6

BEGINNING DISASTER RECOVERY

Geoscience Support at Lamington and Rabaul

The administration in Port Moresby and the Department of External Territories in Canberra in February had been managing the media fallout relating to the proposal for a public inquiry on what led to the disaster. Meanwhile, on Sunday 4 February, Judge Phillips, who was at the centre of the dispute, reported to the administrator that he had been assisting lawyers at the government secretary's office to finalise a 'volcanic and seismic disturbances' ordinance that would cover the official relief effort and state of emergency at Lamington, to be renewed on a month-by-month basis (Phillips 1951b; Crown Law Officer 1951). Phillips added that the acting government secretary himself, Steve Lonergan, and his assistant, had 'worked incessantly and unsparingly' and that, on the previous day, Lonergan 'looked on the verge of collapse' (Phillips 1951b, 1).

The first 10 days of the relief phase at Lamington had been implemented rapidly and can be judged to have been a significant success. The administrator in Popondetta, however, was still focusing his immediate attention on continuing effective relief effort in the disaster area, and February thus became a month of many multifaceted and interrelated activities for him and his staff. February also represents the start of a transition from the 'relief' phase of the post-disaster period into a much longer and more difficult 'recovery' phase. Several of the main tasks facing the administration at this time can be identified from messages sent by

Colonel Murray from both Popondetta and Port Moresby to Canberra between 3 and 28 February (Murray Administrator 1951f–k). The first of these tasks was the challenge of continuing scientific observations and instrumental monitoring of the still active and threatening volcano as a basis for early warning of future eruptions.

Volcanologist Tony Taylor was required to stay on at Lamington to continue the volcano monitoring, thus beginning his nearly two years of study, broken at times by other commitments elsewhere in the Territory. He was supported in his work by other scientists seconded from the Bureau of Mineral Resources, Geology and Geophysics (BMR) in Canberra. Paramount in the early days was the support provided by Dr N.H. ‘Doc’ Fisher, chief government geologist, who had come to the disaster area carrying the benefit of his prewar experience in volcanological work in the Territory of New Guinea and especially at Rabaul in 1937–42. His seniority and experience were invaluable and timely as he was able to engage in discussions with Colonel Murray not only about the situation at Lamington, but also about the volcanic threats elsewhere in the Territory of Papua and New Guinea, including Rabaul.

Other BMR scientists who came to Lamington were seismologist W.J. ‘Bill’ Langron and geologist John G. Best. Bill Langron contributed greatly to the scientific and technical work through long hours of duty in collecting much of the instrumental data that was recorded on the seismograph (Taylor 1958). John Best came early but stayed only briefly as he was required to travel on to Rabaul to continue, in Taylor’s absence, the running of the government’s volcanological observatory and to deal with eruptions taking place elsewhere in the Territory. Best had the frightening experience on Wednesday 7 February of sinking ‘up to his neck’ in quicksand while crossing one of the flooded rivers, probably the Ambogo, but being pulled out by accompanying patrol officers using his camera strap (Littler 2005, 69).

Administrator Murray and Dr Fisher went to Embi airstrip on the morning of Saturday 3 February to meet the crew of a Royal Australian Air Force (RAAF) ‘Mosquito’ aircraft equipped for aerial photography (Murray Administrator 1951f). The visit had been arranged by the Department of External Territories in Canberra and would include not only the aerial photographic survey of the disaster area, but also the aerial spreading of DDT for health purposes (see also Bullard 2017). Aerial photographs of the Lamington area were needed to map the extent of the disaster and changes in topography and infrastructure. Murray and Fisher

discussed their requirements with the two flight-lieutenants in charge, but the subsequent flights were hampered by the weather and dust-laden atmosphere. Flight-Lieutenant Guthrie reported that in:

[Twenty-eight] days they had been able to take photographs on three days only, and on those occasions between 9 and 10 o'clock in the morning ... The monsoon season, with its low cloud and rain, and the continued presence of pumice dust made photographic conditions difficult. (*North Queensland Register* 1951, 15; see also Figure 5.9c(iv))

Doc Fisher also had the opportunity of following up on the concerns of 22 January that Mount Victory might break out in eruptive activity in a similar way to Lamington. He undertook an aerial inspection of Victory volcano, south of the government station at Tufi, but reported 'no change from its usual condition' (Murray Administrator 1951f, 2). In a magazine article published in June 1951, Fisher later described Victory as 'a rugged, partly eroded and heavily timbered cone ... There are no recorded eruptions [sic]', and said that an estimated eruption type at the volcano was 'probably mild explosive' (Fisher 1951, 38, 40). This description is a reflection of what little was known about Victory volcano and its threats at that time, although Fisher did point out that thermal activity was still taking place in its summit crater and that there was a considerable coastal population just to the east near Wanigela.

Colonel Murray had yet another active volcano, Rabaul, on his mind—in addition to Victory and to the immediate problem of Lamington volcano and its ongoing eruptive activity. Doc Fisher was on hand, so the administrator could now discuss with him the issue of relocating the town of Rabaul in East New Britain to a volcanically safer place. Rabaul town had been destroyed by the end of the war by the Allied bombing of the then Japanese-held town, meaning there was now an opportunity for rebuilding it somewhere else. Gradually, however, Rabaul town had come to be reoccupied in the few years after war's end, particularly by local businesses that had had property there before the Japanese invasion. The proximity of the Rabaul wharfs and deep anchorage in the harbour were also clear advantages for trade. Murray in January 1951 was under pressure to allow this growth to continue, given especially that the volcanological observatory was being re-established for eruption early warning. In the wake of the Lamington eruption of 21 January, the issue was highlighted in an editorial in the *South Pacific Post* of Friday 26 January:

The time for argument and indecision is long passed [sic]. The matter is no longer a question of comfort or discomfort, financial gain or loss. The people of Rabaul must be removed from the possibility of a repetition of the Higaturu horror ... The important and glaring necessity is to get the place moved and get it moved quickly. If the Administration wants to clutter up its routine activities with red tape then it can do so. But red tape where human life is endangered cannot be tolerated. (*South Pacific Post* 1951b, 8)

Was there indeed any immediate risk that Rabaul, like Lamington, might break out in catastrophic eruption at any time? Murray favoured the Kokopo area to the south of Rabaul as an alternative town site, but Fisher preferred the Tavui area to the north. Doc Fisher flew to Rabaul and, on his return through Port Moresby, was able to reassure the administrator that there was 'no evidence whatever of impending [eruptive] activity for some considerable time and that in any case the present station he has at Rapindik [near Tavurvur volcano] can give two days notice of major eruption' (Murray Administrator 1951i, 1; see also *South Pacific Post* 1951e).

All of this information was sent by Colonel Murray to the minister through the Department of External Territories in Canberra on Wednesday 14 February—the day that Fisher returned to Australia—together with an opinion 'that without compulsion [it] would be unlikely that majority of total nonnative [sic] population would move out of Rabaul township' (Murray Administrator 1951i, 1). Public safety concerns in Rabaul, however, evidently were becoming prioritised by the experience of the Lamington disaster as District Commissioner J.K. McCarthy cancelled a Rabaul evacuation plan dated 1950 and introduced a new one on 15 February 1951 (McCarthy 1951a). The administration even arranged for a representative party of Rabaul residents to visit the Lamington area for two days, leaving Rabaul on 12 May (*South Pacific Post* 1951f) and—as stated in the caption on the front cover of the July issue of the *Pacific Islands Monthly*—'apparently with the idea of impressing upon them what a volcano can do' (Figure 6.1). Nevertheless, the rebuilding of Rabaul township continued on its existing site and was undertaken officially following government approval by the Australian Cabinet in Canberra in June 1952 (Territories 1952).

Figure 6.1. Rabaul residents visiting Lamington area in mid-1951

A group of Rabaul residents poses in front of Lamington volcano in the second week of May 1951. A similar photograph to this one was published on the front cover of the July issue of *Pacific Islands Monthly* where the caption includes the statement that: 'On their return to Rabaul all were of the opinion that the sooner that volcano-encircled town was moved to a safer spot the happier they would be'. Photograph supplied courtesy of Geoscience Australia (negative number M/2438-3-1).

Doc Fisher, before his departure from the Territory, gave Colonel Murray a list of 22 volcanoes in the Territory that required instrumental monitoring. He also advised the administrator that Popondetta was 'safe for all time' from volcanic eruptions and was therefore a suitable place for new headquarters for the Northern Division (Murray Administrator 1951i, 1). Colonel Murray advised Canberra that the administration, therefore, would be using Popondetta as temporary headquarters until a final decision on a permanent base could be made.

Development of Evacuation Centres

Wairopi

The Wairopi evacuation camp had been established in the first few days after the eruption on the western side of the Kumusi River, on level grassy ground and on the main road connecting Kokoda and Popondetta. Kokoda airstrip was not far off. The Kumusi could be crossed by a suspension foot bridge ('wire rope') high above the fluctuating water

levels of the river, and hence by the road west to Kokoda. The camp itself seemed to be in a relatively safe place well west of the ongoing eruptive activity at Lamington volcano, but the flat ground was the flood plain of the large Kumusi River and the camp was set between it and the nearby Oiva stream. Water in the Kumusi was suitable for general washing and cleaning and in the Oiva for drinking (Administrator, quoted in *South Pacific Post* 1951d).

Overall responsibility for managing the large evacuation camp at Wairopi belonged to Assistant District Officer F.P.C. 'Fred' Kaad, a former Australian New Guinea Administrative Unit officer, assisted by administration patrol officers such as Geoff Littler. Kaad and his staff had to oversee many different aspects of temporary life at the Wairopi camp, but the overall aim was to determine, finally, how best the evacuees could be settled on a more permanent basis in a safe place acceptable to the displaced communities themselves. Patrol Officer Henry or 'Harry' Plant came to the area and used his anthropological training to identify and map the lands owned by different groups of mountain Orokaiva as a basis for resettlement plans (Plant 1951). Other patrol officers, such as Bob Blaikie and Des Martin, were carrying out duties elsewhere, including helping with burial parties. Their work was exhausting, seemingly unrelenting and emotionally demanding, and they were transferred out of the disaster area within two or three weeks of arrival for recovery elsewhere. They never returned to the Lamington area and, later in life, stated openly that they had, in different degrees, suffered post-traumatic stress disorder (Blaikie 2005–12; Martin 2007–15).

The number of evacuees at Wairopi increased steadily in the hours and then days and weeks after the eruption of 21 January—from a few hundred up to as many as 4,000, or even more. The number was this large for two main reasons: first, because many evacuees on Sunday 21 January were already migrating there along the road away from the devastated western slopes of the volcano; and, second, because many refugees in other parts of the Northern Division were encouraged by the administration to move there to centralise the disaster recovery work.

Figure 6.2. Wairopi and pedestrian bridge over the Kumusi River

Wairopi and the pedestrian bridge across the Kumusi River are seen in this aerial photograph supplied by the Kleckham family. The Kumusi River is in full flow, but not carrying any obvious floating debris. Scores of people are assembled in front of the large building near the bridge, possibly for a church service. The date of the photograph is unknown but it could have been one of the Sundays earlier in January 1951. Mr Kleckham, an amateur photographer, is known to have taken an aerial trip earlier in January.

The unsuitable evacuation settlement at swampy Cape Killerton was soon abandoned, and Sangara and Isivita evacuees were shifted along the coast to Eroro and Oro Bay, respectively. Colonel Murray visited the area and noted in his telegram of 3 February to Canberra that progress had been made at Oro and that the Anglican mission in the area, based at Eroro, was helping with accommodation and hospitalisation of the evacuees and was boosting morale. Bishop Strong was reported by the administrator as saying that 'organisation at Wairope [Wairopi] evacuees camp wonderful and Kaad doing excellent work' (Murray Administrator 1951f, 2).

The mountain Orokaiva refugees at the coast were in foreign Yega territory. They were also fearful of the sea and the prospect of tsunamis, and wanted to move back inland to higher ground. This was only one of the challenges that John R. Foldi had to deal with at the Oro Bay refugee camp. Foldi was district commissioner at Samarai and he came to Oro Bay to provide the emergency leadership needed by the administration. He was accompanied by his wife, Sister Vera Foldi, who provided invaluable medical support for the refugees in the camp (e.g. Kettle 1979).

Wairopi was not too far from the former, now destroyed villages of the mountain Orokaiva. Most of the evacuees were from the nearby Waseta–Isivita–Awala area. Others were those few Sangara people who were fortunate enough to have survived the eruption of 21 January, having been outside of what would become the devastated area. There were, however, some non-Orokaiva evacuees, notably the Koiari-speaking and much less populous Omie people from villages on the south-western flank of the mountain (Modjeska 2009, 2012, 2017). Taylor’s mapped limits of ‘complete devastation’ and ‘heat effect and partial destruction’ caused by the pyroclastic flows extends down the south-western and south-eastern flanks of the volcano to the Mamama River, so the Omie suffered in the disaster too (Figure 4.6). In contrast, the Managalasi people further to the west and south-west appear to have escaped the deadly effects of the eruption. They may have self-evacuated from their threatened villages and gardens during the days of the ashfalls that preceded the eruption of 21 January.

Medical staff in the Northern Division had been dealing with an outbreak of whooping cough before the eruption and now there were the increased risks of other transmittable diseases in the disaster relief area, such as dysentery, typhoid, tuberculosis and pneumonia. Mosquitoes and the ever-present malaria also had to be taken into account. Effective and urgent health services, including extensive programs of immunisation, were therefore required for the evacuees at Wairopi where a tent community was growing (Gunther 1951a, 1951–52; Best 1951; Kettle 1979). Refugee malnutrition was another potential problem and attention was given to the growing of vegetables, supervised by an onsite agricultural officer, and obtaining them from local villages. Medical equipment was flown in to Kokoda and then transported by road to Wairopi. Other supplies including rice and tinned meat continued to be dropped by parachute. The RAAF ‘Mosquito’ crew also completed their aerial spraying of DDT in the area (Murray Administrator 1951f; *North Queensland Register* 1951; Bullard 2017).

Dr Kenneth Pike was put in charge of health services in the Northern Division as the replacement to Dr Pal Martin who had perished at Higaturu in the eruption of 21 January. Lon Tomlinson, an experienced administration medical assistant, was appointed officer-in-charge and responsible for the difficult health challenges at Wairopi. Sister Pat Durdin shifted from Popondetta to the camp on Friday 26 January to assist Tomlinson with the medical work, joining other mission staff who were living in tents (Kettle 1979). The numerous Papuan evacuees were having to adapt to a new, post-catastrophe life in temporary accommodation,

and this included having to cope with the grief of losing so many family and friends and having no access to their traditional lands. Decades later, in 2007, Sister Durdin recalled her impressions of the people in the evacuation camps at both Wairopi and Popondetta:

We would hear the traditional wailing and expression of grief at night. But we could not but be impressed by the overall attitude of acceptance, and readiness to respond to the immediate demands of the situation; and to express even at that stage their desire to return to their own villages and rebuild their lives. That was their overwhelming urge—to get back to their own land, though for many months it was not possible, until the area had been declared safe by the government authorities. (Durdin 2007, 1)

Other European observers noted that the Orokaiva at this time had a strong sense of independence, alertness, self-reliance and dignity (Keesing 1952). Visitors also observed that the refugees showed restraint and an imperturbability at meeting unexpected events. The Orokaiva, however, also could be vocally assertive if not excitable in some conversations. These characteristics were tested to the full in the weeks and months ahead in the large, crowded refugee camps. The Orokaiva of 1951 were, after all, the descendants of warriors who had resisted the invading colonists in battle.

Camp hygiene, supplies of clean water and disease prevention were demanding particular attention at Wairopi, as they had from the beginning, and despite the natural resilience of the evacuees. Dr Gunther on the evening of 29 January in Port Moresby had telephoned Sister Edna Gilbert, a nurse undertaking infant welfare work in the capital. Sister Gilbert was asked to fly to Kokoda the next morning, and then travel by road to Wairopi, taking with her supplies of powdered milk and vitamins for babies. She also brought 'a gavage tube and funnel lest there be any premature babies following the shock of the eruption' (Kettle 1979, 140). Lon Tomlinson was greatly relieved to have the help of Sister Gilbert who was placed in charge of the care of all pregnant women and all children under five years of age. Tomlinson himself focused on hygiene and battling the threat of dysentery and other infectious diseases. An education officer, Percy Jensen, was brought in to set up schools for both child and adult education. The concentration of so many local people in one place was an excellent opportunity for the administration to demonstrate and teach a range of subjects, perhaps most notably and immediately the principles of sanitation and hygiene that could be applied later to normal village life.

The administrator in early February recognised that mudflows were rapidly silting the river channels on and around Mount Lamington, concluding that there was a risk of flooding (Taylor 1958). He was concerned particularly about the potential vulnerability of the Wairopi camp on the bank of the Kumusi River. An aerial inspection of the headwaters of the Kumusi and its large catchment area was, therefore, carried out on 8 February. The main tributary, the Mamama River, was receiving heavy loads of fragmental debris from the denuded southern slopes of the volcano, and logs brought down from the destroyed forest appeared to be blocking narrow parts of the valley. Staff at the Wairopi camp were alerted. Refugees at Wairopi, however, according to one journalist, had been expressing their own concerns about the camp's safety, presumably because of their knowledge of riverine flood hazards:

Then, for no apparent reason, the natives of Wairopi began to talk of moving out. They seemed frightened of 'big trouble'. When those in charge explained that they were out of range of any possible future blast from Lamington they were not comforted. The natives said they must get away from the river. (Best 1951, 20)

Figure 6.3. Flooding of Kumusi at Wairopi refugee camp

Part of the tented refugee camp at Wairopi is seen in this aerial view taken on 19 February 1951. The photograph was published by Taylor (1958, fig. 104; compare with Figure 6.2) and was accompanied by the following caption: 'Flooding of Kumusi River and undermining of Wairopi Evacuation Camp. The large building on the left of the bridge remnant has partly collapsed'. Photograph supplied courtesy of Geoscience Australia (negative number GB/1893).

The Kumusi River flooded that afternoon, 8 February, but subsided rapidly (Taylor 1958). Further flooding by 19 February, however, caused the river to break its eastern banks and erode the camp site on the opposite side (Figure 6.3). The camp would have to be abandoned and relocated somewhere safer, despite all the gruelling work and achievement at Wairopi during the previous few weeks. New staff had arrived at Wairopi by this time including medical assistant Albert ‘Bert’ Speer who was just in time to help with the arduous transfer (Figure 6.4). The new evacuation site was at Ilimo, 6.5 kilometres along the road west of Wairopi and closer to the Kokoda Airstrip. Ilimo, however, was further away from the traditional homelands of the refugees and more distant from the still temporary but developing provincial headquarters at Popondetta.

Ilimo

Shifting the entire Wairopi camp and its occupants to Ilimo was hardly a straightforward task (Best 1951; Kettle 1979). About 2,000 people were transferred to local villages. Most of the remaining 2,000 evacuees walked to Ilimo along the road from Wairopi, but the old and ill were carried by two jeeps shuttling between the camps. In the first three days, the new camp was soaked by torrential downpours, slowing down building construction and increasing the dangers of disease. The old Wairopi camp was flooded and became submerged completely, as were the gardens of Ajeka village on the low, opposite, eastern side of the Kumusi River. The village itself also suffered from ash falls, but the higher gardens behind the village survived and the Ajeka people expressed a desire to reoccupy the site. A patrol officer at Ilimo, possibly I.W. Wiseman, wrote on 23 February that:

It is a grand site for a settlement standing as it does on good high ground and with ample acreage for possible expansion. In the days ahead, when the Kumusi River returns to its normal course the river flats, where the gardens previously were, should prove excellent land for all kind of cultivation. (Patrol Officer 1951, 1)

The Ajeka people clearly were quite accepting of future flood risk on the banks of the Kumusi.

Figure 6.4. Bert Speer photograph of evacuation of Wairopi camp

Sister Gilbert in the front seat and Sister Pat Durdin behind her are here seen departing from the abandoned Wairopi camp, escorting infants in the trailer behind the left-hand-drive jeep, to Ilimo camp (Speer 2005, photograph no. 29). Courtesy of the National Library of Australia.

The Ilimo camp eventually began to take form during the remainder of February. Bush-material houses for the evacuees were constructed and arranged in regimented straight lines, and support buildings were built, including a temporary hospital that attracted villagers from the surrounding areas. Ilimo was not a 'tent town' like Wairopi but, rather, a large, temporary and changing 'village' of houses built by the refugees themselves and by local villagers. The number of refugees at Ilimo was increased when the 'Isivita' people at Oro Bay were relocated there, transported in small groups by launch to Cape Killerton, truck to Popondetta, small aircraft to Kokoda, and from there to Ilimo on foot (Keesing 1952). The Sangara refugees at Eroro, in contrast, took a much less circuitous route when they were transported to the Popondetta camp and nearby areas closer to their homes.

Figure 6.5. Twin babies at Ilimo refugee camp

Twin babies and their mother are here photographed at Ilimo evacuation camp, together with infant welfare officers Sister Edna Gilbert on the right and Ivane Champion in the centre (Best 1951, 21). It may well have been a celebratory moment for them, judging by the expressions on the faces of the two European women. The two Papuan women seem more curious about the camera, however. Reproduced with the permission of Bauer Media Pty Ltd.

Health, education and local agricultural developments continued as priorities at Ilimo as they had been at Wairopi, but all this work was still against the established backdrop of how the evacuees could be resettled on a more permanent basis, once the eruptive activity at Lamington volcano had ceased. Lon Tomlinson worked heroically at achieving an epidemic-free environment:

Before the month ended Tomlinson had given 3840 whooping-cough injections and 3150 [for] typhoid. He started vitamin courses for the hundreds of under-nourished children, distributed malaria preventives, treated thousands of tropical ulcers and eye infections ... In the first week Tomlinson got a total of 10 hours sleep—but he got the epidemics under control. (Best 1951, 20)

Sister Gilbert was similarly busy with the refugee infants. She was joined by 20-year-old Miss Ivane Champion, daughter of Ivan Champion, who had been flown in urgently to assist Sister Gilbert, even though still only partly trained in infant welfare. Both women never worked less than 15-hour days. Both also appeared, together with a Papuan mother who had given birth to twins, in a photograph that was published in the widely read *Australian Women's Weekly* (Figure 6.5).

Staff and the refugees at Ilimo still relied largely on parachute drops for food made by both the RAAF and Qantas, but officers of the Department of Agriculture—first W. ‘Bill’ Conroy, then Malcolm McIndoe and Alan Boag—became busy with teams of men clearing forest and undergrowth and planting rice, sweet potatoes and peanuts (Kettle 1979). Agricultural officer Fred Kleckham was originally assigned to rice-growing work at Wairopi but he was injured in a road accident on the way to the camp. Kleckham had to be flown out to Port Moresby for X-ray examination and Conroy took over the farming work at Wairopi (e.g. *South Pacific Post* 1951c). This important agricultural work was an opportunity to teach the principles of agricultural mass production and the cooperative farming of food. Meanwhile, the parachute drops were greatly appreciated by the hard-working administration officers on the ground at Ilimo, who, for amusement, would assess the cargo-dropping skills of the different aircraft crews. They reached the general conclusion that Qantas pilots were more successful than the postwar pilots of the RAAF (Littler 2005).

Life in the large, cramped camp at Ilimo cannot have been easy for the thousands of refugees who were more used to community life in their widespread hamlets and nearby gardens. This was despite the close attention and support being provided by dedicated administration staff. The administration sought to counter the potential problem of boredom among the male refugees, in particular, by keeping them busy up to a point with tasks such as construction, clearing land, gardening and hygiene. The refugees in the camps could hardly be accused of being ‘mollycoddled’, as one anonymous letter writer claimed (Old Planter 1951). It was, however, still a time of dislocation, uncertainty, worry and tension for the encamped refugees (Belshaw 1951b; Keesing 1952). Tempers could flare excitedly, quarrels and fights could break out, blood could be spilt, and women could be assaulted by fractious, frustrated husbands. The large squads of native police led to friction, sometimes over women, and sometimes through a general resentment of being ordered about. Sharing common latrines was something new and stressful for some of the refugees. Some believed that the changed circumstances might permit sorcerers to take advantage.

Albert Maclaren Ririka, who had escaped the eruption through being at Isivita rather than at Sangara Mission, came to the Ilimo camp as a schoolteacher. While there he composed two songs or laments, one of which was later included in a songbook distributed to primary schools in Papua (Figure 6.6). The English translations of four verses selected from the two songs are reproduced as follows:

*We were at Sangara
Gathered together
With all our brothers
Living together*

*The mountain was made by Thee
It was not seen by us before;
Lord, when it appeared
We were wounded.*

*In the land of Sangara
Are the bodies of our brothers
As though they were sleeping
But we will see them again in the end.*

*The evening was bright
On the hills of Ilimo
But our thoughts
Are always with our brothers. (Hand 2002, 65–66)*

Ewa ge language,
Popondetta,
Northern Province.

NANGO EINDA SANGARA DA (LAMINGTON LAMENT)

Figure 6.6. Lamington lament words and music in Balob songbook

This detail includes the first bars of the song or lament written originally by Albert Ririka in 1951 and presented later in an educational songbook in a local language (Balob Teachers' College 1976, 13). Reproduced courtesy of the editor and compiler of the songbook, C.K. Thorp.

Visits to Higaturu and Andemba

Health staff were hard at work in the refugee camps coping with medical issues. They included Medical Assistant Bert Speer who also travelled widely through the area, undertaking vaccinations and general health work (Speer 2007, 2005–14). At times, his activities away from the camps entailed him entering the devastated area where the horror of the disaster was still to be seen weeks after the catastrophic eruption of 21 January, as Speer described in his diary:

Monday 26 February 1951: Today I awoke with a stinking cold in the nose and head. However flew over to Embi and checked the stores over there and then returned home to Popondetta in time to go up to Higaturu—This was one of the worst areas of devastation I have ever seen! Everything totally destroyed for miles around, the station just tossed and turned around and dead bodies everywhere. Natives poor souls who never had a chance. Dr Pike and I salvaged—in pouring rain about £100 worth of instruments here. I was interested in records but none found as it was too wet, I didn't disturb more than I could help. It was a peculiar feeling to be there amongst the rotting dead with an active volcano at one side and all around teeming rain—it seemed to spell disaster itself. I hope I never see a similar sight again. The flies were active in all the bodies and in the heat I should imagine the stench would be terrific. God help them and rest their souls. It makes one wonder just what is found in life here. People strive to build something beautiful and then all is wiped off the earth.

Wednesday 14 March: Today, up at 7 A.M. ... Then after tea with Tony Taylor and Jim Robinson and Peter (the cop) procured some rations and then Jim took me off to Andemba village and the coffee plantation on the banks of the Ambogin [Ambogo] River. Here [north of Higaturu] the river is just a hot ash bed with smoke and fumes arising. But oh the destruction of it all and the loneliness. A trade store with its poor dead—guardian just a skeleton now! Then the village in all stages of destruction, with its corpses and blowflies everywhere, and across the hot and desolate river all that remains of poor twisted Higaturu with its D.O.'s house and the Mission house standing shaken and sentinel against the desolation. A site to ever remember. This was a station, here lived people and here they died, the black with the white and none to tell the difference, now or ever. God rest their poor souls. At the top of it all stands the smoking burning volcano a mass of hot and burning hill, that in its wrath has spilled out over the land

it [over]looks ... Tony [Taylor] seems to think all will be OK to go into Higaturu now, but is cautious! (Speer 2007; text lightly edited by author)

Dr Pike had a strong interest in butterflies, and Speer told of them both entering the devastated area in search of the large, brilliantly coloured Blue Emperor butterfly (Speer 2007, 7). They found the butterflies flitting among the death and destruction, attracted by the decaying cadavers. This association of butterflies and death is part of ancient mythology, commonly attracting meanings of spirituality and representing symbols of human rebirth (e.g. McPhedran 2002), not that Speer alluded to this directly.

Restarting the Plantation Economy

Re-establishing village life in the Lamington area was one priority for the administrator and his administration. Another was restarting the economy of the Northern Division, based on plantation productivity. Colonel Murray informed Canberra on Saturday 3 February that the Territory's director of agriculture, R.E.P. Dwyer, was assessing the extent of damage and that Dwyer and Dr Fisher were discussing when the plantations might recommence their activities (Murray Administrator 1951f). The administrator, just three days later, informed the Department of External Territories that the two scientists had advised 'plantation personnel may return' (Murray Administrator 1951g, 1; see also Administration 1951d).

Director Dwyer reported that crop damage in the main Sangara Rubber Plantation did not exceed 4 per cent on average, and that damage to the rubber trees at Awala Plantation ranged from 3 to 18 per cent. The young rubber on the Sangara subsidiary plantation at Widjo, however, had suffered complete destruction. Further, rubber-tapping panels would need much clearing before tapping could be restarted. Awala cocoa had been damaged. The highest rate was estimated at six trees per acre, but damage to young cocoa was less. Damage to village taro and sweet potato gardens in the area between Sangara and Awala was minor, and the greatest damage was on a ridge at Agenahambo. Dwyer had been working since the previous Saturday and fuller checks would be undertaken in the days ahead. Assessment of damage to plantation buildings had not yet been completed, but the administration had made arrangements with the director of the Department of Works and Housing to make available an

officer who would assess damage to both privately or company-owned buildings in the large area originally closed within a 16-mile radius from the crater (Administration 1951d). Native-owned buildings would be assessed by the Department of District Services and Native Affairs.

The Hendersons, then, would return to re-establish Sangara Plantation. They would also host the Sangara Observation Post on the edge of their property near the western bank of the Ambogo River. Volcanologist Tony Taylor used the Sangara Observation Post as his base and wrote later of his:

Deep appreciation of the unfailing kindness, patience, and truly gracious hospitality of Mr and Mrs T.G. Henderson, who, at Sangara Plantation, had the doubtful privilege of accommodating for almost two years seemingly obsessed addicts to a scientific cause. (Taylor 1958, 12)

However, in early February 1951, the Ambogo River itself was still presenting problems for the administration.

Improved Access to the Disaster Area

Administration officers in the second week after the eruption of 21 January were still trying to find a trafficable way across the Ambogo River into Higaturu and hence to Sangara Mission. Colonel Murray noted on 3 February that he was considering the erection of a 'flying fox' across the river. He noted also that there were risks to villages on the lower parts of the rivers well beyond the eruption area owing to the immense quantities of material being transported and fanning out where the river gradient lessened (Murray Administrator 1951f).

Active mudflows down the numerous stream valleys on the denuded northern flanks of Lamington in February 1951 were a consequence of the huge abundances of loose, fragmental materials recently deposited there by the eruption, and their movement triggered by periods of ongoing monsoonal rainfall. The run-off 'became great rumbling torrents of viscous mud and assorted debris which periodically descended the water courses, cutting communications, scouring out the valleys, and depositing enormous quantities of material on the lower country' (Taylor 1958, 56).

The Ambogo River drained from the active summit crater down across the loose volcanic debris of the bare devastated area. The river became notable for its mudflows, particularly downstream at Double Crossing where the road to Popondetta was repeatedly destroyed, starting on Friday 26 January, and then had to be reopened. Larger, later mudflows would reach full flood in a matter of minutes, some looking like 'a conveyor belt loaded with logs ... their movement was silent apart from the rumbling impact of large boulders, semi-buoyant in the dense stream ... [They left behind] hot quagmires which were impassable until they cooled and set' (Taylor 1958, 56)—quagmires and quicksands that BMR geologist John Best may have experienced firsthand.

At other times, loud roars from more mobile mudflows upstream in the Ambogo River were so loud at the Sangara Observation Post that local people became alarmed, and ground vibrations were recorded as distinctive 'grass'-like patterns on the seismograms. The Ambogo mudflow discharges were preventing easy access to Sangara Mission, the administration advising Canberra on Tuesday 6 February that the normal Higaturu road was impassable owing to mud deposition and a deepened channel. Colonel Murray, Dr Gunther and others, however, had negotiated the Ambogo River at another place and had got through to Sangara Mission on a more direct track on the previous morning. They said they planned to make the track southwards to Higaturu 'jeepable' that afternoon (Administration 1951c). The administrator and his group saw about 150 still unburied bodies at Sombo village and reported that most of the contents of the still-standing mission house were salvageable.

Another significant decision announced by Colonel Murray on 3 February, and one that also dealt with access, was a reduction of the radius of the prohibited area from 16 miles (about 26 kilometres) to 10 miles (about 16 kilometres) (Murray Administrator 1951f; see also I.F. Champion 1951b). This was to allow greater ease of access—including by local people to their former villages and gardens—to the annular zone now created between the two concentric circles. Ivan Champion estimated that about 3,000 people out of a total of about 6,000 refugees thus were able to return to their homes or to lands near them, particularly the 'Isivita' people who earlier had refused the offer of lands near Kokoda well to the west of their homelands (I.F. Champion 1951b). Yet, the reduced size of the prohibited area was still large. It easily covered the devastated area mapped by Taylor who still had ongoing concerns about future eruptions and the mudflow and run-off problem. The reduction, nevertheless, meant that places like

Popondetta, the two airstrips and the Wairopi evacuation camp now lay outside the prohibited area. At about this time, and for the government secretary's consideration, Champion also set out the advantages and disadvantages of three possible sites for new divisional headquarters—Oro Bay, Popondetta and some Crown land in the Ambogo River area (I.F. Champion 1951b).

A further reduction of the prohibited area to 8 miles radius was later recommended by Dr Fisher, which would mean that the Sangara and Awala plantations, the Sangara Observation Post and all of the Wairopi–Popondetta road would also be outside the prohibited area, and an even greater area could be made available for visits to the western slopes by villagers (Murray Administrator 1951i). There is no evidence that the perimeters of either of these large, ideally circular, reduced areas were patrolled rigorously given their great lengths. A day-to-day pragmatism would have had to govern the decisions that were made. Further, on 3 February, Colonel Murray had announced that a siren warning system had been proposed, that villagers who wanted to enter the annular zone were to be informed of the warning system, and that warnings would be based on the volcanologists' decisions (Murray Administrator 1951f). However, a suitable, long-range siren could not be found in Australia.

Compensation and the Disaster Relief Fund

The administrator informed the minister in Canberra by telegram on Thursday 8 February that the Territory's Executive Council on the previous day had endorsed a proposal to establish a 'Mount Lamington Disaster Relief Fund' (Murray Administrator 1951h), although arguably, given the timing, it should have been called a 'recovery fund'. The fund's committee of nine consisted of prominent Territory citizens from businesses, charities, banks and the Department of Finance, and would be chaired by Justice Ralph Gore. The proposal had already received publicity during the previous week in the *South Pacific Post*, which, on 2 February ran the front-page headline: 'Administrator Launches Relief Fund for Lamington Victims' (*South Pacific Post* 1951c). The idea seemed reasonable and appropriate, but the Executive Committee was careful in its formal comment, as relayed to the minister in the administrator's telegram:

FUND WILL BE ADMINISTERED FOR BENEFIT OF ALL WHO SUFFERED IN DISASTER WITH PROPER ALLOCATION TO GREATEST NEED BUT WITH RELATION TO COMMITMENTS OF ADMINISTRATION SO THAT SPHERE OF ACTION OF ONE WILL NOT UNNECESSARILY INTRUDE ON PROVINCE OF THE OTHER. (Murray Administrator 1951h)

Thousands of Papuans had been killed and there were additional thousands who had lost their villages, gardens, families and clan members. A fair and equitable allocation of money from the disaster fund clearly was not going to be an easy process for Judge Gore and his committee members. The administration already had provided, and would continue to provide, substantial relief support for the refugees in the evacuation camps, so would these people be given additional monetary support and, if so, how much? Many of those killed, both European and Melanesian, worked for the administration, meaning that formal provision of compensation to their next of kin was a probable government obligation. However, the deadly eruption took place on a Sunday—a day normally used for recreation and churchgoing, so were the administration people ‘on duty’ or not? If not, what were the implications? Would the families of senior, European officers of the administration at Higaturu receive the same treatment as those for deceased members of, say, the ‘native’ constabulary? Further, would Europeans in practice be treated preferentially, in spite of the fund being ‘administered for the benefit of all’, as Judge Gore had said (Murray Administrator 1951h, 1)? Some of the European dead had not yet been found and identified, and contacting their next of kin was not a straightforward process and would, and indeed did, inevitably lead to delays.

These administrative difficulties would face the relief fund, the administration and the Department of External Territories in the weeks and months ahead. Meanwhile, however, the front-page headline for the *South Pacific Post* of Friday 9 February read: ‘Lamington Relief Fund Gets Fine Start: Hallstrom Gives £1,000’ (*South Pacific Post* 1951d). Hallstrom was the founder of a livestock and fauna trust in the Territory, as well as chairman of the Taronga Park Zoo in Sydney. The famous Australian artist William Dobell donated one of his landscapes for auction as a contribution to the fund (*South Pacific Post* 1951e). Further, the Cadbury chocolate company agreed for Urquhart to donate the 16 guineas (£16 16s) he had received from those newspapers who had published his aerial photographs

of the eruption cloud taken on the morning of 21 January (Urquhart 1951). Donations were made by other public companies and by the European community and Australian Red Cross (Ahearn 1951c). ‘Native peoples’ and ‘Chinese people’ also contributed generously, including local people of the Talasea area on the north coast of New Britain who even offered land to the displaced Orokaiva (McCarthy 1951b).

A fund total of £20,593 8s 3d was available for distribution when the Mount Lamington Disaster Relief Fund members met on 17 August 1951 (Chairman 1951): £10,000 would be distributed to nine children, four widows and three dependent mothers of Europeans killed in the eruption; another £10,000 would be given to the administration for onward distribution to surviving natives affected by the eruption. The balance would be kept for any further applications for assistance.

Final Death Toll Estimates and Defending the First Responders

Counting the dead had not been possible during the rescue and early recovery phases of the disaster. The total of 4,000 casualties suggested by Claude Champion as early as Tuesday 23 January was clearly a rough estimate, and burying the numerous dead in the days and weeks following could hardly be accompanied by the rigorous collection of accurate mortality statistics. However, the figure of 4,000 was used commonly in newspaper reports and, on occasion, as the full death toll figure rather than as a provisional casualty total that included the still-living injured. D.S. Wylie, managing director of Sangara Rubber Plantations, said at a lunch held on 21 February at the influential businessmen’s ‘Millions Club’ in Sydney that the ‘estimate of 4,000 dead is far too low’ and that probably 8,000 people had lost their lives at Lamington (*Sydney Morning Herald* 1951, 7). The article was transcribed and placed on the files of the Department of External Territories in Canberra (Anonymous 1951e). The administrator on the following day in Port Moresby informed the department that a check of government records had been made and had revealed that a total of 3,466 local people—a surprisingly precise figure—had been killed or were missing. Further, Ivan Champion in Popondetta had advised that a figure in excess of 3,500 was extremely unlikely (Murray Administrator 1951j).

A 'final' figure of 2,907 Papuan dead resulted from a comprehensive investigation of local community losses made between 28 August and 2 October 1951 by administration officer R.M. Claridge (1951b; Elliott-Smith 1951a). This total was regarded as closer to the true death toll than 3,500 because of a duplication of numbers: the number of local workers killed in the eruption had also been included in the separate figures for villages. The administrator informed the Department of External Territories in Canberra of the result, adding that 'probably we will never get an actual death roll of this disaster and we must accept this report as final' (Murray 1951c, 1). The total of 35 Europeans dead and missing—the 'missing' now all presumed dead—had been determined in the first week following the eruption of 21 January, so the full, 'final' total was 2,942. However, most commentators simply refer to the total as 'almost 3,000' (e.g. Taylor 1958). Most of this total consists of people from the Sangara 'tribe', representing, according to one calculation, perhaps 94 per cent of the total Sangara population before the eruption engulfed them (Schwimmer 1969).

Another problem regarding finding the dead had to be addressed by the administrator as a result of media reports. This was in relation to a recording made by mission mechanic Rodd Hart on 25 January that was broadcast by the Australian Broadcasting Commission. The following statements were made: 'Elliott kept running amongst the bodies and kicked them to see if they were alive' and 'Blue Morris went to the lip of the crater' (Murray Administrator 1951k, 1). An Australian resident wrote to the minister of external territories on 31 January 1951 asking why a stethoscope or microphone could not have been used by the rescue party to determine death rather than 'kicking' bodies (Ferrier 1951). The writer also drew attention to media statements that the bodies of Europeans were being set aside for later exhumation and thus were being given burial preference over the Papuan dead.

The administrator was strong in his response and defence of Rodd Hart and the Andemba rescue party of Sunday 21 January (Murray Administrator 1951k). Colonel Murray pointed out that: 1) Hart, at the time of the recording, 'was under mental and emotional strain and perhaps did not realize fully what he was saying'; 2) Blue Morris had not gone to the lip of the crater; 3) 'Mr Kleckham stated that he did not see Elliott or anyone else kick bodies, but it is possible that the feet were used to roll some bodies over for further examination'; 4) no doctors, stethoscopes or microphone had been available to the rescue party; and

5) no preferential treatment was given to European bodies, although the administrator did not refer to the point that European bodies would be disinterred later. Colonel Murray stressed that:

All the Europeans [in the rescue party] highly praised the work done by native Elliott during this rescue work and it is a pity that they have been subjected to ridicule instead of being highly commended for their bravery in carrying out rescue work in the highly dangerous area of ANDEMBA. (Murray Administrator 1951k, 1)

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