not generally realized that a similar state of affairs has also existed in remoter parts of the world for many years. One such area is the Solomon Islands which has been particularly badly affected and a history of the disease in that territory is now presented for the first time. In order to furnish the reader with the requisite background knowledge (not otherwise readily obtainable), a brief outline of both the relevant geography and history of the region is provided.<sup>1</sup>

The Solomon Islands comprise a scattered archipelago in the Western Pacific. In a vast expanse of water the total land mass is only just over 30,000 sq. km. and is made up of six large forest-covered, mountainous islands surrounded by numerous smaller islands and atolls. The largest land mass is Guadalcanal with an area of some 5,000 sq. km. Having an average of only six people per sq. km., the Solomon Islands are sparsely populated, although several outlying atolls are overcrowded. The 161,000 population is made up of over ninety-three per cent Melanesians who inhabit the large islands, and four per cent Polynesians who live on outlying atolls. The remaining inhabitants, who are non-indigenes, consist of 1.5 per cent Micronesians, mostly Gilbertese immigrants, and just over one per cent non-oceanic races made up primarily of Chinese and Caucasians.<sup>2</sup>

The native inhabitants live in small coastal or inland villages which are well sited, traditionally for defensive purposes but now for ease of communication. The villagers are not dependent on a cash economy as they can live adequately by subsistence farming and fishing. Until recently the Protectorate's economy relied on the export of copra, but in recent years this revenue has been exceeded by that of timber and fishing.

Communications have long been a major stumbling-block to economic development. Travel on the larger islands has, until recently, relied on a network of bush paths and on coastal canoeing. Even today there is still less than 400 km. of all-weather

\*A. B. Cross, O.B.E., M.D., F.R.C.S.I., D.T.M. & H., Late Government Surgeon, British Solomon Islands Protectorate (1966–1974). Currently, Consultant in Accident and Emergency Services, Dudley Road Hospital, Birmingham.

<sup>1</sup> *Solomon Islands annual report 1974*, Honiara, Government Printer, 1975, pp. 122–136.

<sup>2</sup> K. Groenewegen, K. Groenewegen and D. C. Horton, *Report on the census of the population of the British Solomon Islands Protectorate 1970*, Southampton, Hobbs, 1971, p. 12.

road. Historically inter-island traffic was by large ocean-going canoes but these have now been replaced by trading cutters and administrative touring vessels. Since 1965 a rapidly expanding internal air service has been developed.

The recorded history of the Solomon Islands begins with their discovery in 1568 by the Spaniard Alvaro de Mendana and his attempted colonization twenty-seven years later. The colony was soon abandoned however, and the Solomon Islands were then lost to Europe for almost two centuries.

In the late 1700s, with the upsurge of Pacific exploration, the islands renewed their contact with Europe. After the explorers came the traders, missionaries and settlers, almost all of whom received a hostile reception provoked by their unwelcome intrusion. For the next 100 years the history is a chronicle of misunderstanding and violence highlighted by the frequently inhumane traffic in indentured labour and the murders of Bishop Patteson and Commander Goodenough. Not only did the islanders attack intruders but internecine warfare was rife, to the degree that Solomon Islanders earned the reputation of being the most ferocious cannibals in the Pacific. With the increasing harassment of would-be settlers and finally the murder of the bishop, it was believed both in England and Australia that intervention by Britain was imperative. This resulted in the proclamation of the British Solomon Islands Protectorate in 1893 with C. M. Woodford as the first resident commissioner.

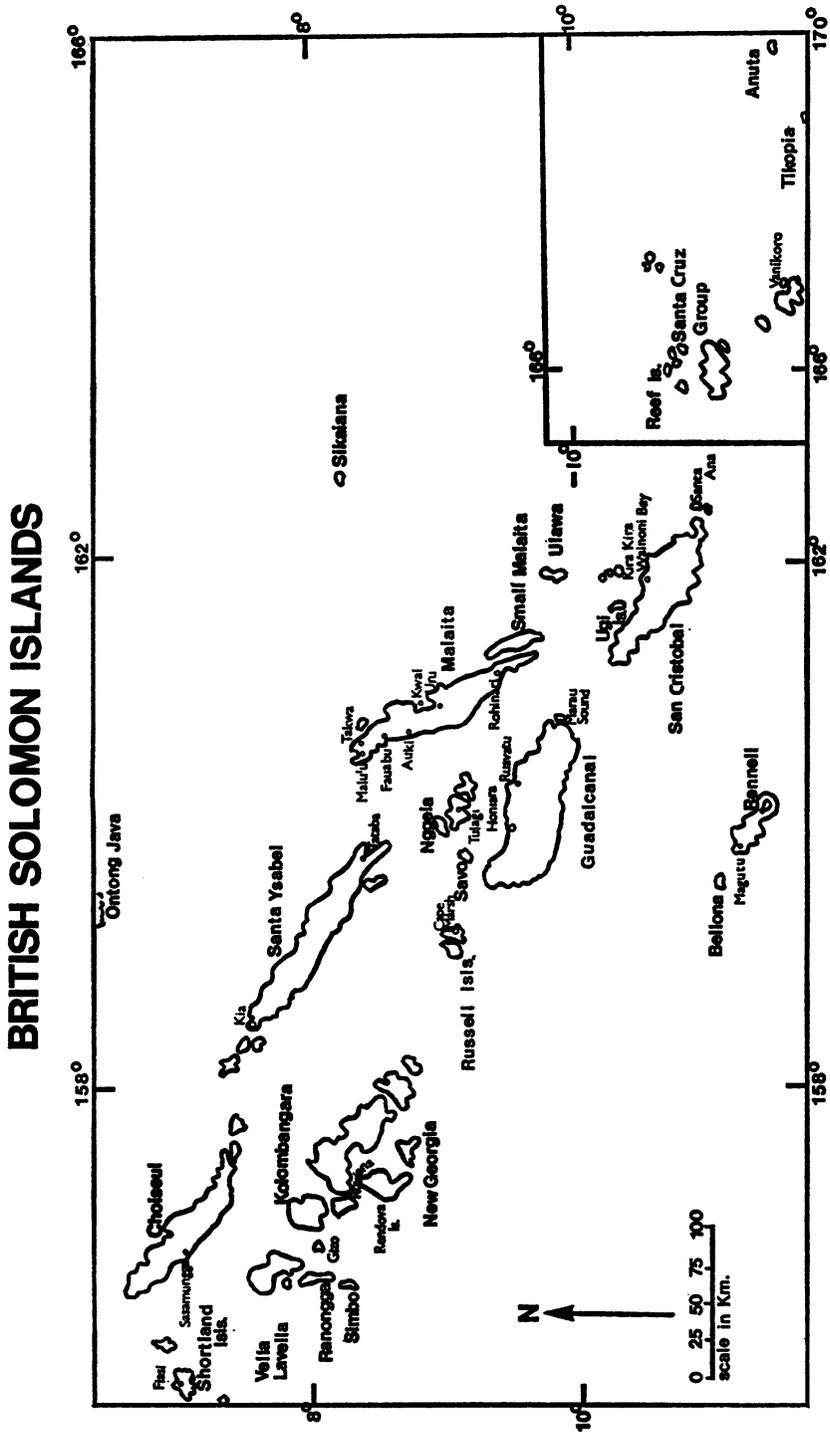
During the following thirty years, in spite of inadequate finance, a semblance of law and order was established, but with Woodford's departure in 1914 effective government gradually declined. As a result of the murder of a district officer and his party of fourteen men on the island of Malaita in 1926, public opinion in Britain eventually determined an improvement in the tone of government in the islands and there followed a gradual opening up of the Protectorate with the re-establishment of law and order.

In 1942 the Japanese, realizing its strategic importance, occupied much of the Protectorate, and it was here that one of the decisive battles of the Pacific War was fought when the American forces defeated the Japanese on Guadalcanal. With the collapse of the civil administration, the influx of so many troops and the disruption of plantations, the islanders became both bewildered and frightened. It came as no surprise therefore that a strong and determined nativistic movement, centred on Malaita island, began in 1946. It was called "Marching Rule" and it dominated local affairs on Malaita. It was characterized by an opposition to any co-operation with the Europeans (government or church), regimentation of its adherents into strictly ruled communities with large villages and communal farming, and cargo-cult overtones of firm expectations that soon the material wealth of the Europeans would reach Solomon Islanders by the intervention of some supernatural agency. This lasted for nearly six years and at one stage needed a show of force to control it.<sup>3</sup> It was in this setting that two devastating poliomyelitis epidemics occurred.

By 1952 the civil administration was again firmly established and for the first time in its history there was peace throughout the island group paving the way for a substantial economic expansion and later self-determination. Internal self-government was attained in 1976 and full independence is expected within the next two years.

<sup>3</sup> *Annual report 1974*, op. cit., note 1 above, pp. 134–135.

*The Solomon Islands tragedy*



## INTRODUCTION

Poliomyelitis has existed in the Pacific for many years, the first recorded epidemic being in Guam in 1899.<sup>4,5</sup> This was followed by another serious epidemic in Nauru in 1910.<sup>6,7</sup> Since then outbreaks have been documented throughout the Pacific.

The first medical practitioner to study the Solomon Islands was Guppy, the surgeon on H.M.S. *Lark* in the 1880s, who in his book on the islands, in the section on prevalent diseases, does not mention any condition suggestive of poliomyelitis, although he describes a case of probable Pott's disease of the spine.<sup>8</sup> The naturalist and later resident commissioner, C. M. Woodford, writing in the 1890s on his three visits to the islands, states: ". . . Cripples and deformities of longstanding are seldom seen".<sup>9</sup>

The *Annual reports of the Solomon Islands' Government Medical Department* commence in 1913 and are virtually complete except for the Second World War period.<sup>10</sup> The first mention of poliomyelitis can be found in the report for the year 1924, where it is stated that of 132 indigenes treated at Fiasi Hospital (Western Solomons) one had infantile paralysis.<sup>11</sup> However, in 1914, one European had died of "Paralysis",<sup>12</sup> and in 1919 an influenza epidemic was described, a complication of which was said to have been neuritis of the legs.<sup>13</sup>

## THE FIRST KNOWN EPIDEMIC—1925

The first well-documented epidemic suggestive of acute anterior poliomyelitis was recorded in the *Annual report of the Medical Department* for 1925.<sup>14</sup> In the latter months of that year, among indentured labourers, there was an epidemic of paralysis on certain plantations and most prevalent in the Cape Marsh district of the Russell Islands. It is worthy of note that the disease occurred in two companies which recruited some of their labour from the Santa Cruz Islands, and was something new in the experience of plantation managers who, while cognisant with beriberi as a cause of death, could not explain the deaths in this epidemic. As far as can be ascertained there were fifty-six cases, varying from sudden complete paralysis to mild polyneuritis with pyrexia. There were thirteen known deaths. The Government Hospital at Tulagi had sixteen admissions with five deaths from paralysis or polyneuritis

<sup>4</sup> F. E. M. McCullough, 'History of epidemics in Guam', *U.S. Navy Bull.*, 1908, 2: 22–25.

<sup>5</sup> A. G. Grunwell, 'Report on an epidemic of acute poliomyelitis of adults on the island of Guam', *Annual report of the surgeon-general 1900; United States bureau of medicine and surgery*, Washington, D.C., Government Printer, 1901, pp. 224–227.

<sup>6</sup> A. Müller, 'Eine epidemisch auftretende Erkrankung des Nervensystems auf Nauru', *Arch. Schiffs- u. Tropenhyg.*, 1910, 14: 535–543.

<sup>7</sup> P. Hambruch, *Ergebnisse der Sudsee-expedition 1908–1910*, edited by G. Thilenius, section on Nauru Hamburg, L. Friederichsen, 1914, pp. 259–266. (In the Mitchell Library, Sydney, Australia.)

<sup>8</sup> H. B. Guppy, *The Solomon Islands and their natives*, London, Swan, Sonnenschein, Lowrey, 1887, pp. 163–179.

<sup>9</sup> C. M. Woodford, *A naturalist among the headhunters*, London, George Philip, 1890, p. 34.

<sup>10</sup> *Annual medical reports British Solomon Islands Protectorate* (hereinafter *Annual medical reports*), 1913–1915, 1917–1940, 1946, 1948–1974. (*Annual medical reports, British Solomon Islands Protectorate*, and Western Pacific High Commission Archives (hereinafter WPHC Archives) references are obtainable from WPHC Archives, P.O. Box 748, Suva, Fiji.)

<sup>11</sup> *Annual medical report*, 1924, p. 7.

<sup>12</sup> *Ibid.*, 1914, p. 4.

<sup>13</sup> *Ibid.*, 1919, p. 6.

<sup>14</sup> *Ibid.*, 1925, pp. 2 and 5.

### *The Solomon Islands tragedy*

during the same year. Although there was much debate as to whether this outbreak of disease among the plantation labourers was poliomyelitis or beriberi, Crichlow (a government medical officer) was adamant that the disease was a very virulent form of poliomyelitis which apparently came from New Zealand via the New Hebrides and Santa Cruz and eventually made its way to New Guinea following the trade routes.<sup>15</sup>

#### THE 1929 EPIDEMIC

In 1929 there is no doubt that there was a severe epidemic of acute anterior poliomyelitis.<sup>16</sup> Unique is the fact that the first three known cases occurred simultaneously in three widely scattered islands — Malaita, Savo and New Georgia. Many others then occurred throughout the group, totalling 276 confirmed cases of whom sixty-three died. In this epidemic the diagnosis was substantiated by lumbar puncture and examination of the cerebro-spinal fluid. It was suggested that the disease was imported from Australia where poliomyelitis was endemic. Strict quarantine measures were imposed, including the somewhat unusual proclamation of suspending church services and tax collection. Recruitment and repatriation of indentured labourers was prohibited for two months, but despite this, some illicit trading with Chinese cutter boats continued.<sup>17</sup> James described how poliomyelitis was introduced into an isolated community on the island of Choiseul, resulting in three deaths among the ten acute cases he himself treated.<sup>18</sup> He commented on the speed with which the disease spread once it was introduced. Hetherington, the senior government medical officer, stated that most of those attacked were left with varying degrees of disability resulting from paralysis.<sup>19</sup> This is confirmed by two nursing sisters stationed at that time on Malaita<sup>20</sup> and New Georgia.<sup>21</sup> Twenty-one cases were admitted to Tulagi Hospital during the year. Lever's Pacific Plantations had nineteen cases among their indigenous staff, two of whom died, while the remaining seventeen recovered adequately to return to work.<sup>22</sup> In this epidemic the possibility of beriberi did not arise. Sayers<sup>23</sup> had the impression that mainly adults were affected, while a table in a unsigned report on the epidemic gives an age incidence as follows: 1–3 years 8 per cent, 4–12 years 44 per cent, 13–20 years 16 per cent, 21–40 years 30 per cent and above 40 years 2 per cent.<sup>24</sup>

The depression years of the 1930s were not without poliomyelitis epidemics in these islands. Crichlow, in 1930, states: "Poliomyelitis did not occur this year".<sup>25</sup> Nevertheless, the returns for Tulagi Hospital show that four patients were admitted with acute poliomyelitis, one of whom died.

<sup>15</sup> N. Crichlow, 'The prevalent diseases of the British Solomon Islands', *Trans. R. Soc. trop. Med. Hyg.*, 1929, 23: 179–184.

<sup>16</sup> *Annual medical report*, 1929, p. 1.

<sup>17</sup> A. E. Palmer, personal communication, 1972. (Former labour recruiting officer and trader.)

<sup>18</sup> C. James, 'The advent and progress of an epidemic of infantile paralysis on an island in the British Solomon group', *N. Z. med. J.*, 1938, 37: 32–34.

<sup>19</sup> H. B. Hetherington, *Annual medical report*, 1929, p. 1.

<sup>20</sup> E. S. Guylee, personal communication, 1973. (Former missionary nursing sister.)

<sup>21</sup> L. Woodnut, personal communication 1973. (Former missionary nursing sister.)

<sup>22</sup> *Annual report of Levers Pacific Plantations Ltd.*, 1929.

<sup>23</sup> Sir E. G. Sayers, personal communication, 1974. (Former medical missionary.)

<sup>24</sup> WPHC Archives, BSIP File I. 1929 (unsigned report).

<sup>25</sup> *Annual medical report*, 1930, pp. 1 and 8.

### THE 1932/33 EPIDEMIC

Late in 1932 poliomyelitis again became epidemic. By the end of the year thirteen cases had been reported. They were all mild. However, the epidemic became more serious by the beginning of the following year. Cases were notified mostly from among plantation labour. Quarantine measures were started and no deaths occurred.<sup>26</sup> This conflicts with the annual report of Levers Pacific Plantations, the largest employers at the time, which says that they had forty-two cases on their plantations with ten deaths.<sup>27</sup> According to Fulton, Levers' manager at the time, the majority of cases were in the Shortland Islands (Western Solomons), but a few did occur in the Cape Marsh district (Russell Islands). He points out that the company's medical officer was sure the disease was poliomyelitis but Hetherington gave his opinion that the disease was beriberi and requested an improved diet for the labourers. Fulton was quick to point out that the diet was as prescribed by the government regulations and had not altered for thirty years. He further pointed out that no cases of beriberi had been reported from Levers Plantations during the preceding thirty years. There was no change in the course of the epidemic after a trial period with a revised diet.

### THE PERIOD 1934–1947

Following the 1932/33 epidemic there are few references to the disease until the end of World War II. However, in 1934 the Solomon Islands first medical practitioner published an article in which he discusses the death of his cook and concludes that it was due either to poliomyelitis or pneumonia.<sup>28</sup> It is interesting that Lambert, who paid several visits to the Solomon Islands, describes a poliomyelitis epidemic in Samoa<sup>29</sup> but does not mention the condition in any of his medical publications on the Protectorate or the Western Pacific.<sup>30</sup> However, a visiting leprologist in his report on a leprosy survey of the Solomon Islands in 1937 mentions poliomyelitis among the endemic diseases of past years.<sup>31</sup> Of the prodigious number of patients he examined during the survey (21,615) he lists ninety-two as having residual paralyses due to poliomyelitis.

During the Second World War, medical services for the indigenous population ceased and there are no official records for the years 1941–1945. That there were sporadic cases during these years is confirmed by the author's survey of residual paralyses due to poliomyelitis, as four patients state the onset of their symp-

<sup>26</sup> *Ibid.*, 1933, p. 2.

<sup>27</sup> *Annual report of Levers Pacific Plantations Ltd.*, 1933,

<sup>28</sup> G. Bogese, 'Notes on an unusual case in the British Solomon Islands Protectorate', *Native med. Practnr. (Fiji)*, 1934, 2: 163–167.

<sup>29</sup> S. M. Lambert, 'A yaws campaign and an epidemic of poliomyelitis in Western Samoa', *J. trop. Med. Hyg.*, 1936, 39: 41–46.

<sup>30</sup> S. M. Lambert, 'Report on a hookworm survey in the Solomon Islands', 1921, *Annual medical report*, appendix 2, pp. 21–25. *Idem*, 'Medical conditions in the South Pacific', *Med. J. Aust.*, 1928, 2: 362–378. *Idem*, 'Health survey of Rennell and Bellona', *Oceania*, 1931, 2: 136–173. *Idem*, *Health survey of the British Solomon Islands Protectorate*, Suva, Fiji, Government Printer of H.M. High Commission for the Western Pacific, 1934. *Idem*, *A doctor in paradise*, London, J. M. Dent, 1942.

<sup>31</sup> J. R. Innes, *Report of leprosy survey in the British Solomon Islands Protectorate*, Suva, Fiji, Government Printer of H.M. High Commission for the Western Pacific, 1938, pp. 5, 14–15, 23, 32, 35, 41, 45.

### *The Solomon Islands tragedy*

toms was during the Solomon Islands Campaign. No official figures are available from the Japanese occupying forces, but the Americans kept accurate figures of sickness rates among their personnel. Paul studied in detail the poliomyelitis attack rates in American troops generally, and found the figures low in the South West Pacific area.<sup>32</sup> The official medical history of the United States Army during the Second World War states that poliomyelitis was rare or did not occur among their forces in the South West Pacific.<sup>33</sup> Unfortunately the exact numbers are not recorded in either report.

Rutter, who was a medical officer in the Solomons between 1938 and 1948, did not see any active poliomyelitis, but mentions seeing patients with residual palsies and contractures, several of whom he operated upon with good results.<sup>34</sup> It is interesting that the medical officer (Western District) claims to have seen a definite case of acute anterior poliomyelitis in Gizo during this period, resulting in a flail left arm.<sup>35</sup> For all practical purposes poliomyelitis as an epidemic disease was now forgotten.

#### THE 1947/48 EPIDEMIC

The epidemic started in early November 1947 when the first case occurred at Ruavatu on the coast of Guadalcanal, about thirty miles from the capital, Honiara, but it remained unrecognized until early January 1948.<sup>36</sup> Within the next four weeks two cases were reported, one from the prison in Honiara, and the other from the government farm on the outskirts of the town. The diagnosis of the latter was confirmed by examination of the cerebro-spinal fluid. At the same time the district medical officer for Malaita reported three widely scattered cases from his island, and a mission medical officer from the Western Solomons notified two cases from his hospital on Kolombangara. By the week ending 3 January a total of ninety-seven cases had been notified. The senior medical officer then declared an epidemic and brought quarantine regulations into effect. Recruitment and repatriation of plantation labour were curtailed and the movement of groups of six or more people was forbidden. Among the measures taken was the stationing of a policeman on a pontoon in Point Cruz Harbour, Honiara, to keep ship-to-shore traffic to a minimum.<sup>37</sup>

Notification of cases was handicapped by the failure of the population to recognize the course of the disease and the significance of paralysis.<sup>38, 39</sup> Added to this was the turmoil accompanying Marching Rule, when suspicion for reporting any kind of statistics to the government prevailed, particularly on Malaita. Such was the resentment of the movement's adherents to any intrusion, that when the district medical officer and the district agriculture officer arrived to do routine work in the Malu'u

<sup>32</sup> J. R. Paul, 'Poliomyelitis attack rates in American troops 1940-1948', *Am. J. Hyg.*, 1949, **59**: 57-62.

<sup>33</sup> L. D. Heaton (editor), *Preventive medicine in World War II, Vol. 5.—Communicable diseases transmitted through contact or by unknown means*, Washington, D.C., Office of the Surgeon-General, 1960, pp. 373-375.

<sup>34</sup> A. G. Rutter, personal communication, 1974. (Former mission and government medical officer.)

<sup>35</sup> WPHC Archives, BSIP List No. 1 46/62, 1947, Section 8, para. 51.

<sup>36</sup> *Ibid.*, BSIP List No. 1. 46/46, 1948, letter.

<sup>37</sup> *Ibid.*, infectious diseases medical reports, Part 2, 46/46, 1948, memo 10.

<sup>38</sup> C. Kamphuis, personal communications, 1973. (Former Marist missionary priest.)

<sup>39</sup> J. Qaqiri, personal communication, 1973. (Solomon Island villager.)

area of North Malaita, they were handed a note forbidding them even to land. It is also recorded that this same medical officer was, on several occasions, met with demonstrations when the people refused to have any dealings whatsoever with the government medical service.<sup>40</sup> A further hindrance to accurate documentation was the shortage of medical officers, there being for most of the epidemic only two expatriate doctors in the Protectorate, both of whom were, on occasions, stationed together in Honiara. In addition there were twelve Melanesian medical officers who unfortunately were unable to tour in many areas due to the adverse political climate.

Soon cases were widely reported throughout the Protectorate and all the large islands in the central chain were eventually affected, but the Polynesian islands all escaped, as did some islands at the extreme western and eastern boundaries of the Protectorate. The Russell Islands, headquarters of Levers Pacific Plantations which were involved in previous epidemics, also escaped.

As was to be expected, the island of Malaita with its large population and numerous inland villages recorded the greatest number of cases — a total of ninety-three.<sup>41</sup> However, the suspicion that this was not an accurate picture is confirmed by the district commissioner (Malaita), who was appalled by the extent of the epidemic and recalls that hundreds of people were affected. He also states that complete recoveries were seldom reported.<sup>42</sup>

The island of Ulawa, lying off the south-eastern tip of Malaita, claimed many victims. Eighteen paralytic cases were reported. It was thought that the disease was carried there from Small Malaita as the people of these islands are related. At certain times of the year, between the seasons, the seas are calm, allowing much canoe traffic between the islands. The epidemic was at its height during one of these periods.<sup>43</sup> The local population, on the other hand, blamed the introduction of the disease on the medical ship A.V. *Hygeia*, which arrived some days before the outbreak. The ship's visit caused much resentment on Ulawa.<sup>44,45</sup>

Guadalcanal reported seventy-three cases of which twenty-nine came from Honiara, the majority from the labour lines where men were congregated in large numbers. There were forty-four admissions to the Central Hospital, all of whom had the diagnosis confirmed by examination of the cerebro-spinal fluid.<sup>46</sup> A further twenty cases were reported from the neighbouring islands of Savo and Ngela.

On the sparsely populated island of Santa Isabel the first victim was the medical officer at Tataba Rural Hospital on the eastern end of the island, where virtually all of the thirty-seven reported cases occurred.<sup>47,48</sup> There were twelve reported deaths, mainly among children.<sup>49</sup>

In the Eastern District the epidemic was confined to San Cristobal and Santa Ana,

<sup>40</sup> *Annual Malaita Report*, 1947, WPHC, BSIP List 22/1/10, para. 30.

<sup>41</sup> *Annual medical report*, 1948, appendix 3.

<sup>42</sup> R. Davies, personal communication, 1973. (Former district commissioner, Malaita.)

<sup>43</sup> *Annual medical report*, 1948, appendix 3.

<sup>44</sup> WPHC Archives, BSIP List I 14/35, 1948.

<sup>45</sup> J. Espagne, personal communication 1973. (Marist missionary priest.)

<sup>46</sup> *Annual medical report*, 1948, appendix 3.

<sup>47</sup> E. T. Pogolomana, personal communication 1972. (Retired Solomon Islands medical officer.)

<sup>48</sup> H. Barrett, personal communication, 1973. (Missionary nursing sister.)

<sup>49</sup> WPHC Archives, BSIP List 7, III F.17/4, 1948.

### *The Solomon Islands tragedy*

where a total of twenty-seven cases was found.<sup>50</sup> At this time there was very little contact with the more easterly islands and, in fact, no cases occurred there.

According to statistics, only sixteen cases were reported from the whole of the Western District.<sup>51</sup> As this area was loyal to the government and opposed to Marching Rule doctrine, this figure, though small, is probably more accurate than those compiled from other districts.<sup>52</sup>

The epidemic finally ended in July 1948, the last case being reported from the Western District, and a final figure of 287 cases was recorded.<sup>53</sup> No Europeans or Chinese had contracted the disease. Although no mention is made of the number of deaths in any of the official reports, it is believed to have been few. It is worth recording that the areas with the greatest morbidity were those exhibiting maximum support for the Marching Rule movement.

Most Solomon Islanders were now well aware of this dreaded disease and were greatly relieved at its passing.

Clinically the outstanding feature was the low virulence of the causal organism. This was stressed by all medical personnel involved. Bulbar paralysis was exceptional, and the majority of patients complained only of fever, stiff neck, and pain in the limbs. Of the cases seen in the Central Hospital, and therefore more fully investigated, only thirty-three per cent showed signs of paralysis, and of those the majority recovered completely.<sup>54</sup> Understandably, most of these hospital admissions were young adult males, as this group formed the bulk of Honiara's population. Away from the medical centres the majority of cases were reported by headmen and dressers who, it is thought, only recognized poliomyelitis in the paralytic form. In a malarious country such as this, non-paralytic poliomyelitis was invariably diagnosed as malaria by the population at large and treated accordingly.<sup>55</sup>

At the time of the epidemic there was a severe outbreak of poliomyelitis in New Zealand,<sup>56</sup> a country with which the Solomons traditionally had close contact through the Methodist and Melanesian Missions. However, a thorough investigation of all incoming sea and air traffic failed to reveal any possible introductory source of the virus.<sup>57</sup>

#### THE MAJOR EPIDEMIC OF 1951

1951 heralded one of the worst epidemics of acute anterior poliomyelitis ever recorded. A particularly virulent form of the virus was involved. The disease appeared in epidemic form in early March, and by September, when it had run its course, there were thousands of victims and hundreds left with varying degrees of paralysis.

With the 1947–48 epidemic still relatively fresh in their minds, the population soon realized the significance of the early cases, and a wave of terror and panic seized the

<sup>50</sup> *Annual medical report*, 1948, appendix 3.

<sup>51</sup> WPHC Archives, BSIP List 1 46/46, 1948, letter.

<sup>52</sup> T. Russell, personal communication 1973. (Former district officer, Malaita.)

<sup>53</sup> *Solomon Islands annual report*, 1948, London, H.M.S.O., 1949, p. 16.

<sup>54</sup> *Annual medical report*, 1948, appendix 3.

<sup>55</sup> *Ibid.*

<sup>56</sup> M. J. Freyche and J. Nielsen, 'Incidence of poliomyelitis since 1920', in *Poliomyelitis*, Geneva, World Health Organization, 1955, (Monograph Series No. 26) pp. 59–106.

<sup>57</sup> *Annual medical report*, 1948, appendix 3.

people. This is well described by a medical officer who, on returning to Malaita during the early days of the epidemic, was struck by the “. . . excitement and fear branded in the eyes of the people”.<sup>58</sup>

The disease first came to light when a young adult male was admitted to the Central Hospital, Honiara, from the Government labour lines. Soon patients were being admitted daily from all parts of the town and its environs, until, by the end of the epidemic, ninety-five paralytic cases had been admitted to the hospital.<sup>59</sup> The number of deaths among these patients was not recorded, but it is known that there were eleven hospital deaths within the first two weeks.<sup>60</sup> Soon the disease spread throughout all the coastal areas of Guadalcanal, with the Marau Sound district in particular being badly affected. It is interesting that many of the high inland villages escaped due to their extreme isolation.<sup>61</sup>

The epidemic quickly spread to Malaita, and was thought to have been carried there from Honiara.<sup>62</sup> Poliomyelitis was first reported in the last week of March from Takwa (North Malaita) where the onset was said to have been explosive, the disease reaching its peak within a week. It spread rapidly throughout the length and breadth of the island,<sup>63</sup> and the densely populated artificial islands were said to have been particularly badly involved.<sup>64</sup> The last case was reported from Fauabu in late September. The true number of people affected during the epidemic on Malaita is hard to determine, but it is known that fifty-nine cases were admitted to Auki Hospital, five of whom died. From the area surrounding Auki a further 645 cases were notified by the dressers.<sup>65</sup> These were undoubtedly, in the main, paralytic cases or patients who had died. Added to these figures were reports from some of the mission stations. Rohinari Catholic Mission station admitted twenty-eight paralytic cases from its surroundings, seventeen of whom died.<sup>66</sup>

The only accurate figures for the whole epidemic were those of the Malu'u area (North Malaita), and this is also one of the few parts of Malaita where a strict enforcement of quarantine regulations was attempted. The number of cases reported from this area, each one of which was examined by a qualified medical practitioner, was 172, with twenty-seven deaths. Those affected were evenly distributed in the age group 0–20 years and there was not a particularly high prevalence in young children. The oldest case was a man of forty years.<sup>67</sup>

Little data on the morbidity of the disease were obtained for South Malaita, which still had many Marching Rule adherents among its population, although it is said that every village had at least one victim.<sup>68</sup> The villagers here refused to give any figures of cases or deaths.<sup>69</sup> No medical officer toured in this area during the epidemic,

<sup>58</sup> W. T. Malani, WPHC Archives, BSIP List 11 F, 28/1, 1951, letter.

<sup>59</sup> *Ibid.*, BSIP List No. 1 52/90/1, 1951, letter.

<sup>60</sup> S. Dakei, personal communication, 1972. (Former laboratory superintendent.)

<sup>61</sup> G. Wainwright, personal communication, 1972. (Former government medical officer.)

<sup>62</sup> C. Ofai, *Annual Malaita medical report*, 1951, p. 5.

<sup>63</sup> C. H. Allan, *Annual Malaita report*, 1951, WPHC Archives, BSIP List 22/I/13, para. 190.

<sup>64</sup> P. Geerts, personal communication, 1973. (Former Marist missionary priest.)

<sup>65</sup> *Annual Malaita medical report*, 1951, p. 7.

<sup>66</sup> B. Van de Walle, personal communication, 1974. (Former Marist missionary priest.)

<sup>67</sup> Malani, *op. cit.*, note 58 above.

<sup>68</sup> Geerts, *op. cit.*, note 64 above.

<sup>69</sup> *Annual Malaita report*, 1951, WPHC Archives, BSIP List 22/I/13, para. 204.

### *The Solomon Islands tragedy*

and such was the isolation of the people that individual dressers were forced to make their way by canoe to Auki to collect their routine medical supplies.<sup>70</sup> However, the resident commissioner and the district commissioner did tour Malaita and recorded well over 100 deaths from poliomyelitis.<sup>71</sup> The magnitude of the epidemic on Malaita is stressed by the resident commissioner who, in a letter concerning these deaths writes: “. . . There must be many more of these poor creatures who have died in the bush without having been brought to hospital.”<sup>72</sup> In his annual report for Malaita, the district commissioner states that a total of 961 cases with 110 deaths was confirmed by the end of the epidemic. He goes on to say that no reports had been forwarded from dressing stations on Small Malaita and four other stations on the mainland. His statistics do not include any mission station figures. Furthermore, many dressers in the various inland stations where Marching Rule was still active were unable to furnish figures. This is not surprising as it is recorded that in certain parts of Malaita, notably Kwai and Uru on the north-west coast, the government was unable to maintain effective control of law and order, and the collection of statistics was still associated with the repressive measures of the Marching Rule era.<sup>73</sup> The district commissioner, a particularly shrewd observer, advanced the opinion that the reported poliomyelitis figures for Malaita might well underestimate the true incidence of the disease by a factor of four.<sup>74</sup> It is perhaps worth noting that a severe drought on Malaita coincided with the epidemic which, in turn, was followed by the coldest weather in living memory. This must have added greatly to the discomfort of the people.<sup>75</sup> No sooner had the poliomyelitis epidemic finished than a severe outbreak of influenza occurred on Malaita, and this may well have caused the deaths of many of the badly paralysed.<sup>76</sup> That this epidemic reached monstrous proportions is confirmed by a report that 740 patients were treated at Auki Hospital alone, and a further 429 were reported by dressers in the surrounding district.<sup>77</sup>

The Western Solomons did not escape for long, the first case of poliomyelitis being notified in early March from the government station, Gizo. Quarantine regulations were started immediately and were strictly adhered to by a terrified population. During the course of the epidemic eleven cases were admitted to Gizo Hospital, with two deaths. The disease spread rapidly throughout the whole district, and no island was spared. It finally petered out after reaching the Shortland Islands in late July. Again statistics for the whole district are incomplete, despite a population which was health-conscious and had always remained loyal to government.<sup>78</sup> In the sub-districts of Vella Lavella and Roviana (total population 6,723), where communications were good and the population relatively static, seventy-two paralytic cases were reported with four deaths. These figures can probably be considered accurate.<sup>79</sup>

<sup>70</sup> *Annual Malaita medical report*, 1951, p. 5.

<sup>71</sup> WPHC Archives, BSIP List 1 F 52/139, letter.

<sup>72</sup> *Ibid.*

<sup>73</sup> *Annual Malaita report*, 1951, WPHC Archives, BSIP List 22/I/13, para. 190, 204.

<sup>74</sup> WPHC Archives, BSIP List No. 4 C 187, 1951, letter.

<sup>75</sup> *Ibid.*

<sup>76</sup> G. Kuper, personal communication, 1972. (Retired Solomon Island medical officer.)

<sup>77</sup> *Annual Malaita medical report*, 1951, p. 7.

<sup>78</sup> Davies, *op. cit.*, note 42 above.

<sup>79</sup> *Ibid.*

A. B. Cross

Badly hit was the island of Simbo (population 560) where ten cases were reported. The World Health Organization Yaws Eradication Campaign survey carried out in 1953 found, on Simbo, nineteen paralytic cases with contracture and deformity, mainly children, all a legacy of the 1951 epidemic.<sup>80</sup> The disease was known to have gained considerable hold on Ranongga<sup>81</sup> but the number of cases and deaths was unfortunately not recorded. It is known that Choiseul was badly affected, the disease appearing after the visit of a Government official in mid-May. All areas of the island were involved<sup>82</sup> despite attempts made to impose quarantine measures.<sup>83</sup> After the epidemic had passed, a survey was carried out of all Choiseul's Methodist villages (two-thirds of the population), and it was found that there were over 100 definite cases, about forty of whom appeared to have permanent paralysis. Fourteen fatal cases occurred at the mission headquarters in Sasamongga.<sup>84</sup> Eight other definite deaths from poliomyelitis were reported by headmen.

Late in 1951, despite quarantine regulations, the epidemic finally spread to the Eastern Solomons. It was said to have been introduced by a patient from Central Hospital, Honiara, travelling to Santa Ana on the government ship *A. V. Mary*, which stayed a few days at Kira Kira (San Cristobal) en route.<sup>85</sup> Soon cases occurred throughout San Cristobal, the total reported being fewer than 100 with less than ten deaths.<sup>86</sup> Twenty-five of these cases came from the Wainoni Bay area. On the neighbouring island of Ugi, there were many paralytic cases of whom four were known to have died. The three Anglican boarding schools situated there had six known cases and accounted for three of the deaths.<sup>87</sup> The small island of Santa Ana was particularly badly involved with over thirty paralytic cases. Because of effective quarantine the district commissioner states that poliomyelitis was contained within the San Cristobal area.<sup>88</sup> Indeed, few cases were reported farther east although it is known that some people living in Santa Cruz, the Reef Islands and Vanikoro, were affected.<sup>89</sup>

The Russell Islands, despite a large labour force, again appeared to be lucky with few cases and no deaths.<sup>90,91</sup> Santa Isabel also was more fortunate than in the preceding epidemic and had few victims. Kia, the largest village in the Solomons, escaped completely for the second time.<sup>92</sup>

The outlying Polynesian islands were again free of the disease. Nevertheless,

<sup>80</sup> J. de Beaux, 'Interim report on a pilot yaws survey and campaign on Simbo Island', *Annual medical report*, 1953, appendix 4.

<sup>81</sup> P. Beck, personal communication, 1974. (Senior Solomon Islands medical officer.)

<sup>82</sup> S. Kodovaru, WPHC Archives, BSIP List No. 7-III F 60/3, 1951, letter.

<sup>83</sup> L. Papaku, *ibid.*, BSIP List No. 7-III F 60/5, 1951, letter.

<sup>84</sup> L. Money, personal communication 1974. (Missionary nursing sister.)

<sup>85</sup> WPHC Archives, BSIP List 4C 190, 1951, letter.

<sup>86</sup> *Ibid.*

<sup>87</sup> Barrett, *op. cit.*, note 48 above.

<sup>88</sup> *Annual report Eastern District, 1951/1952*, WPHC Archives, BSIP List No. 9 F 111/4 Folder F. para. 7.

<sup>89</sup> A. B. Cross, 'Rehabilitation of the neglected poliomyelitic cripple in the Solomon Islands', M.D. thesis, The Queen's University of Belfast, 1975, p. 44.

<sup>90</sup> S. Timi, personal communication, 1973. (Male nurse, Levers Pacific Plantations.)

<sup>91</sup> A. Muva, personal communication, 1973. (Retired government dresser.)

<sup>92</sup> D. Tuti, personal communication, 1974. (Solomon Islands Anglican Bishop.)

### *The Solomon Islands tragedy*

several Polynesians fell victim to paralytic poliomyelitis while at schools or working in other parts of the Protectorate. Among the non-indigenes three Europeans were known to have contracted the disease, one of whom died, the others being left with mild palsies. The Chinese community again escaped.

By the time the epidemic had petered out in September, 1,280 cases of paralytic poliomyelitis had been confirmed in the Protectorate, with 156 deaths. This is the only available official figure.<sup>98</sup>

There seems little doubt that the causal organism of this epidemic was much more virulent than that of the 1947/48 outbreak, and it is thought that very few people escaped without showing some manifestations of the disease at least.<sup>94</sup> The symptoms in abortive cases were commonly headache, sore throat and gastro-intestinal upsets. These usually cleared up within three or four days. The major illness was heralded by sudden onset of severe headache, hyper-pyrexia and pain in the back of the neck.<sup>95</sup> This was followed, in many cases, by a bloody diarrhoea which was considered a bad prognostic sign.<sup>96</sup> Excruciating muscle pains were a marked feature,<sup>97,98,99,100</sup> often followed by paralysis of muscles in the painful areas. Bulbar palsy and respiratory paralysis were common,<sup>101,102</sup> and responsible for a large number of deaths. Indeed, nine out of eleven medical officers witnessing the epidemic state that death from this cause was common. Several workers report retention of urine as a feature of the disease,<sup>103,104</sup> and facial paralysis as a common sign. It is known that in many areas the time from the onset of meningeal symptoms to death was less than seventy-two hours.<sup>105</sup>

The vastness and severity of the epidemic overtaxed the very limited resources of the medical service. The Protectorate-wide shortage of medical personnel was even more serious than in 1948, and indeed, for the whole of 1951 the island of Malaita never had more than two doctors. Though few in number, the dressers stationed in the remoter areas worked with great energy and courage, even though many of them and their families were among the sufferers.<sup>106</sup> Symptomatic treatment was prescribed by these officers and usually consisted of bed-rest, mild analgesics and antimalarial drugs. For those with residual palsies, exercises were suggested, but little instruction or supervision could be given. Treatment in hospitals for the fortunate few was along similar lines but with the addition of better nursing care and rudimentary physiotherapy. The latter consisted of effecting passive movements of the limbs in the initial stages to avoid contractures. The expatriate community, considerably alarmed

<sup>98</sup> *Annual medical report*, 1951, p. 2.

<sup>94</sup> C. H. Allan, personal communication, 1973. (Former District Commissioner, Malaita.)

<sup>95</sup> Malani, *op. cit.*, note 58 above.

<sup>96</sup> Dakei, *op. cit.*, note 60 above.

<sup>97</sup> Pogolomana, *op. cit.*, note 47 above.

<sup>98</sup> G. Strachan, personal communication, 1973. (Missionary.)

<sup>99</sup> J. W. Panda, personal communication, 1974. (Treasury clerk, rehabilitated poliomyelitic patient.)

<sup>100</sup> C. Norman, personal communication, 1971. (Rehabilitated poliomyelitis patient.)

<sup>101</sup> S. G. Seruvatu, WPHC Archives, BSIP List No. 7-III F 30/1, 1951, letter.

<sup>102</sup> Kuper, *op. cit.*, note 76 above.

<sup>103</sup> L. Pullen, personal communication, 1974. (Former missionary nursing sister.)

<sup>104</sup> F. Osifelo, personal communication, 1974. (Solomon Islands civil servant.)

<sup>105</sup> Seruvatu, *op. cit.*, note 101 above.

<sup>106</sup> *Annual Malaita report*, 1951, WPHC Archives, BSIP List 22/I/13, para. 190, 191, 192.

by the obvious morbidity and mortality of the disease, subscribed to a fund for the purchase of a respirator which was eventually donated to the Central Hospital. It was ironic that the only death of an expatriate was from respiratory failure, and occurred within hours of the arrival of the machine.

The mission stations throughout the Protectorate did what little they could to relieve the suffering, but with rudimentary medical knowledge felt themselves very inadequate to deal with the situation.<sup>107,108,109</sup> The larger schools were all on mission stations and few were spared the disease. All Anglican schools had paralytic cases and several deaths were reported.<sup>110</sup>

For the majority of the population no medical expertise was available. Nevertheless, an attempt was made by the government to despatch messengers to as many villages as possible, warning the inhabitants of the epidemic and advising them to stay at home and to avoid strenuous activity. As the epidemic gathered momentum, anxiety increased among the population. The people, left mainly to their own devices, began to show considerable resource and courage, and made great efforts on their own account to combat the disease.<sup>111</sup> Even the Marching Rule leaders, Timothy George and Nonohimae, attempted to enforce quarantine regulations in their own districts.<sup>112</sup> The people were quick to fall back on remedies traditionally used for a variety of common ailments, these consisting basically of applying heat or counter-irritants.

On the island of Malaita it was customary in the early paralytic stage to make a bed of hot stones on the ground and cover this with layers of a certain leaf (*Evodia solomonensis*). Plaited leaf mats were added for comfort. The patient was then laid on the bed and covered with more leaves and mats, so that the heat would be retained. Only the head was left outside, so that a turkish bath-like effect resulted, with the patient sweating profusely. After two or three days the treatment was discontinued and the patient assisted to walk if possible.<sup>113,114</sup> The case of a woman being burned to death while receiving such treatment is reported by a medical officer working on Malaita at the time.<sup>115</sup>

Other novel ways of applying heat were used. On Guadalcanal a canoe filled with water was left in the sun and in due course the patient was laid in the warm water.<sup>116</sup> In the Western Solomons the victim was placed in a sand pit which had been heated by means of a fire, and he was then left for some hours covered with a leaf mat.<sup>117</sup> It seems that in none of these treatments was any attempt made to maintain the limbs in positions to avoid contracture formation.<sup>118</sup> Poultices made from various heated leaves were also a popular means of applying heat. In the coastal areas of Malaita

<sup>107</sup> Van de Walle, op. cit., note 66 above.

<sup>108</sup> Kamphuis, op. cit., note 38 above.

<sup>109</sup> Sister Evangeline, personal communication, 1973. (Missionary nursing sister.)

<sup>110</sup> H. Reynolds, Personal communication, 1974. (Anglican archdeacon.)

<sup>111</sup> *Annual Malaita report*, 1951, WPHC Archives, BSIP List No. 22/1/13 para. 190, 191, 192.

<sup>112</sup> *Second quarterly Malaita report*, 1951, WPHC Archives, BSIP List No. 4 C 187.

<sup>113</sup> R. Bosokuru, personal communication, 1974. (Former government librarian.)

<sup>114</sup> W. Suruti, personal communication, 1974. (Solomon Islands Herbarium curator.)

<sup>115</sup> C. Ofai, personal communication, 1973. (Retired Solomon Islands medical officer.)

<sup>116</sup> Sister Evangeline, op. cit., note 109 above.

<sup>117</sup> Timi, op. cit., note 90 above.

<sup>118</sup> F. Kikolo, personal communication, 1974. (Retired Solomon Islands medical officer.)

### *The Solomon Islands tragedy*

the leaves of *Barringtonia asiatica* were used.<sup>119</sup> On Guadalcanal the leaves of *Acalypha grandis* and *Leea suaveolens* were heated and packed around joints.<sup>120</sup> Another remedy was the heated and smoked leaves of the “fata” (*Vitex cofassus*) and “rufa” (*Eugenia tierneyana*) trees, which were rubbed on painful areas and said to have given relief.<sup>121</sup> It is not known whether the selection of these species was made solely because of their heat-retaining properties, or whether some more subtle, medicinal value was imparted.

As in many other parts of the world, counter-irritants were popular. The juice of hot chillies (*Capsicum minimum*) and lemons were the common irritants.<sup>122,123</sup> A novel treatment favoured on Malaita was the heating of the “sao” vine (*Ipomoea biloba*) which emitted a vile smell. The vine was then rubbed over the body and was said to cast the disease from the sufferer. Successful cures have been reported.<sup>124</sup> Those who had worked in the copra industry readily massaged painful areas with coconut oil.<sup>125</sup>

As well as these comparatively innocuous practices, two harmful treatments became popular in certain areas. The first was the drinking of copious amounts of fluid, often sea-water obtained far from land. Retention of urine was a sequel, the symptoms being difficult to relieve in a rural village setting.<sup>126</sup> The second practice was to exercise vigorously in the acute painful stage of the disease.<sup>127</sup> A case is documented of a policeman playing football in spite of his severe muscle pains. Twenty-four hours later he developed gross weakness in both lower limbs.<sup>128</sup>

The residual paralyses, for which there were no traditional remedies, were beyond the understanding of the islanders. To rehabilitate these people, both government and churches laid great emphasis on exercise, especially in the water. Many patients themselves remember being placed in water and encouraged to move their paralysed limbs. On the island of Simbo, a wooden raft was made by the local people at their own initiative, and this was moored in deep water for the purpose of aiding remedial exercises.<sup>129</sup> The people in inland areas used to exercise their victims in nearby rivers.<sup>130</sup> or on islands with thermal activity, in the sulphur springs.<sup>131</sup> Other villages improvised parallel bars for exercise sessions.

Unfortunately many people who treated their relatives by the methods described did so for a short time only, and when an instant cure did not result the procedures were abandoned.<sup>132</sup> Those who did not recover from their paralyses soon realized that if they were to increase their mobility they would have to compensate for their

<sup>119</sup> G. Maniasi, personal communication, 1974. (Government male nurse.)

<sup>120</sup> S. Vevoa, personal communication, 1973. (Solomon Islands village elder.)

<sup>121</sup> J. Sutea, personal communication, 1974. (Solomon Islands chief.)

<sup>122</sup> R. Alike, personal communication, 1973. (Solomon Islands villager.)

<sup>123</sup> Strachan, op. cit., note 98 above.

<sup>124</sup> J. Fifi, personal communication, 1974. (Ex-Marching Rule chief.)

<sup>125</sup> Pogolomana, op. cit., note 47 above.

<sup>126</sup> Pullen, op. cit., note 103 above.

<sup>127</sup> Fifi, op. cit., note 124 above.

<sup>128</sup> Malani, op. cit., note 58 above.

<sup>129</sup> WPHC, BSIP List No. 1 F.14/3 III 1951. letter.

<sup>130</sup> J. R. Fa'arondo, personal communication, 1973. (Solomon Islands medical officer.)

<sup>131</sup> D. Slade, personal communication, 1974. (District council president.)

<sup>132</sup> Sister Evangeline, op. cit., note 109 above.

disabilities by developing some unusual form of locomotion. A range of bizarre movements and gaits developed, often leading to permanent and severe contracture formation. A large proportion of victims with gross deformities were undoubtedly encouraged by finding themselves relatively mobile in the water. Over the course of time a variety of primitive walking and crawling aids were evolved for use on land.

This epidemic left the Solomon Islanders bewildered. The cause of the affliction was beyond their comprehension, and being a primitive people, many believed it to have been the revenge of offended spirits.<sup>133</sup> Others thought that it was the fault of the "white man", while on Malaita it was thought to be God's vengeance for their participation in the Marching Rule movement. In any event, it has been suggested that this epidemic was the final nail in the coffin of Marching Rule.<sup>134</sup>

This catastrophic epidemic made such a deep impression on the islanders that virtually any person who developed a paralysis of any kind was considered a victim of poliomyelitis.<sup>135</sup> Although there were certainly sporadic cases, none is mentioned in any of the official medical records for the next six years.

#### THE 1958 EPIDEMICS

The recurrence of epidemic poliomyelitis in 1958 caused alarm and despondency among the population,<sup>136</sup> so that when the Salk vaccine was introduced for the first time during the year, adult Solomon Islanders willingly paid £A1 for a course of injections at the Central Hospital.<sup>137</sup> Vaccination was free for children.

The disease appeared in three minor epidemics that year, in widely scattered areas of the Protectorate. Early in the year the Gilbertese immigrants, recently settled near Gizo, were the victims. None of the reported cases was fatal, and only seven had any degree of residual paralysis.

The second outbreak took place in the middle of the year on the island of Ulawa, the third time that epidemic poliomyelitis had occurred on this small island in ten years. Cases were scattered throughout the island and were said to be mild, although of the sixteen reported cases two died and three had mild residual paralyses.

The last of the outbreaks of the year occurred on the Polynesian island of Rennell. The neighbouring island of Bellona was at first also thought to be infected, but on investigation no paralytic case was found. Influenza, however, was rife. An anthropologist arriving at Rennell shortly after the start of the epidemic in November, found that two of his interpreter/guides were ill with poliomyelitis.<sup>138</sup> All cases were confined to four neighbouring villages, and the victims were isolated in the ghost village of Magutu.<sup>139</sup> When a government medical team arrived to investigate, eighteen cases of paralytic poliomyelitis were found. Six deaths were reported. As there was an influenza epidemic at the time it is not certain that all these deaths were due to poliomyelitis.<sup>140</sup> With the meagre medical facilities available, the Rennellese

<sup>133</sup> T. Monberg, personal communication, 1973. (Danish anthropologist.)

<sup>134</sup> D. Stuyvenberg, personal communication, 1974. (Roman Catholic bishop.)

<sup>135</sup> Dakei, *op. cit.*, note 60 above.

<sup>136</sup> J. D. Macgregor, *Annual medical report*, 1958, p. 24.

<sup>137</sup> Beck, *op. cit.*, note 81 above.

<sup>138</sup> T. Monberg, 'Research on Rennell and Bellona', *Folk*, 1960, 2: 68-81.

<sup>139</sup> Infectious Diseases File, Solomon Islands medical department, 1958, letter.

<sup>140</sup> *Annual medical report*, 1958, p. 24.

### *The Solomon Islands tragedy*

used the ancient treatments of the island. Two methods were employed: the massaging of the limbs with coconut oil, and a unique method of counter-irritation, consisting of burning the skin over the painful areas with the smouldering end of a piece of coconut frond.<sup>141</sup> The author has, on several occasions, noted faint scarring in paralysed areas which patients relate to such treatment.

During 1958, twenty-seven cases of poliomyelitis were admitted to the various hospitals in the Protectorate, with one death reported.<sup>142</sup>

#### THE 1959 EPIDEMIC

Epidemic poliomyelitis continued into 1959 with a sharp localized outbreak in the Russell Islands during April. Six Polynesians were severely paralysed but none died, and by the end of the year all had been discharged from hospital.<sup>143</sup> As a result of these recurring outbreaks there was an intensification of the immunization programme in 1959, all children under five years being offered free vaccination with the Canadian Quadruple Vaccine against poliomyelitis, diphtheria, tetanus and whooping-cough.

#### THE POST-1959 ERA

It should be recorded at this point that public-spirited people had shown active interest in the plight of the many post-war poliomyelitis cripples. The Solomon Islands Red Cross had locally-designed wheelchairs manufactured, the first thirteen of which were distributed by the end of 1959. When this wheelchair project was taken over by the Society for the Crippled People in the Solomon Islands in 1970, 114 such chairs had been issued. Late in 1963, with the introduction of the Sabin oral vaccine, an enthusiastic, active vaccination campaign commenced and has continued to date. School-children, pregnant women and medical staff were immunized free, as well as children under five years. By 1966, universal vaccination was being offered. Such was the enthusiasm of the population that a record 17,280 doses of vaccine were administered in 1969.<sup>144</sup>

Despite the progress of immunization, two minor outbreaks have occurred since 1959. In 1963 two suspected cases of poliomyelitis were reported from a plantation on Rendova Island in the Western Solomons. Emergency immunization was carried out and no further cases were reported.<sup>145</sup> The last reported epidemic was in late 1964 when a small outbreak occurred on Santa Isabel. There were no deaths and few were left with residual palsies.<sup>146</sup> Since that time only five sporadic, possible cases of poliomyelitis, all with minor palsies, have been reported. From this we may conclude that immunization has been highly successful.

#### RECENT REHABILITATION

In 1970, as poliomyelitis immunization was still satisfactory and there had been a rapid development of the medical services, it was decided that at last something

<sup>141</sup> Monberg, *op. cit.*, note 133 above.

<sup>142</sup> *Annual medical report*, 1958, p. 24.

<sup>143</sup> *Ibid.*, 1959, p. 15.

<sup>144</sup> *Ibid.*, 1969, p. 16.

<sup>145</sup> *Ibid.*, 1963, p. 7.

<sup>146</sup> *Ibid.*, 1964, p. 8.

could be done to alleviate the wretchedness of the Protectorate's numerous poliomyelitis derelicts. Advice was sought from overseas resulting in the visit of Professor R. L. Huckstep who had a vast experience in the management of such cases in Africa. During his visit in May 1970, 608 cripples were seen of whom 489 were found to be suffering from the after-effects of paralytic poliomyelitis. Since that survey a register has been kept, and by August 1974 the total had risen to 905 of whom 222 were crawling. Undoubtedly many unregistered individuals with minor palsies still exist.<sup>147</sup> As would be expected most of the sufferers are now adults who had been infected during the major epidemics of 1947/48 and 1951.

On Professor Huckstep's advice,<sup>148</sup> a nation-wide rehabilitation programme was formulated. The crawling derelict was to be given priority. Treatment was to consist of the alignment of the lower limbs (by surgery where necessary), for the subsequent application of simple, locally manufactured calipers, and the building up of residual unparalysed musculature wherever possible by intensive physiotherapy in order that adequate crutch walking could be established. For the unfortunate few who could not benefit from such treatment, wheelchairs were to be provided.

Although the government agreed to allocate some monies towards the programme, and to provide two disused buildings, it was unable fully to finance such a venture. Funds had therefore to be found elsewhere and to this end a locally based philanthropic organization was formed. The Society for the Crippled People in the Solomon Islands came into being in July 1970 and was an immediate success as it caught the imagination of people throughout the Protectorate and overseas. As a result of subscriptions and voluntary technical expertise, it was soon possible to open both a hostel and an appliance workshop. By the end of 1974, over 200 poliomyelitis patients, of whom 132 crawled on admission, had been treated.<sup>149</sup> All their appliances and wheelchairs were financed and manufactured by the society. During 1974, the Ryder Cheshire Foundation of Australia, being impressed with local efforts, provided a twenty-bed Ryder Cheshire Hostel for the accommodation of patients undergoing treatment. One of the primary aims of the Society for the Crippled People in the Solomon Islands is to maintain contact with rehabilitated patients and provide an after-care service. The society has more than fulfilled all its objectives and indeed, without its participation, successful rehabilitation on such a scale could not have been undertaken.

#### COMMENT

Now that poliomyelitis is considered a disease of the past in the Solomon Islands, it is hoped that immunization will continue, thus ensuring that the earlier tragic experience of these beautiful islands and charming people is not repeated.

This story of poliomyelitis poses many fascinating questions but probably the most intriguing is the part that political unrest played in the two devastating post-Pacific War epidemics in the Solomon Islands. If one accepts that political upheaval

<sup>147</sup> Cross, *op. cit.*, note 89 above, pp. 58–75.

<sup>148</sup> R. L. Huckstep, *Orthopaedic problems in the newer world – report on a Commonwealth Foundation lecture tour*, London, Commonwealth Foundation, 1971, Occasional Paper No. 10, pp. 34–37.

<sup>149</sup> Cross, *op. cit.*, note 89 above, pp. 143–162.

### *The Solomon Islands tragedy*

may adversely influence the course of such an epidemic disease, is it not possible that even today similar outbreaks of poliomyelitis may be occurring in remote, politically unstable areas unknown to the outside world?

#### **SUMMARY**

A history of the ravages of epidemic poliomyelitis in the Solomon Islands is presented. Poliomyelitis has been known to exist in the Pacific region since the end of the nineteenth century, and the first recorded case in the Solomon Islands occurred in 1924. The epidemics of 1925, 1929, 1932/33, 1947/48, 1951, 1958 and 1959 are well documented and described here in detail. The long-term effects of the disease on an isolated community are discussed.

#### **ACKNOWLEDGEMENTS**

I should like to thank the many people, too numerous to mention individually, who experienced poliomyelitis epidemics in the Solomon Islands and took much time and trouble to tell me of their experiences. To two people go my especial thanks: Dr. J. D. Macgregor, O.B.E., M.D., M.F.C.M., former Director of Medical Services, British Solomon Islands Protectorate, for help and encouragement to investigate the history now presented; and Patrick Macdonald, C.M.G., who spent many hours extracting information for my use from the Western Pacific High Commission Archives in Fiji.