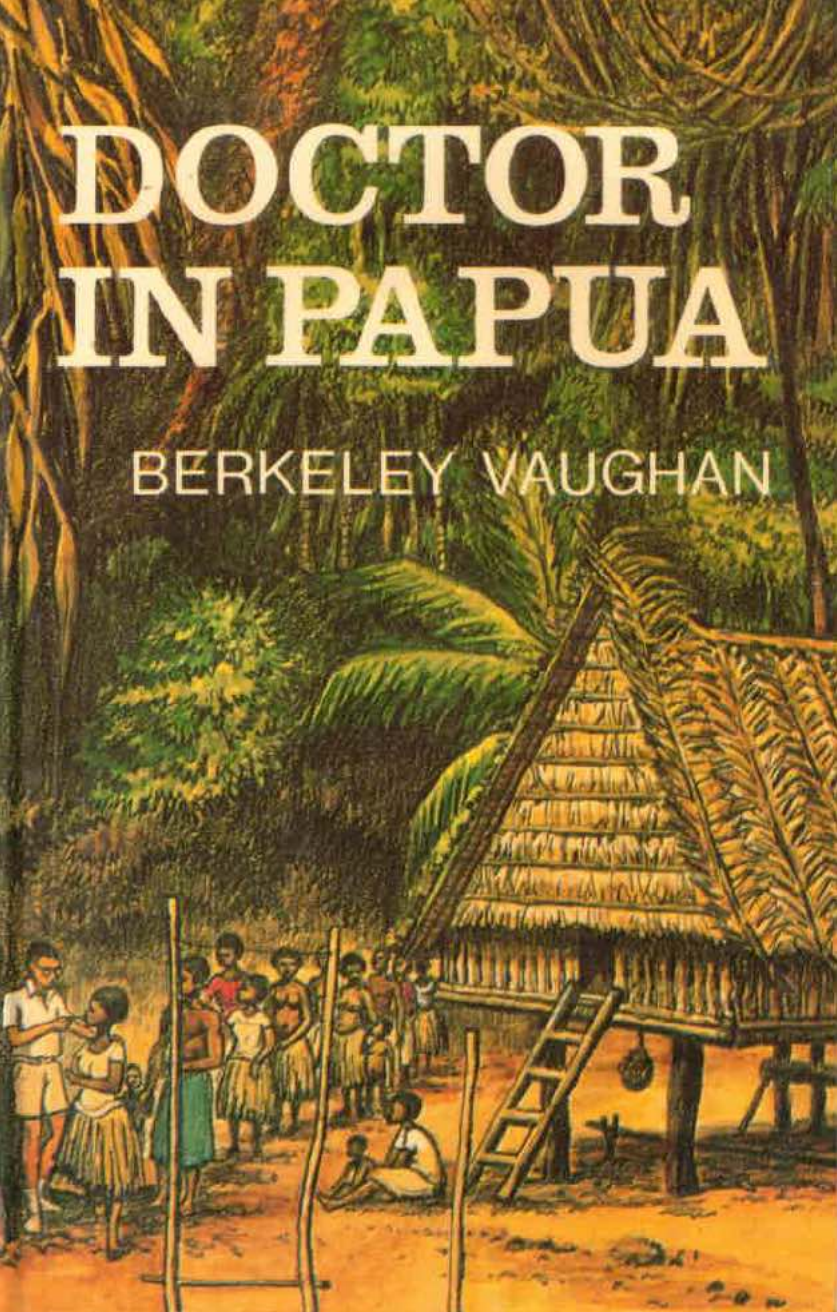
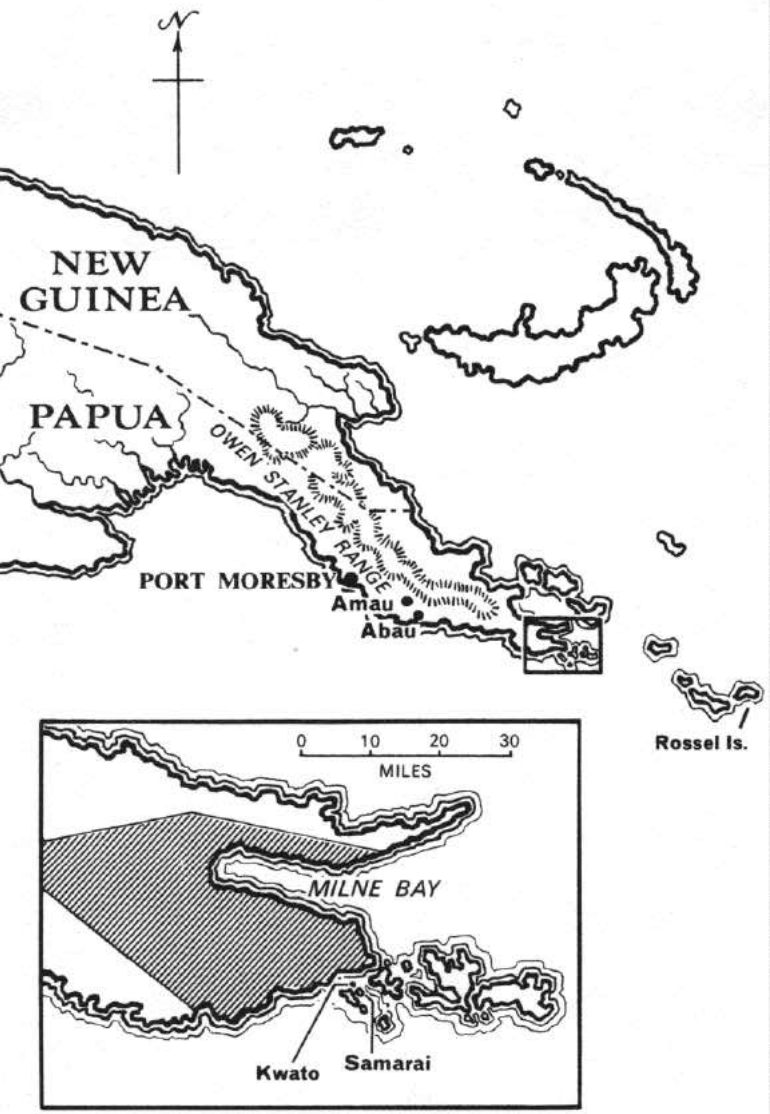
DOCTOR IN PAPUA

BERKELEY VAUGHAN



DOCTOR IN PAPUA



KWATO EXTENSION ASSOCIATION
(*KWATO MISSION*)

DOCTOR IN PAPUA

BERKELEY VAUGHAN

THE SAINT ANDREW PRESS
EDINBURGH

First published in 1974
by Messrs Rigby Ltd, Australia.

This new edition published by
The Saint Andrew Press, Edinburgh.

Copyright © B. D. Vaughan, 1974
ISBN 0 7152 0419 X

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher. This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out or otherwise circulated without the publisher's prior consent.

Printed and bound in Great Britain
by Bell and Bain Ltd, Glasgow.

LIST OF ILLUSTRATIONS

Facing page

The King Henry VIII gateway at St Bartholomew's Hospital 38
The Vaughan family en route for Papua New Guinea 39
Ceremonial war canoes 39
Kwato mission staff 54
Dermot with one of the Papuan nurses 54
Papuan village huts 55
The cricket ground at Kwato 55
Patients for the ante-natal clinic 86
The landing stage at Kwato 87
Local boatbuilding industry 87
Building the church at Kwato 102
A company of the Royal Papuan Constabulary 102
Break at a village school 103
Dermot and Michael 103
Kwato hospital staff in 1938 134
Garionedi Tariowai with a young patient 134
Village outpatients being treated for trachoma 135
Building the hospital at Koeabule 135
The ravages of leprosy 150
Mother and child in a Papuan village 151
Village conference 151

PREFACE

"*Maybe people going from here could give them something. For all their progress and science and technology, they have forgotten God. They have given us Christianity, medicine, education; this would be a chance for us to pay back.*"

Paul Lapun
M.H.A. for Bougainville
Minister for Mines

Two people—one a politician and the other an orthopaedic surgeon—asked me to write a history of the early medical and surgical work done at Kwato, in the Milne Bay area of Papua.

The work as it now stands is in no sense a scientific treatise, although the recorded facts were checked with ex-members of the Kwato staff for accuracy. Many of the actual Kwato medical records were unavailable, having been lost in the second World War. However, in writing the medical history section of this book, I became even more interested in what I believe to be the considerable significance of Kwato in the early development of Papua

New Guinea. Events described here happened between thirty and thirty-seven years ago, and might seem on the surface to be irrelevant to the rapidly-developing country which is Papua New Guinea today. Yet to my mind they are relevant, in several respects.

First of all, the apparent sophistication of Papuans and New Guineans today can be misleading. The intrinsic difference between Papuan and Western modes of thought, as it is discussed in this book, must be appreciated. I believe the Papuan, far from being backward, possesses a basic philosophy of life which we, to our great detriment, have lost.

My second point is that the modern, highly sophisticated practice of medicine must and will come to Papua New Guinea. It is necessary for progress. Nevertheless, I think there will still be a place for the simpler, indigenous type of medical practice which is described in this book. I hope I will demonstrate that such a system is still consistent with good standards of medicine and surgery.

Thirdly, I believe that the story of the Bohutu and the Kunika people related here has a direct relevance today. If a primitive, deeply traditional people can alter their way of life so drastically, why should not a world divided by race, colour, and religion find the same answer?

I am deeply indebted to Mrs Sheila Abel for her kind permission to use part of the text of her late husband's manuscript *They Broke Their Spears*. I also give thanks to Mr Cecil Abel and Mr Raymond Whale for the provision of some of the photographs, and to my secretary Mrs Dawn Wulff for her assistance with typing.

Chapter One

DAWN HAD JUST BROKEN over the coast of Papua as the P. & O. liner *Mooltan* slowly turned the corner of Kwato into the anchorage of Samarai. Away in the distance stretched range after range of cloud-capped mountains, towering up into the sky. Dense forest vegetation reached from the mountains down to the coast, and the coral beaches were fringed with the delicate shapes of coconut palms. To our left was the island of Suau, famed for its warrior people. It was said that, many years ago, they used to launch their great war canoes over the living bodies of their captives. The green island of Kwato, with the little gem of Bonarua Hilihili island at its base, could be seen on our right. I stood on deck with my wife and three children, and this beautiful but savage land held us spellbound.

Papua New Guinea had from time immemorial had a sinister reputation. Its massacres, its cannibalism, and the fearlessness of its warriors had created an aura so full of dread that even the redoubtable Captain Bligh, desperate as he was for food and water after the mutiny on the *Bounty*, had steered past it. Yet this land was to become home to us, and some of its people were to become our closest

friends. Seven of the happiest years of our lives lay ahead of us.

All over Kwato white sheets and towels were being waved at us, and we five on deck waved back excitedly. It all seemed so peaceful until suddenly the quiet air was shattered by the indescribably weird sound of conch shell horns. Great fleets of canoes, huge dugouts with carved prows decorated with shells, rowed out from the shore. Each of them was crewed by up to forty paddlers, and they seemed almost to lift out of the water with the strength of each stroke. They raced past us, weaving from side to side and crossing each other's tracks with perfect timing. Years later I saw them perform the same manoeuvre during a vice-regal visit by H.M.A.S. *Australia*. The Governor-General, Lord Gowrie, later described the incident to a friend of mine, and recalled the dawn appearance of the canoes as being one of the most exciting moments of his life.

The anchor dropped, we transferred to a launch, and after a short trip we were at Kwato.

I qualified at St Bartholomew's Hospital, London, in 1932. Bart's, as it is popularly known, was founded in 1123 by the monk Rahere, jester at the court of King Henry I, and it is the oldest hospital in the Commonwealth. The buildings now show a curious blend of medieval and modern. The lovely old Norman chapel of St Bartholomew the Less is still in constant use, and on the other side of Smithfield Square, in the church of St Bartholomew the Great, Rahere still lies in his tomb.

For 300 years, the hospital was run by the Priors of St Bartholomew as a place of healing for the poor. When the monasteries were dissolved, in the reign of King Henry VIII, administration of the hospital passed to a lay Board of Governors, which body still controls it. Fortunately, the change did not alter the spirit of the place. Medicine was still regarded as a gift to be used for the good of humanity, not for personal profit. Nothing of this sort was ever said in words in my day, and Bart's students were just as

professedly cynical and iconoclastic in manner as any others, but on even the toughest something of the old atmosphere must have rubbed off.

The medical wards were maintained in spotless condition, and it was hard to realise that they were 300 years old. On the left-hand side of the entrance to each ward there were two glass shelves, the top one empty, the bottom holding a decanter of brandy. When we were new students, we would automatically deposit our text-books on the empty shelf; and, just as automatically, they would be thrown off by an irate ward sister. We learned later that the top shelf was reserved for the physician's top hat, and that the brandy was kept in readiness to fortify him against infection. The shelves had not been used for their original purpose in many years, but this made no difference: the tradition was faithfully upheld.

The surgical wing was on the opposite side of the square. This multi-storeyed building, erected in the 1920s at the then huge cost of £250,000, was as modern as the others were old. Each floor had its own operating theatre, pathology laboratory, and wards, and had been designed to accommodate every conceivable modern amenity—or so it was thought. On the morning of the day it was to be opened by the Prince of Wales, it was discovered that there was not a single towel-rail in the entire building.

Even this modern block could not escape its medieval past; excavations made for its foundations opened up one of the enormous death-pits left from the Great Plague of 1665. It was an amazing sight. The diggings had laid bare an earth face thirty feet deep, studded with layer on layer of human bones. We impecunious students, eager to secure free anatomical figures, all clambered down to look for good skeletons, but the bones crumbled away as soon as they were handled. No one, of course, had heard of antibiotics, and it never occurred to us to wonder why, after all those years, the plague-ridden soil was safe to touch. Fleming and Florey were yet to start on the research which was to prove the value of moulds like those which sterilised these ancient bones.

The entrance to Bart's is the King Henry VIII gateway, a massive and ornate piece of masonry which contains, in an alcove, the portly figure of King Hal himself. Underneath this is the porters' lodge.

These porters had phenomenal memories. There were 600 students at Bart's in any one year, but shortly after any new student had arrived the porters knew who he was. Apparently they never forgot him. It is said that one Bart's graduate, after living abroad for something like ten years, returned to England for a visit and called in at his old alma mater. As he came through the gateway, one of the porters doffed his hat. "Good afternoon, Doctor So-and-so," he said. "Nice weather we're having!"

Inside the main gateway was an outer courtyard, and then another archway leading into an inner square. High up on the wall of this archway was one of the old monastery texts: "Whatsoever thy hand findeth to do, do it with thy might." We saw this injunction every day and somehow it sank into our minds, as it must have been intended to do. Over this archway was the Great Hall, where the Board of Governors held their meetings. The walls of this room carried the names of outstanding benefactors of the hospital. On the wall of the staircase leading up to the hall were the lovely paintings by Hogarth of the Good Samaritan and the Pool of Bethesda. Hogarth, as a young man, had been stricken with pulmonary tuberculosis. He was treated by the hospital, and slowly regained his health. Later he painted these two magnificent murals as a thank-offering.

As new students, we attended lectures in the medical college within the hospital grounds. I was most impressed by my first day in the dissecting-room. The sight of rows of tables, each holding an embalmed body which had to be dissected until we knew every artery, nerve, and muscle, was quite formidable. Unfortunately, this interval of awe and fascination did not last for long. One soon found that the easiest way of attracting someone's attention in the noisy room was to throw a spare part of the corpse. Sometimes, when arguments waxed fierce, the air was full of

flying fragments, and on one occasion an entire liver collided with the Professor of Anatomy as he strode briskly through the swing doors.

I never knew where the bodies used in anatomy came from. It was rumoured that some of the corpses were those of criminals who had died in gaol, and that others were of destitute folk with no known kin. Occasionally, somebody would make a bequest in his will that after death his body should be donated to the hospital. All we knew was that the bodies were embalmed, and that after we had finished the bones would be collected and decently buried somewhere in accordance with the law. The theory apparently was that in the day of resurrection the soft tissues would not be required but the bones must be complete. If this is so, some odd shapes will come to light. Some sets of bones contained two left legs, others two rights; and big and small bones were often mixed together with a perfect lack of concern for their congruity, provided the total number was correct.

It was perhaps not such a far cry from the day of the "resurrection men" who used to go at night to the cemeteries to unearth bodies for use in the dissecting-room. The churchyard across the road from Bart's still had reminders of this practice in its high iron railings and small sentry-box.

My fellow-students were a varied bunch. All, of course, were men. Women were not admitted to this masculine preserve of medicine until twenty years later. Two of my fellow students in particular stand out. One of them, a sort of perpetual student, was a very suave gentleman who spent much of his time on the race track and in West End clubs, only gracing the hospital at intervals. He had been left a large income by a relative for as long as he was an undergraduate, and he took care that this would be an indefinite state of affairs.

The other was an elderly man who had been a student for some time before I got there, and who was still a student when I left. Rumour had it that he had been a businessman who, on retirement, became such a nuisance about the house that his wife had told him to get another job. He

decided to become a doctor. I believe he achieved his aim before he died, all credit to him.

When we had finished pre-clinical studies, we entered the wards. I was fortunate to be a student of the Professorial Unit, whose assistant surgeon was Sir Thomas Dunhill, an ex-Melbourne graduate renowned for his pioneering work in thyroid surgery. I learned a lot from him and appreciated it when I saw the difficulties experienced by others less skilled, when later I had thyroid surgery to do. It fascinated me to watch him work. On one occasion I was so intrigued that I came too close, with the result that he looked up, saying querulously, "Do you mind not breathing down the back of my neck!" On another occasion I was reading out a patient's sheet on a ward round when I noticed that his attention seemed to be concentrated on my chest. Obviously he was not listening and eventually I became so nervous that I dried up. Then in a gentle voice he said, "Would you please do up the top button on your waistcoat?"

One day, we students were assembled round a bedside, airing our views on the treatment of a patient. As statements were delivered by each in turn, Sir Thomas' attention seemed to wander. When we had finished there was a long silence, until someone asked the great man for his opinion. Dunhill looked up vaguely and said, "If I had my way I'd retire and grow carnations."

An old story was told of one of these wards. One of the physicians of that time, a great believer in leeches, had just listened to his house physician's report on a patient to whom he had been giving this treatment. Expressing approval he said, "Good, now let us have a blood count." The procession of doctors and students moved round the corner to the next bed. The ward sister, hearing a commotion, returned to the patient they had just left to find her out of bed, feverishly dressing. She asked her what on earth she was doing and received the terrified reply: "Them leeches is bad enough, but not a blood 'ound!"

One of the colourful characters of those days was the senior physician, Sir Percival Horton-Smith Hartley. (Woe

betide the student who attempted to shorten his name.) Hartley was a physician of the old school, who wrote his prescriptions with a quill pen in flowing Latin. His opposite number on the surgical side was Sir Holburt Waring. The two rarely agreed with each other, but on one occasion a patient in whom Hartley was interested was transferred to Waring for surgery. I doubt if Hartley had been inside an operating theatre for decades, but interest in his patient induced him to attend the operation.

He was persuaded with difficulty to wear cap and mask but clung to his stethoscope against all protocol. The operation commenced, the abdomen was opened, and Hartley peered over to see inside. Suddenly his glasses fell off into the wound. The roar from Waring was so explosive that Hartley jumped backwards, only to deposit his dirty old stethoscope in the middle of the tray of sterile instruments. The theatre sister's violent protest completed his rout and he disappeared ignominiously, trailing gown and stethoscope.

Waring was one of the last of the "brilliant" school of surgeons. He was a student in the days when anaesthesia and resuscitation were primitive, and to him, speed in operating was the first essential. He was a superb technician, and had been credited with a time of eighteen minutes for the complete removal of a cancerous breast, an operation which even today with skilled surgeons may take two hours. Unfortunately, Waring's temper was equally hair-trigger. His house surgeon at the time was H. J. Seddon, later to become an international figure in orthopaedics. Seddon was a quiet, gentlemanly, hardworking resident, and I was shocked when one morning Waring berated him in front of the theatre staff as being "the worst house surgeon I have ever had." I felt sorry for him until I found out that each house surgeon in turn went through the same performance. When Waring retired, he received a formal invitation to dinner from "The Thirty Worst House Surgeons." Apparently this burying of the hatchet resulted in a memorable evening.

Outpatient departments these days are complex places,

but in the old days the large outpatient hall at Bart's was run on a far simpler system. Each morning, the porter on duty would address the assembled throng with the stentorian words: "Them as 'as corfs, stand up!" Those who stood were then ushered into medical outpatients, and the rest were presumed to be surgical cases.

One night, a dog limped into the casualty department. He had probably been hit by a car, for he had a badly lacerated wound. The casualty officer dressed the wound, and the dog trotted outside. Thenceforth he turned up for dressings every day until the damaged leg was healed. We never saw him again. No one in the casualty department remembered ever having seen him before, yet he knew exactly where to go. We guessed that he must have accompanied his owner to the casualty department sometime in the past.

Odd cases were legion. One day, a rather plump Jewish woman presented herself in the outpatient hall, complaining of pains in her chest. The house physician asked the nurse to get her ready for an examination, and both women retired behind a partition. A lot of commotion could be heard going on, and soon the doctor grew impatient.

"Are you ready yet?" he called.

"Not yet," answered the nurse.

Minutes went by and still the argument seemed to be continuing, with no result. The doctor, harassed for time, asked again if the patient was ready.

"She can't get her dress off," cried the nurse.

The doctor angrily pushed aside the screen and went in. A red-faced nurse and an embarrassed-looking, fully-clothed patient presented themselves.

"What on earth is the matter?" demanded the doctor. "If you put your dress on, surely you can take it off!"

"I can't," replied the woman, looking at him hopelessly. "Since I put it on last year, I've grown a lot, and it won't *come* off."

Pathology was a highly-respected speciality in my day, and I was once privileged to see Sir Bernard Spilsbury

perform an autopsy. Unfortunately, Bart's could lay no claim to Spilsbury, as his locus was in St Mary's Hospital; but he sometimes worked by invitation in other hospitals. It was a revelation to watch him dissecting. He was fastidiously thorough and neat, and nothing escaped his attention. At this time he was at the height of his fame as a forensic pathologist. In the previous two decades he had been involved with virtually every important murder trial from Crippen to the Charing Cross trunk murder. His reputation stood so high that lawyers used to complain that it was no longer a case of trial by judge and jury, but of trial by Spilsbury. Certainly in every case his evidence was final.

However, not long before this pathology was far less highly regarded. There were still on the consulting staff some who remembered the days when it was the Cinderella of the sciences, and physicians who wished to follow up interesting cases by autopsy had to do so at home.

One such doctor used to tell about an incident which had befallen him many years before. A patient of his had died in the hospital, from cancer which spread into the liver. Wishing to investigate the matter further, the physician removed the liver after death, wrapped it in brown paper, and took it home with him. He travelled on the top of one of the old horse buses with the parcel beside him. When he had reached his stop and alighted, he realised to his horror that he had somehow left the package behind. By this time the bus was quite a way up the road and, because it was illegal to carry human remains in this way, he decided that he had better not try to retrieve his property. The matter was soon forgotten.

Years later this same physician was farewelling a patient who was being discharged from hospital. The man had been seriously ill with pneumonia and at first he had not been expected to survive. After a long battle he had eventually recovered, and he was extremely grateful to his skilful doctor. He repeated his thanks to an almost embarrassing degree. It was obvious that he had something on his mind. At last it came out.

"You know, Guvner," he said, "I once did you a bad turn."

"Nonsense," the physician reassured him. "I've never seen you before in my life."

"You didn't see me," continued the patient earnestly, "but I saw you. Years ago I sat behind you on the top of a bus, and I stole your supper."

The day arrived when I was to start my anaesthetic training in the theatre. I had not bothered to study the subject. After all, I was going to be attached to Dr Boyle, the inventor of the Boyle's anaesthetic machine, which is still in almost universal use. I rather looked forward to being initiated into the mysteries of anaesthesia by this great man.

"Cocky" Boyle must have been a mind-reader, for his method of teaching was salutatory. I entered the ante-room next to the theatre and found the patient lying on a trolley. Beside him were Dr Boyle and a large and complex machine. Boyle greeted me and pointed to the patient.

"Here's the machine," he said briefly. "I'll wish you good day."

With that, he turned and went out of the room. I waited for him to return but nothing happened. I looked at the machine with its rows of knobs and dials and hastily looked the other way. Just then the door of the theatre opened, and a head appeared.

"Is the patient ready yet?"

"No," I replied, "not yet."

Something had to be done quickly. In desperation I seized the face mask, applied it to the patient's face, and turned on a few taps. The result didn't please the patient at all. I shudder to think what would have happened if Boyle had not reappeared at that moment. I could cheerfully have fallen at his feet and worshipped him.

As time went on I became more at home with anaesthesia and liked it. One day I was selected to be the anaesthetic student at a thyroidectomy operation done by Dunhill. For some reason he decided to do it under local anaesthesia so

I had nothing to do but had to be present in case a general anaesthetic was required. The patient's face and head were, of course, covered over with drapes. After some time the heat from the theatre lamp plus the lack of ventilation under the drapes began to tell, and the patient became restless. We had in this theatre a service manifold—that is, a tiled concrete column rising from the floor, which contained the outlets to various gases and appliances. This is standard equipment now, but in those days it was rare. Bart's was, I believe, the first hospital in England to incorporate this device in its new operating theatres. Aware of the patient's distress, I coupled up a tube to the compressed air outlet and blew a gentle stream across his face. He was most grateful, so I kept on holding the tube under the drapes.

Presently the theatre door opened and an unknown man came in. It was obvious, from his accent, that he was an American. Dunhill seemed to attract Americans like bees to honey.

The newcomer keenly watched the operation field and Dunhill's meticulous method of dissection. After a while his glance took in the instrument tray, and progressively roved to the head of the table, where he saw the anaesthetist, sitting with his hand under the drapes. Finally his eye travelled along the tube to the manifold. The legend, COMPRESSED AIR, rather shook him. He looked back along the tube then again, more searchingly, at the manifold. There was absolutely no doubt that the patient was anaesthetised. I sat there woodenly, inwardly convulsed at the incredulity on his face. Admission of ignorance is inconceivable to some Americans and it was a while before he admitted defeat. He came over to me and said wonderingly, "Is that right, compressed air?"

"Oh yes," I replied off-handedly, as if anaesthetising patients with compressed air was an everyday occurrence.

He breathed out. "Gee," he said, admiringly. "How *do* you do it?"

Our training in midwifery came late in the medical course. I had been a student for five years, and was already

married. The obstetric unit at Bart's was not large, and there were not enough beds for all the students to have the responsibility for one or more patients. On the other hand, the deficiencies in our inpatient facilities were more than made up for by the enormous population of Clerkenwell and the other districts adjacent to the hospital. Thus, many students had to go "on district" before they had had any practical experience of midwifery. I was one of these.

Clerkenwell was largely a slum area with terrace after terrace of dreary houses which usually held one family to a room, sometimes more. Children were everywhere and poverty was very evident. We students lived in at this stage, and took it in turns to go out on call. A bicycle and a black bag were provided by the hospital.

My first case, if I remember rightly, came late one night. I was woken by the night porter, and went downstairs to find a rather wizened little man waiting for me. He was the expectant father and, as I pedalled, he trotted along beside me, guiding me to the house. I had time en route to realise my inadequacies. I had never seen the birth of a baby, and my knowledge, such as it was, had been gleaned from textbooks, with some coaching from my wife, Freda, who had been trained in nursing but not midwifery. My trepidation was not lessened, on my arrival, by the appearance of the midwife. All midwifery at this time was done by the Sarah Gamps of the day. One of these untrained but vastly experienced women greeted me with the remark that this was the umpteenth hundredth confinement she had attended, and that in all that time she had never had "a case of purple," which I construed to be puerperal sepsis. I congratulated her, and assured her that she had had more experience than I had.

I cannot remember the delivery, but it must have gone smoothly. Certainly it was not like the one which followed. This, too, was in the middle of the night, and the room was lit by a gas lamp. A kerosene box served as an instrument table. I washed my hands, laid out the instruments, and prepared for battle.

I coaxed the baby's head through with masterly preci-

sion, then there was one more push and the child was in my hands. At that moment the light, which worked from a shilling-in-the-slot meter, suddenly went out. The old gamp charged for the meter, fell over the box, and sent my instruments flying, while I sat there in the darkness with a wriggly, slippery baby in my arms. After an age the light came on again and I was able to retrieve a pair of scissors to cut the cord. Then, while I was putting down the baby, there was a sudden rush and a swoop: the cat had disappeared with the placenta.

On another occasion, I was delivering a baby on the top floor of one of these slum houses when a barrel organ struck up in the street outside. The gamp was incensed that such a thing should disturb my concentration. Flinging up the window, she glared down at the unfortunate organ grinder and in a voice like a foghorn shouted, "Can't yer see the doctor's here? Get out!" He retreated as if a bull was after him.

Now, whenever I see a television picture set in the days of the Wild West, I am reminded of these old gamps. It seems that no television birth can be accomplished without the aid of a bath full of boiling water – for what, goodness knows. My Clerkenwell gamps had a similar obsession, but, whatever their defects or superstitions, they were completely loyal. Although my ignorance must have been all too apparent to them, they never commented on it.

We were frequently summoned to these deliveries far too early. Many of us were just about as ignorant as the husbands who fetched us, and we would sit for hours while the woman went through labour. In one such case, I got so sleepy waiting that I asked the mother to move over and got on to the bed beside her, telling her to wake me up when she was ready. She did, too, most obligingly. I may say, though, that the practice of delivering a baby in the depths of a double bed with a sagging feather mattress has its disadvantages.

Obstetrics under these circumstances terrified me. The risk of a postpartum haemorrhage in these undernourished mothers was all too common. A flying squad of trained

obstetricians was available, but by the time help had arrived the patient could well be *in extremis*. We were given special application forms to fill in if we needed extra help on a difficult case. One student, faced with a haemorrhage, filled in the form by imprinting his blood-stained hand across it. The response of the flying squad was quite outstanding.

After the years of study had passed, we were confronted by the last hurdle: our final examinations. The written papers, I remember, were not too bad. Then came the practical examinations, when we were questioned by two examiners, one a local man, the other from some other university. This system, applied throughout the country, makes for uniformity of standards. All went well for me in the surgical practical until I was given a series of short cases where I was expected to make an immediate diagnosis, and to prescribe treatment.

One case was a Dupuytren's contracture. In this condition, prolonged pressure on the palm of the hand produces a thickening in one or more of the finger tendons, so that the finger is pulled into a bent position. In the case which was presented to me, the diagnosis was obvious. The patient was a carpenter aged sixty, and everything fitted into the usual pattern.

"What's the diagnosis?" asked my examiner.

"Dupuytren's contracture, sir," I replied confidently.

"Quite right," he nodded. "And what would you do?"

"Oh," I said, "he's an old man, and it doesn't trouble him much. I wouldn't do anything."

The examiner looked at me with a beady eye, and there was a prolonged silence.

"Young man," he said finally, "it might interest you to know that I am older than the patient. If there was something wrong with *me*, I suppose you would still say, 'He's only an old man, we won't bother with him'?"

In the last practical examination, the medical, I really thought I had met my Waterloo. I was introduced to a man and told to examine his central nervous system. This

is a long procedure, and I went through it systematically, but could find nothing wrong. I rechecked. There *had* to be something wrong; a normal case was never given in these examinations. Still I could find no fault. I got more and more worried. Finally the examiner came over.

"Well," he said, "what did you find?"

"I'm sorry, sir," I answered. "I couldn't find anything wrong at all."

"Oh, come," he said impatiently. "Have a look at his optic discs."

I peered into the patient's eyes through the ophthalmoscope once again. All I could see was a normal optic disc, and I told the examiner so.

"Oh, come, come," he said again, rather more impatiently. "Let me have the ophthalmoscope."

I gave it to him, and he bent over the patient. He grunted, straightened up, and beckoned to the other examiner. There was a whispered colloquy, of which I caught only the final words, "see for yourself." Just then the time-bell rang, and my heart sank.

The examiner turned to me. "You say there is nothing wrong?" he asked.

"Yes, sir," I replied, despairingly. "Nothing."

"You are quite right," he said. "You have been given the wrong case."

At last it was time for the final interview. There were two examiners in the room. One fired all kinds of questions at me, and every time I replied his colleague looked up at me and then scribbled something on the paper in front of him. I grew more and more apprehensive. Surely I couldn't be making as many mistakes as all that? Then the bell rang, and the examiners retired from the room. I was unable to bear the suspense, and leaned over the desk to look at the examiner's papers. All I could see were sketches of horses' heads. He had been doodling.

EQUIPPED WITH THE IMPOSING DOCUMENTS which said that I was licensed to practice medicine and surgery, I now faced the world. During my undergraduate training, I had acquired a vast amount of learning, but little practical experience. Now came the opportunity to make better use of my knowledge. I could, no doubt, have gone into general practice, but I wanted to have the important and varied working experience of a hospital resident. This was easier said than done; for every vacant post, there seemed to be a plethora of applicants. It was 1932, and the world was in the grip of the depression.

One day as I was pondering my future prospects, the telephone rang. The caller was a friend of mine, who had qualified the previous year and who was now casualty officer at the National Temperance Hospital. He said that one of the house physicians—an Australian—had been offered a good post in Australia, and was looking for a locum to take over from him for the rest of the term. Was I interested?

I was on to the doctor in minutes, and it was arranged that I should take over his position almost immediately.

The resident medical officer has sole charge of perhaps forty or fifty patients. He lives in the building with his charges day and night, and carries out the treatment ordered by the visiting surgeon or physician who comes round twice a week, or on operating days. Between these visits, the resident doctor is in constant attendance on his patients, and has full executive authority, although he can always get advice from his chief. The salary I was paid for this sixty-plus hour week was £104 per annum, so we were not rich. Nevertheless, the few weeks of my locum at the National Temperance Hospital were absorbingly interesting, and I got on well with my chief. When the post came up for renewal, I applied, and got the job without much difficulty.

The odd-sounding name of the National Temperance Hospital proclaims its origins. It was built during the last century, as a result of the efforts of a group of people who protested against the overuse of alcohol in the big public hospitals. In this hospital alcohol was banned, but in all other respects it was an ordinary general hospital with a very competent senior staff.

The implication inherent in the name of this hospital had one curious side effect. Rather illogically, it seemed to act as a beacon to alcoholics, and every week would see one or more of these unfortunate people brought in suffering from delirium tremens. In those days it was a very difficult matter to treat this condition without gradual withdrawal. The suffering of some of these patients, when they were suddenly deprived of alcohol, was very great. The look of terror on their faces as they saw snakes crawling down the wall to devour them was pitiable. I spent a lot of time dealing with imaginary predators on the walls and beds, but though the hallucinations were intense sobriety followed quite quickly. Incidentally, I never heard anyone state that he could see the classical pink elephants. Alcoholism is, of course, a metabolic disorder, but there must often be a psychological element involved. This was classically exemplified in the case of one patient, a hotelkeeper.

The man and I had a lengthy conversation during which I tried to encourage him to give up his drinking habit, but his craving was intense.

"If only I could have one drink, doctor," he pleaded.

"If I manage to fix something," I said, "will you keep it quiet?"

"Won't tell a soul," he replied with alacrity.

I got the pharmacy to fix up a drink of iron and ammonium citrate. This has a beautiful port colour, but there is no alcohol in it. That night the ward sister ostentatiously screened off his bed and dimmed the ward lights. When the scene was properly set, she tiptoed in with the concocted drink in a wine glass and gave it to him. The next morning on my round I came to his bed and, sending the sister away, I whispered conspiratorially, "How was it?"

"You've saved my life, doctor," he said.

One night, while I was on casualty duty, I was presented with a sad case. A young actress, a very pretty girl, had been playing with her pet dog, and he had taken a bite out of her lower lip. The dog had swallowed the piece of flesh and there was now a hideous gap in the middle of her lip. Nonplussed, I sought advice. I rang up a famous Harley Street plastic surgeon, one of the many Australians who had achieved fame in London, and described the position.

"Send her along straightaway," he said. Then, to my mystification, he added, "Send the dog, too."

I found out afterwards that he made the dog vomit, recovered the missing piece, and sutured it into place.

The resident medical staff at the hospital were almost entirely overseas graduates. At one stage I was the only Britisher on the staff, the rest being either South Africans, Australians, or New Zealanders. One of these men had a great liking for tomatoes, which he stored in a cupboard in the residents' dining-room. Again and again, to his annoyance, he would return to find some missing. The night porter came under suspicion but he indignantly denied the charge.

A round-table conference was held and the brains trust

came up with an answer, which was to inject the tomatoes with croton oil. Croton oil is a strong purgative, one or two drops being the usual aperient dose. One of the residents, a Sydney man, was sceptical. When all the tomatoes had been injected with five drops of the oil he expressed doubt as to whether it would have any effect and, to prove his point, ate one of the tomatoes. That night he spent most of his time trotting up and down stairs to the toilet, to the evident sympathy of the night porter, who was not told the cause.

The next day more tomatoes had disappeared, and that night the night porter failed to report for duty. He did not turn up for four days, and when at last he put in an appearance he was looking very much the worse for wear. "You know, Dr Wells," he said, "the trouble you had the other night? Well, me and the missus have been terrible bad with the same thing." Wells looked him full in the eyes and said, "Have you been eating tomatoes?" Nothing more was said but no loss of tomatoes occurred again.

That same dining-room got us into trouble on another occasion. "Sausages and mash" were appearing on the menu far too frequently for our liking, and eventually one angry resident impaled a sausage on a fork and slung it out of the window. The dining-room was on the first floor and the sausage sailed across an alleyway, through a kitchen window on the ground floor, and hit the chef. The latter straightaway gave notice, and the kitchen was thrown into confusion. We were promptly on the mat before the Hospital Manager. It took some time to convince him that our marksman had not aimed deliberately.

At this time the Senior Resident at the National Temperance Hospital was an Australian, later to become a prominent specialist physician in Melbourne. He had passed the examination for membership of the Royal College of Physicians and had stayed on to get further experience in London. From him I gained a great respect for the versatility of Australian doctors; for he was equally at home either unravelling a complicated neurological problem or taking out an appendix.

This man was a Jew, and had that intangible quality common to so many cultured members of his race. My friend was typical of the Jew who, being free from financial care, was able to indulge his taste for scholarship. The remarkable place of the Jew in history has always fascinated me, and we had many discussions on the subject. Perhaps the realisation of what the Jewish race was already beginning to suffer in Hitler's Germany, although our knowledge was at that time incomplete, lent sympathy to our relationship.

My friend was an indefatigable explorer of London and knew far more about it than I did, although I had lived there for years. On one of his expeditions one night he moved in to a darkened shop entrance to light a cigarette out of the wind. In the dark alcove there were two dim human shapes, one of whom leaned across to him, murmuring, "I see you're on the Charing Cross murder. See you later on." My friend never found out who they were, or for whom he was mistaken, but he was delighted with this Edgar Wallace touch to his explorations.

After six months as a house physician, medicine had come alive for me, but I still wanted to get more surgical experience. Accordingly, when my term as house physician expired and the post of house surgeon became vacant, I applied for the position. There were thirteen candidates for the job, and several of these men had specialist qualifications. On the face of it I didn't have a chance. I think my chief must have spoken up for me because, in spite of the odds, I got the appointment.

The training of an embryo surgeon starts in the outpatient department, with practical work such as stitching up cuts and opening abscesses. From this, the trainee progresses to the removal of small warts and cysts, at the same time working in the operating theatre as a second assistant to the operating surgeon.

A big operation will involve many people. The surgeon stands on one side of the operating table, with the assistant surgeon facing him on the other side. The theatre sister stands beside the surgeon next to the instrument tray.

The surgeon makes the incision with a razor-sharp knife, and as the edges of flesh fall apart a number of small bleeding points appear. The assistant presses a piece of gauze on these, thus mopping up the blood and temporarily stopping the flow. Nowadays, the bleeding points are electrically coagulated, but at this time artery forceps were used for the job. These are like a delicate pair of pointed pliers with a ratchet on the handles. The surgeon pinches the bleeding vessel with the point and clips the ratchet shut, sealing off the bleeding point. More and more forceps are applied until the wound is dry. Then the assistant lifts the handle of each pair of forceps in turn, and the sister hands the surgeon a piece of absorbable catgut which he ties tightly round the blood vessel beyond the point of the forceps. The assistant finally unclips the forceps and cuts the loose ends of the catgut.

Each operation proceeds in an orderly way, according to a precisely laid down technique. The surgeon operates while the assistant helps him by holding instruments or pressing structures out of the way.

At first the trainee surgeon acts as an assistant to the assistant, doing odd jobs and watching everything that goes on. Then, in simpler operations, he is promoted to the position of assistant. Finally he himself is allowed to operate, with his tutor assisting him.

The first operations given to the trainee are relatively straightforward conditions, such as the removal of an appendix or the repair of a hernia. I was still doing this simpler form of surgery when I was granted an opportunity to prove myself.

I have a feeling that the old adage "Opportunity knocks but once" has a lot of truth in it.

I have often heard successful medical men say that they owe their success to taking a risk which came off. My uncle, for example, was working as a young resident in the casualty department of a hospital when suddenly the door was flung open and a child suffocating from diphtheria was rushed in. He had never done a tracheotomy operation before, and the child was struggling violently, making the

job doubly difficult. His only other alternative was to send for the resident surgeon, knowing that it would be too late by the time he got there.

Instead, he seized a knife and opened a hole in the child's windpipe. By the time the surgeon had arrived, the tracheotomy tube was in place and the child was breathing peacefully. That one decisive action not only gave him confidence but, more importantly, gave his seniors confidence in him. He went on to become a very successful surgeon.

My chance came one night when a small girl was brought in to the casualty department, where I was on duty. She had been hit by a car while crossing the road. The mirror on the front mudguard had caught her cheek and torn it right open, and there was a large hole gaping through to the back of her tongue.

I rang the assistant surgeon, who was on emergency duty. He was an Ulsterman, while I was southern Irish, and somehow we never got on well together. I got no favours from him.

"Good evening, sir," I said. "We have a casualty here, a small girl who has a wound which will need suturing. She has been knocked down by a car."

There was a pause before he replied. His voice sounded tired.

"Are you able to handle it?"

"Certainly, sir," I answered. "There's no need for you to turn out. I shall be glad to do it."

I doubt if he would have let me do it if he had seen the extent of the injury, but he had not.

"All right," he said, and I rang off.

It was a huge wound and was bound to leave an unsightly scar. The mother had already been sent for, and when she arrived and asked to see her daughter I thought that her presence would serve a double purpose. It would comfort the child, and would also make the mother realise the impossibility of repairing such a wound without leaving a scar.

The mother took one look at her child, and fainted.

The theatre was opened up. I scrubbed up and injected a local anaesthetic, cut off the jagged edges of the wound, and carefully sewed them together. The scar stretched from the ear right across to the nose and back to the chin. When the assistant surgeon had the dressing taken down the next day and saw the wound, he gave me a very searching look which eloquently said that my description of the case had been, to put it mildly, an understatement. However, he had given his approval and there was nothing he could do about the situation.

I had spent over an hour carefully sewing the edges together and when the stitches were out the scar was gratifyingly unnoticeable.

This case was the turning point in my career; from then on, more and more surgery came my way. Nevertheless, pride came only shortly before a fall.

Mr Geoffrey Parker was my principal tutor. He was at that time surgeon at the French Hospital and Surgical Registrar at the National Temperance. (This man was later to win fame during the second World War as Commandant Parsifal of the French Resistance. His bravery was legendary and he was all but captured on several occasions by the Germans. On one occasion he escaped through a back window while Gestapo agents burst through the front door of a house.)

Under his expert eye I had progressed through all the usual stages until I was doing appendix and hernia operations.

Hernia (rupture) is caused by a strain tearing through a weak spot in the muscle wall of the belly and allowing a loop of the intestine to bulge through and track down under the skin. The bowel is thus liable to become pinched. If this is not relieved it will become strangulated; that is, its blood supply will be cut off and the loop of bowel will die. The resulting infection, if it is not corrected immediately will rapidly kill the patient.

With a hernia it is best to operate early, when it is easy to put the bowel back into the abdominal cavity. The opening is then closed and reinforced by turning down a flap of

muscle and stitching it down. In a common groin rupture, the operation is complicated by the fact that the main artery and vein to the leg lie just underneath the ligament at the lower end to which the muscle flap is attached.

One day Parker told me I could do the next operation on the list. This was to be the repair of a hernia in a young man. I made the usual incision, and on the opposite side of the table Parker worked as my assistant. Everything went smoothly. Dissecting out the loop of intestine, I put it back inside the abdomen and closed the hole over it. Then came the muscle flap strengthening. One, two, three stitches went in and the flap was joining nicely.

In went the curved needle with the fourth stitch. Then suddenly a fountain of blood came out of the wound. My needle had gone too deep and torn a hole in the large femoral vein underneath the lower ligament.

In a second, Parker brushed me aside. With his left thumb on the hole in the vein he made a couple of deft snips with the scissors and the ligament fell apart, exposing the torn vein. It was the work of a moment to tie the vein across and cut off the flow of blood.

The rush was over and we paused. "I'm awfully sorry," I said. Parker was usually a cheerful soul but this time his face looked grim.

"You need to be," he said. "With the venous supply cut off I have no alternative but to tie the artery. If he doesn't develop a collateral circulation he'll lose his leg."

His words were all too clear. Once the vein was tied off, blood was prevented from returning to the heart. At the same time, the artery would keep pumping more blood into the leg, which would soon swell hopelessly. The artery would have to be tied as well, but if we did this we would cut off the main blood supply to the limb.

There was just one hope. In any limb there is an alternative source of blood supply through a number of small blood vessels. If the main supply is cut off these may just be able to allow through enough blood to keep the limb alive, if there is a minimum of movement. Movement creates a need for more blood. If the arteries and veins

are healthy they may in time swell and allow more blood through and the limb will recover. This new circulation is known as a collateral circulation.

Parker tied off both artery and vein and concluded the operation. "Well," he said, "you'll have to tell the Chief."

The head of our unit was a Mr McClure, senior surgeon to the hospital. He was skilled and careful in his work, but his personality was that of a rather dour Scot. The thought of confessing my error to this scrupulous soul appalled me.

On the way downstairs to the outpatient department, where McClure was holding a clinic, I had time to reflect on my carelessness. The least I could expect was instant dismissal, but it might well be more than this. I could be sued for heavy damages if this young man lost his leg, and my whole career and the futures of my wife and family would be in jeopardy. I would never get another job with such a black mark. Besides, how could I face seeing this poor fellow lose his leg?

I knocked on the door.

"Come in," said McClure.

"Excuse me, sir," I said, "but I have had trouble at the operation on Mr —— and he may lose his leg."

"What happened?" asked McClure. His glance was cold and searching.

"Well, sir," I said, "I had reduced the hernia and was doing the Bassini repair when my needle went too deeply through the inguinal ligament and tore the femoral vein."

"What happened then?"

"Parker took over immediately and ligatured both femoral vein and artery."

"So, if he doesn't develop a collateral circulation, he'll lose his leg?"

"Yes, sir," I said.

"Have you any excuse?"

"No sir, I'm just sorry."

There was a long silence while he looked at me. I waited with a sinking heart for the axe to fall. Then, unexpectedly, this dour man said kindly, "Well, laddie, you're not the first to do it, and I suppose you won't be the last."

That was all.

My patient got the full V.I.P. treatment, and, to my enormous relief, made a perfect recovery. But I learned a lesson which I have never forgotten.

Another incident concerns a patient who had an affliction known as general paralysis of the insane. This dreaded disease was considered to be quite incurable, until it was discovered that an attack of malaria gave some respite. I forget the underlying principle of the treatment, but the procedure was simple: infect the patient with malaria, and let nature do the rest.

When a man suffering from this rare disease came under our care, it was decided to try the new treatment on him. The easiest thing would have been to give him an injection of malarial blood, but apparently no one thought of that. Instead, the nearby London School of Tropical Medicine was asked to supply us with an infected mosquito. The arrival of this fearsome insect in a small glass tube created quite a sensation, and everyone clustered around the patient's bed to watch the creature taking his merciful bite. The man's arm was bared, and the sister approached gingerly with the tube. However, her hand was trembling so much that the cork fell out and the mosquito, instead of biting the patient, escaped.

If little men from outer space had suddenly landed they could not have caused more dismay than that which ensued. The alarm was sounded and staff from all parts of the hospital rushed to the ward. Patients cowered under the bedclothes. Doors and windows were closed tightly to prevent this terrible creature from decimating the population of London, and an army of nurses peered under beds and up walls.

I was later to live in a country where the bite of a malarial mosquito was an everyday fact of life, but in London such a prospect made the stoutest heart quail. We never found the mosquito.

Naturally, I was very much preoccupied by the prospect of my future career all the time I was at the National Temperance Hospital. There were several options open to

me, but I had already decided in my own mind that I wanted to be a medical missionary. I think that this decision must have originally sprung from the fact that my grandfather, a deeply religious man whom I loved and admired greatly, had always hoped that I would do this sort of work. I respected his opinions, of course, and my own conviction that I was destined to lead the life of a missionary had been an essential part of my way of thinking since childhood. My parents, themselves staunch Anglicans, had given me a Christian upbringing and a home where there was constant love and care. Although they never tried to pressure me into doing mission work I am sure that they, too, wanted the same thing.

When I was fourteen, I was invited to attend a schoolboys' summer camp, run by the Children's Special Service Mission, in the highlands of Scotland. I revelled in the days spent swimming, climbing, and playing cricket. Then one Sunday night some of the camp officers gathered us together and told us, in simple fashion, what Christ meant to them. As I listened, I realised that this relationship with a saviour and friend was something immensely important, in fact the most precious thing in the world.

After our camp leaders had spoken, those boys who wished publicly to confirm their allegiance to Christ were invited to stand up. I knew that this was a moment of destiny for me. If I missed it, I would miss all that mattered in life. I stood up. Something then happened to me, although I cannot explain my feeling except by saying that Christ became a living reality for me. John Wesley's experience that his heart was being "strangely warmed" was mine, too. Was it emotionalism? Perhaps it was, but now, half a century later, I know that my life changed its direction at that point. From then on I knew that I was meant to be a missionary. However imperfectly I served Him, Christ made it possible for me to live for Him joyfully, when I could not have done it by myself.

Some people may wonder why, after all the time and effort required to qualify as a doctor, any man or woman should want to enter an area of medical work which is so

financially unremunerative. All feelings of vocation aside, I can only explain this by a comment which I myself made after leaving my medical work in Papua to enter general practice in Australia. When I lodged my first full year's tax return it was sharply queried by the Deputy Commissioner of Taxation. How was it, he wanted to know, that my income had risen so markedly? I replied that while I was a missionary in Papua I had only a modest salary on earth, but, no doubt, considerable deferred credits in heaven. Now I was enjoying a suitable reward on earth, if not so much above. I heard no more on the matter. Possibly the Deputy Commissioner of Taxation thought that anyone who was peculiar enough to be a missionary was incapable of understanding simple financial matters.

Apparently my grandfather had also had troubles with income tax. As he lay dying from pneumonia, he kept drifting in and out of consciousness. The family was gathered around his bedside. Suddenly he opened his eyes, smiled, and tried to say something. My grandmother bent over him to listen. "Thank God there'll be no income tax in heaven," he murmured. A minute later he was dead.

There is, perhaps, a general feeling that anybody who chooses the life of a missionary must be a little odd. Yet missionaries are not all odd people; some, indeed, have become world famous. Sir Henry Holland of Quetta is reputed to have carried out the staggering number of 23,000 cataract operations. Sir Wilfred Grenfell, master mariner and surgeon, brought medical care to the people of the inhospitable Arctic. Sir Albert Cook, of Uganda, was a great educator; Albert Schweitzer was a doctor of music, philosophy, and medicine, and a world exponent of Bach's organ music; while David Livingstone did more than any other European to open up hitherto unknown regions of Africa and to abolish the slave trade. Most missionaries, however, are ordinary people who have chosen to live in remote places, often under conditions of hardship—not necessarily because they like it, but because they feel so strongly that God has called them to this work.

After completing my two residencies at the National

Temperance Hospital, I felt competent to do what I hoped would be my permanent work. I am not fond of heat and was thinking of working as a medical missionary in Tibet. I little realised then that I would be sent to swelter in the tropical heat of Papua.

I had an old friend working at the interdenominational mission at Kwato in Papua, and it was he who first urged me to consider the need out there. The more I thought about it, the more I thought that this position was right for me, and my wife agreed with me. I applied to the mission for the posting.

The Kwato Mission Governing Committee was at that time based in New York. Communications between America and England were slow, and personal contact was impossible. No doubt the Committee was hesitant to take on the responsibility of accepting a married man with three young children; whatever the reason, I received no definite decision on my application. I was therefore forced to take short-time locum tenancies, so that I could be free at short notice if required. It was an unsettling experience. I was shuttled from job to job with confusing rapidity. I would relieve an anaesthetist for perhaps a fortnight; then I would be placed in charge of two geriatric medical wards of seventy-five beds each; then I was sent out as a locum in general practice.

Nevertheless the work was interesting, and often amusing. At one stage I was doing a locum in a sleepy little village in Lincolnshire. The scenery was lovely, and the village itself was dominated by one of those vast and ancient parish churches which dot the English countryside, and which are so fascinating to anyone of an historical turn of mind. The vicar of this church had been there for half a lifetime, and I soon got to know this man and became very friendly with him. One day I happened to mention my liking for the vicar to one of the local residents. He agreed with my feeling, but astounded me by adding, "It's a pity he's a foreigner."

"He doesn't look like a foreigner to me," I said in astonishment.

"Oh yes, he is," replied my companion. "He comes from Somerset."

The difference between districts in England is quite remarkable. The further north one goes, the more rugged the practice of medicine becomes. While I was doing a locum in one Yorkshire village, I asked one of the partners where the local anaesthetic was kept.

"What do you want that for?" he asked.

"There's a fellow in the surgery who wants a tooth pulled out," I replied.

"You don't need an anaesthetic," he said bluntly. "Just pull it out."

To me, with my effete southern ideas, this seemed a barbarous practice, but there seemed to be no other alternative. The patient obligingly opened his mouth. I located the offending tooth, rocked it a few times, and pulled. Out it came, without a murmur from the victim. Holding a handkerchief to his bloody mouth, he grunted his thanks and disappeared.

These northern people were extraordinarily hardy. On another occasion, when I was working at this same practice, I recall wandering about in the snow in the middle of the night, trying to find a farmhouse where I was supposed to be delivering a baby. The baby beat me to it, but I did enjoy the hot cup of tea.

All these short jobs frustrated me. Just as I was becoming familiar with one form of work, I would have to leave it and go on to something different. Later, when I was working on my own at Kwato, I saw the other side of the coin. I found that up there, no matter what problem I faced—with the obvious exception of tropical diseases—I had come up against it, or something similar, in my previous locum work. If I had tried to plan a course of instruction in the light of my future work I could not have improved on it. God is, after all, a much better organiser than I am. I was to discover this many times in the future.

If it was frustrating for me at the time it was even more so for my wife and the children. For three years, during which I was away practically all the time, my wife (who was

not well herself) had the day and night care of three vigorous youngsters. Until I wrote this book I do not think I realised quite how much I owe to her cheerful acceptance of frustration and loneliness.

The children, too, found this yo-yo father difficult to understand.

"Why do you have to go away?" they asked me once.

"To get money for bread and butter for you all," I explained.

A fortnight later I returned home, tired out from yet another job. As I fitted my key into the front door lock I heard a clatter of footsteps in the hall. I opened the door, and three eager faces appeared.

"Daddy," they called, "have you brought the bread and butter?"

My last job was a locum for the house surgeon at the Farnborough Hospital in Kent. I was there for some time, and liked both the work and the place. By that time I had started to study for the Fellowship of the Royal College of Surgeons in Edinburgh, and my dream of Kwato was beginning to fade into the background. The position of Surgical Registrar at the Farnborough Hospital became vacant, and my chief suggested that I should apply for it. With his backing, I was almost certain to get the job. To clarify the situation, I rang the Secretary of the British Committee of the Kwato Mission, and told him that I must have a decision one way or the other about Kwato. He replied that he could not yet give me an official answer, but that he had gained from New York the impression that I would not be accepted as a missionary doctor.

That was enough for me, and on the strength of this information we all went house-hunting. We found only one house which was suitable, but it was just right. The owners were not positive that we could have it, but said that they could let us know in a few days. They fully expected that it would be all right, and so we agreed on appropriate terms.

That evening, I started on the letter of application for the post of Surgical Registrar. The closing date for the

application was still three days away, and being the sort of person who never believes in doing today what can be put off until tomorrow, I did not finish it.

Two evenings later I got out the letter and began to fill in the last details. While I was doing this, the telephone rang. The Secretary of the British Committee for the Kwato Mission wanted to speak to me. He came to the point immediately.

"How soon can you leave for Kwato?" he asked.

"In two weeks," I replied, without hesitation.

"Fine," he said. "Everything's clear. Go right ahead."

I went back to the room and tore up my application. The next morning we had a letter from the owners of the house saying that, to their regret, the house would not be available after all.

Before the end of the month we were all on board ship, bound for Kwato.

TO UNDERSTAND THE ORIGIN and significance of Kwato it is necessary to delve back into history.

Trade with New Guinea is of great antiquity. During the early Egyptian dynasties, several thousand years ago, a flourishing trade route existed between West Irian (as it is now known) and Egypt. Scarabs and ancient Egyptian pottery have been unearthed at various places along this route, which appears to have touched at what is now Darwin in the Northern Territory of Australia. The main purpose of the trading was to bring spices and Bird of Paradise plumes to the Egyptian royal court. The plumes, which were sacred and hence reserved solely for use of the Pharaohs, arrived in Egypt packed in leaves gummed together with sandalwood resin. The latter was used as incense. There is a theory that the legend of the phoenix rising from the flames was inspired by a glimpse of the divine Pharaoh, clad in this gorgeous plumage and sitting in the midst of a cloud of fragrant smoke.

Little more is heard about the island of New Guinea until the insatiable Portuguese and Spanish explorers sighted it, and gave names to some of the outstanding

coastal features. Permanent settlements were eventually established in Indonesia and Timor.

In the eighteenth and nineteenth centuries, England, France, and Germany started their colonial expansion. The British Government had no great interest in New Guinea. It was too far away from England and not on any of the main trade routes. However, Australia became increasingly concerned when Germany decided to annex the north-eastern part of the country. The Queensland Government was alarmed by the presence of a possibly hostile power in the political no-man's-land of south-east New Guinea, and the British Government was reluctantly persuaded to act. After two unsuccessful attempts a Declaration of Annexation was finally made in 1888, and the south-eastern part of the country became known as British New Guinea.

From the start, official policy was to promote the welfare of the indigenous people, and European business enterprise was made subservient to this policy. The country was fortunate to have a succession of outstandingly able men in charge. The era of which I write really began with Sir William McGregor, who laid a fine foundation of administration. He was followed for short terms by Sir George Le Hunte and others before Sir John Hubert Murray took office.

Murray, who was appointed Chief Judicial Officer for British New Guinea in 1904 and became Lieutenant-Governor in 1908, remained in office until his death in 1940. During these thirty-five-and-a-half years Murray became a legendary figure to thousands of Papuans. The Annual Report of the Territory became known throughout the world as a record of the best in colonial administration. During this period, the British Government transferred control of the country to the new Commonwealth of Australia and the country became known as Papua. The former German New Guinea, captured by Australia during the first World War, became mandated to Australia by the League of Nations as the Mandated Territory of New Guinea.

Murray's administration has sometimes been scathingly

dismissed as paternalism, and of course it was. But, given the difficult task of bringing a stone-age country into the twentieth century, paternalism was just what Papua needed. Murray had to progress slowly with this vast and inaccessible land, bringing different areas under control one at a time, as his meagre resources allowed.

It might be said, with our present knowledge, that he moved too slowly; but no one in those days could have foreseen that there would be another disastrous World War. Nor could they see the inevitable aftermath: the rapid dissolution of the colonial empires, and the sometimes violent moves towards independence—often against the wishes of the mass of people in the countries concerned.

On the contrary, the chief contemporary criticism levelled at Murray's administration was that he was not warranted to interfere with the lives of "happy savages." Murray rightly rejected this attitude. Papua was not a happy country. Inter-tribal warfare was part of the very stuff of life; cannibalism was customary, and so was head-hunting. In some large areas no young man could marry unless he was able to prove to his bride-to-be and her family that he had killed a man. Infanticide was common, and people too old to work were frequently left to fend for themselves or starve. Infant mortality was appalling. Even in my time, much later, it was not unusual to find that a woman who had given birth to four or five children had not been able to rear one past babyhood.

Murray's technique for the development of this primeval country was far in advance of his time. First of all the whole region, with the exception of a selected area, would be officially declared closed. No non-indigenous person would be allowed access, but a government patrol would be sent in. Some of these patrols are among the great epics of world exploration.*

The patrol would consist of one or two patrol officers and an escort of the Royal Papuan Constabulary. This

* To those interested, I commend Jack Hides, *Papuan Wonderland*, Glasgow, 1936, and Champion and Karius, *Across New Guinea from the Fly to the Sepik*, London, 1932.

unit, founded by Sir William McGregor, was developed by Murray into an elite corps, whose morale in the face of hardship and danger was magnificent. Gavin Souter, in *New Guinea: The Last Unknown*, quotes a conversation overheard when Patrol Officer Jack Hides and his men looked down on the populous valleys of the Southern Highlands for the first time:

> "My mother!" exclaimed Sergeant Orai. "People like the sand!"
>
> "What if they are bad tempered?" asked a carrier.
>
> "Well what?" replied one of the police. "We are ten!"

The Spartans at Thermopylae could not have expressed it better!

What Murray had done for the morale of these men is also exemplified in Hides' book, *Papuan Wonderland*, by the dying Constable Emesi, veteran of months of gruelling patrol:

> "My lamp is going out, but no matter, I have Judge Murray's clothes on!"
>
> And as they put his pitifully few belongings, his wooden comb, his looking-glass, and his sheath knife beside him in the grave, his friends delivered their panegyric.
>
> "It is Government work," said Constable Dekadua.
>
> "It is true," replied Sergeant Orai.

The government's exploratory patrols would sometimes be away from civilisation for months at a time. This, of course, was long before the days of radio communications, and these men would be moving through some of the most rugged country in the world. Often they would be attacked by hostile tribesmen who greatly outnumbered them; but never, on Murray's explicit instructions, were they allowed to fire back to kill. Murray insisted that all food obtained during these patrols was to be paid for, and that there was to be no interference with village life. It is doubtful whether the Lieutenant-Governor's instructions were invariably obeyed, but certainly there were none of the massacres

which disgraced colonial exploration and development in Africa and elsewhere. In the light of this, it is easy to understand the good-will which grew up between Papuan and European before the second World War.

A series of expeditions took place in the 1920s and 1930s, up the Fly, Strickland, Purari, and Sepik rivers, into the highland country, and elsewhere. All this exploration provided a picture of what had hitherto been unknown. The Lieutenant-Governor acted on the geographical information by selecting areas for local development. The Government Anthropologist would then be sent to live in the principal village in the area, observing all that went on but in no way interfering with the lives of the inhabitants. He would acquire the rudiments of the local language, and generally make friends with the people. At the end of several months he would submit a report to the Lieutenant-Governor.

This report would be studied, and if it was considered expedient to open up the area, a permanent government station would be established there. Soon missionaries would be able to move in, bringing with them medical care and education as well as their evangelical teaching; and eventually traders and recruitors would be allowed to enter, and the entire region would be classified as being "open." By careful adherence to this planned sequence of stages, exploitation of the indigenous people and their land was avoided, and the way was made clear for the coming of Western civilisation.

In 1891, nineteen years after the first missionaries had settled at Hanuabada, the Reverend Charles Abel arrived in New Guinea. Land had previously been presented to the mission on Samarai by its native landowner, but when this island was required by the government for a commercial port and government station, the mission was offered in exchange the island of Kwato, two miles away. The name "Kwato" comes from the Suau words *Kwa Do*, meaning "we cry." At that time, the little island lived up to its name. It was virtually nothing but a rocky hill surrounded by

swamp, from which rose a damp curtain of mist. The exchange was not a good bargain, but when Charles Abel arrived, he took a characteristically cheerful view of the situation, and immediately decided to drain and fill the swamp—partly with an eye to making it into a good cricket pitch. He was an addict of the game, having been himself an English county cricketer.

Month after month he and his men toiled with hand-tools, excavating material from the hillside and tipping it into what seemed to be a bottomless swamp. It took two years to complete the job. The disgruntled workers caused the first strike in the country when they circulated a rumour that the swamp was the home of a great snake, which was eating up all the filling. Abel's comment on receiving this information was delightfully typical of him. "Civilisation is dawning!" he exclaimed.

Now the visitor who lands at Kwato is greeted by an attractive cricket oval surrounded by trees. Generations of Papuan cricketers have learned the game there.

Charles Abel was the first man in the country to foresee fully the problems the Papuan would have to face in order to adapt himself to civilisation. One day, he knew, these people would govern themselves. Before this time, they needed to acquire a philosophy by which to live, and training to develop their latent potentialities. To Abel Christianity was not just an intellectual belief, and it did not conform to any man-made code or convention. He had a horror of pious pomposity. His faith was the very core of his life and the conviction out of which his actions flowed. He felt deeply that his mission to the Papuans was to lift them into a full development of spirit, mind, and body. It was a concept which involved discipline and hard work.

It was not easy for Abel to gain an entry into the villagers' way of life. Their days were filled with hunting, fishing, and dancing, and they saw no reason to do anything else. Nevertheless, Abel saw that an outlet was needed for the bright young boys and girls growing up at Kwato. After long thought, he had decided as far back as 1903 that the first step should be to erect a steam saw-mill on the island.

The King Henry VIII gateway at the entrance to St Bartholomew's Hospital, London







Nothing like this had been done before. The whole idea was far ahead of its time, and quite contrary to accepted mission practice. Abel had to fight hard to get his views accepted by the London Missionary Society, but fortunately he was solidly backed by three successive governors or ex-governors of British New Guinea, who had visited Kwato and knew the possibilities of what he wanted to do. Eventually the scheme went through.

The saw-mill proved to be a great success. Papuans at Kwato took to the work well, displaying an unexpected aptitude for mechanics. In addition, the search for logs in the Milne Bay mountain region brought the Kwato men into close contact with other villagers.

With the development of this first industry, other improvements came quickly to the island. Boat construction and house building were taught; coconut and rubber plantations were established; and a printing press, which produced educational and commercial material as well as the Scriptures, was set up. Finally, engine workshops and a blacksmith's shop were added to the list.

One old workman told me that once, in these early years, a certain very muscular Papuan had reported to Abel that he had broken an anvil. "How on earth did you do that?" asked Abel. "I hit it with a sledgehammer and it broke," answered the lad, apologetically. Abel beamed at him and shook his hand. "You're the first person I've ever heard of who was strong enough to break an anvil," he said.

The medical situation in Kwato was less promising. There was a widespread need for medical care which was not being adequately met, and Abel was deeply concerned, too, that no Papuan woman was safe in the government hospital. The women knew it as well, and would put up with almost anything rather than go there. Abel was determined that one day Kwato would have its own doctor and hospital.

I never met Abel, as he died after a road accident in England in 1930. But when my family and I came to Kwato in June 1935, we were welcomed joyfully as a visible sign that his original plans for Kwato would soon be completed.

Top: The author's wife, Freda, with their children (*from left*) Michael, Dermot, and Patricia, photographed in July 1935 en route for Papua New Guinea. *Bottom:* The great war canoes prepare to row out to greet H.M.A.S. *Australia* during a vice-regal visit

I ARRIVED AT KWATO to find no proper hospital, no nurses, and no instruments, but a delightful place and delightful people, both European and Papuan. There was a large population in the area, chiefly in Milne Bay, and apart from an occasional government patrol they were devoid of medical care. There was a government hospital on the neighbouring island of Samarai but it was not popular, and operative surgery there was minimal. Many years later I took charge of this hospital while the Government Medical Officer went on leave. I was horrified at its filthy condition. The walls were so thick with dirt and with the vivid crimson splashes of betel juice which had been spat on them, that it took three applications of caustic soda in boiling water to obtain a semblance of cleanliness. Knowing this, and knowing also that if I were to criticise I would be told to mind my own business, we at Kwato decided to preach by example.

The hospital at Kwato was at least clean, but when I first took charge it was entirely rudimentary. The building itself was a very simple structure, with asbestos-cement exterior walls, and a wooden floor on piles. The walls had a

wainscoting of sheet iron enamelled green, above which wood bark strips were woven into a parquet-like sheet. When I found that the patients had been used to sleeping on dirty blankets on the floor, I cajoled all the friends I could think of to give us old hospital beds. These were sprayed with white enamel and stood upon floors which were stained and polished. With clean sheets on the beds and clean uniforms on the nurses and orderlies, the whole place looked both efficient and attractive. The contrast with the government hospital evoked from visitors some rather pointed comments on the latter.

I had been assured that elective (non-urgent) surgery could not be done at Kwato, as tropical conditions made sterility impossible. Experience later showed me that this was not so. If meticulous attention was paid to detail, aseptic surgery was perfectly possible, and by using a modified post-operative antiseptic routine any operation could be carried out successfully.

The concepts of aseptic and antiseptic surgery are so important that they should be considered here in more detail, so that they may be more clearly understood.

The basis of all successful surgery is the prevention of infection in the operation wounds. The germs which do the damage are ubiquitous; they live on the skin, in the dust on floors, and to some extent they float in dust particles in the air.

A century ago a Scot, Joseph Lister, started a medical revolution. In those days, surgical wounds always used to become angry and swollen, and to discharge pus. Lister, basing his work on the discoveries of the Frenchman Louis Pasteur, hypothesised that this would not happen if everything in contact with the wound—the surgeon's hands, his clothes, the patient's skin, and all instruments used—were first treated so that all the germs on them were killed. To achieve this aim the instruments to be used were boiled in water, while the wounds themselves and the surrounding air were kept continually in an atmosphere of carbolic acid, which had been found to kill germs. In this way, the practice of antiseptic surgery came into existence. The

resultant absence of inflammation in surgical wounds was startling.

This new concept was at first vigorously resisted by some. Among these conservatives, I regret to record, were a few of the surgeons at Bart's. One of them once called out derisively, in mid-operation, "Shut the door, Mr So-and-so, lest one of Mr Lister's germs comes in." His own operating attire, incidentally, was an old frock-coat which became so stiff with dried blood and grease that it was said to be capable of standing up by itself.

These men, like the redoubtable Waring, were mostly the surgeons of the old "brilliant" school, who learnt to operate at tremendous speed to minimise the pain of the unanaesthetised patient. It is recorded of one of these maestros that "with one sweep of his knife he amputated the leg of his patient, two fingers of his assistant, and his own coat tails."

All this bravura was fortunately to be made unnecessary, as good anaesthesia reduced the need for speed and antiseptic surgery curbed the ever-present risk of infection.

Lord Lister's era, when the gowns of the operators and the drapes on the patient were damp with carbolic acid, the wounds flooded with it and the air misted with it, was itself eventually superseded by the era of aseptic (without infection) surgery. In time, it was realised that better results could be obtained with less damage to wounds by sterilising the gowns and instruments in high-pressure steam. The equipment used for this procedure was an autoclave, a strong vessel with an action based on the principle of the pressure cooker. Materials sterilised in the autoclave were produced dry, yet completely free from germs. Before an operation, the skin of the patient would be cleaned by antiseptic, and the area surrounding the wound covered with sterilised sheets. The surgeon, wearing a sterile gown and with his hands enclosed in sterile rubber gloves, could then perform surgery confident in the knowledge that there was no risk of infection.

In our hospital at Kwato we had procured a really good autoclave worked by a Primus burner. This usually gave

us sterile dressings, although one occasion did arise when a run of elective operations somehow became infected. Prolonged investigation led us to suspect the efficiency of the autoclave. Were the dressings being penetrated by steam? Finally we came up with a method of testing. A hen's egg was buried in the centre of the drum, which was then heated. Sure enough, the egg was not hard-boiled. The drum was then more loosely packed and the experiment repeated. This time we got the desired result, and with our new understanding of the idiosyncrasy of our autoclave the troubles with infected wounds were over.

Kwato was an industrial mission and my great standby was the head of the boatbuilding section, Arthur Swinfield, now a Sydney naval architect. I reasoned that if Arthur could build boats, he could build me an operating table. A partnership of Arthur and the head of the carpentry section, Arthur Beavis, went into action and came up with a remarkably efficient table at trifling cost. The table had the conventional three-piece top, but the centre section hinged on a triangular frame to which it was held by a couple of motorcycle friction shock absorbers. By this means the table was normally stable; but if a downward tilt was required, because the patient was vomiting, or for some other reason, sudden pressure on the head would immediately tilt it. This proved to be a very useful facility for my amateur anaesthetist, Phyllis Abel, in the early stages of her career. The standard anaesthetic was open ether. In time, Phyllis became adapt at it, although wherever possible spinal anaesthesia was used.

The theatre itself was a practical, smoothly-lined room of asbestos-cement sheet. A skylight gave us light, and this was complemented by a wooden rectangular frame to which was attached a row of Bushell's tea tins containing electric light-globes. I have used better shadowless lights since, but this primitive system worked quite well.

Instruments were more of a problem. Before I left London I had been given fifty pounds with which to buy equipment for the mission surgery. There was a shop down in Soho which sold second-hand medical goods, and

with my fifty pounds I managed to buy quite a surprising number of basic surgical instruments. True, these were made from carbon steel, and the plating was less rather than more, but beggars cannot be choosers. Among my bargains was a set of tonsil guillotines which I purchased for one shilling each. These instruments have a grooved metal ring down which a sharp blade is impelled by a spring when the release button is pressed. When I was doing my first tonsillectomy out at Kwato, I gingerly coaxed the ring of one of these guillotines around the errant tonsil and pressed the button. The next instant the air was full of bits and pieces of metal, one of which tried to find its way down the patient's larynx. I have done some hundreds of tonsil removal operations since then, but I have never used another tonsil guillotine.

My plated steel instruments were hard to keep intact in Papua's tropical climate. In the prevailing atmosphere of humidity, everything that can possibly rust does so. To deal with this problem we made a flat bench with a lift-up lid over a galvanised iron trough full of neat Lysol. When the instruments were stored inside this trough, they were kept completely free from rust. All that was necessary then was to dip them for a moment in sterile water, and they were ready for use.

This outfit came in handy on several occasions but one I remember particularly. I was doing an operation on a Papuan woman who had an enormous goitre, part of which had grown down behind the breast bone.

In the goitre operation, a "cut-throat" incision is made across the neck. The skin flaps are then turned up and down and with careful dissection the two lobes of the thyroid gland are exposed. These lie one on each side of the windpipe, just below the Adam's apple, and they are connected by a bridge across the centre. After the main arteries have been tied off each lobe is cut across, bite by bite, using artery forceps to control bleeding. Finally only the back quarter of the gland is left on each side.

As usual, I was using my entire stock of one dozen artery forceps in the gland resection. I had so few instru-

ments that when the supply was used up, the arteries had to be ligated, or tied off, so that the forceps could be re-used. I thought back with longing to the twelve dozen artery forceps which Dunhill had always had ready in these operations. Unperceived by me, my anaesthetist had become so absorbed in watching the operation that she had forgotten to keep up the anaesthetic supply. Suddenly, to our horror, the patient began to regain consciousness. Phyllis hastily poured on the ether and, predictably, the patient gave a terrific cough. In an instant, my twelve artery forceps were on the floor, the ligatures had flown off, and blood was cascading down the table. I was stumped for a moment and then inspiration came to me. I grabbed a pair of intestinal clamps out of the Lysol trough and clamped one on each side of the thyroid stump. To everyone's relief the haemorrhage stopped. The artery forceps were retrieved from the floor and re-sterilised, and the operation was concluded without further incident.

The conditions under which I had to perform surgical operations may sound rather primitive, but they were an immense improvement on what I originally had to face. When we landed at Kwato there was no operating theatre, or any other facilities. I was not given much time to remedy the situation either. The evening after my arrival a Papuan woman was brought in with a strangulated femoral hernia of four days' duration. I hastily unpacked my instruments. Then, using a kitchen table to operate on and a kerosene lamp for light, I did my first resection of a gangrenous bowel. There was very little I could do. Peritonitis was already advanced, and the woman died twenty-four hours later. This was not a good beginning for me, and it was some time before patients could be persuaded to come to surgery at the first sign of trouble, rather than when driven by intolerable pain.

In time the situation altered, and the people began to realise that *dimdim edi puripuri* (white man's magic) meant that conditions which had formerly been regarded as hopeless could now be cured. This feeling of hopelessness in the face of illness or accidental injury was clearly

brought home to me by the condition of an old man in an outlying village. He had dislocated his jaw yawning, and as a result was unable to close his mouth to swallow. He was left to starve slowly to death until word reached his son at Kwato. The son travelled out by boat to find the grave already dug and the mourners assembled for the funeral feast. In spite of opposition he bundled his father into the boat and took him back to our hospital at the mission. All it took to reduce the old man's jaw and restore him to a normal life was a whiff of anaesthetic, followed by a little pressure on the jawbone.

The first step in the establishment of a well-run medical service was the training of Papuan nurses. In this rugged country a single doctor could not hope to cover the entire field. We needed nurses who could be trained to handle the ordinary medical and surgical cases, and particularly to cope with all the midwifery work. With qualified personnel stationed at strategic places in the district, a central hospital at Kwato, and good lines of communication, it would be possible to bring an efficient medical service to this end of Papua.

Our plans to make this possible were based on Charles Abel's philosophy. His method was to provide a thorough technical and moral training, and then to put his trainees into positions of practical responsibility and leadership where they in turn would train others. Theoretically this sounds fine, but in practice it was not always so easy. It is hard to stand by watching while a student takes an hour fumbling over a job which you know you can do in ten minutes, but some so-called instructors never managed to understand how important it was that they should not interfere. One such man was a particular trial to Abel during the early days of the mission, when light industries were first being established. This man's "training" consisted of doing the job himself, while his students stood around looking bored. Abel could see what was going on, and finally he presented the over-zealous teacher with a pair of white gloves and instructed him to keep them on all day. The man was further told that if the gloves were not

still snowy-white at the end of the day, he would be asked to go elsewhere.

In 1935 we established a medical training school at Kwato, close to the various technical and educational facilities of the mission, and a hunt was made for nurses. It was unexpectedly difficult to find them. Nursing was not a recognised field for Papuan girls, teaching being considered the more glamorous job. In spite of this I had the great good fortune to get, as my first trainee, Garionedi Tariowai.

Nedi, as she was universally known, was a widow and a grandmother. She had had little education, and had in fact delivered her own babies in the bush in the traditional Papuan manner. Yet, somehow, Nedi clearly grasped what I was aiming at and she managed to gather round her a group of younger people who became the original nurses and medical assistants of the Milne Bay area. Nedi was particularly gifted as a theatre sister. I had only to mention to her what sort of operation I would be doing and the scheduled time. When I arrived in the theatre I would find the patient on the table, the two assistants scrubbed up, and all the sterile instruments laid out in readiness.

Nedi is still alive and in honourable retirement. She is now cared for by her children and grandchildren, one of whom was the first Papuan woman to graduate from a university. Others of her descendants hold responsible posts all over the Territory. Nursing is now a highly-regarded occupation for Papuan girls, and much of the credit for this change in attitude must go to Garionedi Tariowai for her indefatigable pioneer work.

It would take too long to write up the qualities of the other nurses. They all had something special about them, and some have made an imprint on the history of their country. One of these, however, must be mentioned. Maieogaru was already middle-aged when I first came to Kwato in 1935. She had been brought up in a Milne Bay village and, as far as I know, she had had no formal tuition. Her command of English was poor, and she would not have been considered sufficiently well-educated to go

to a nursing training school, but she was a born nurse. Whether she was in charge of a village confinement or nursing a gravely ill pneumonia patient back to health, she was outstanding at her work. She was known and respected throughout the area.

On 26 August 1942, Maieogaru was at her station at Divinai, on the north coast of Milne Bay, when she was woken in the early hours of the morning by the sound of heavy engines. Motor launches sometimes travelled in the Bay at night but this was altogether different. These were big engines, and not a light was to be seen.

When daylight dawned an astonishing sight met her eyes. Big troop transports were lying at anchor surrounded by destroyers and cruisers, and all flying the Japanese flag with its sign of the rising sun. The transports disgorged their men about two miles east of Koeabule and the troops made their way along the bush road to Gili Gili where an airfield had recently been constructed. The object of the Japanese was to secure this airfield, and so to provide air cover for their fleet to pass through the China Straits.

However, unknown to the Japanese, the Australian High Command had anticipated this move and had quietly landed the 18th Australian Infantry Brigade. A squadron of Kittyhawk fighters of the Royal Australian Air Force were secreted under cover just short of the airstrip, waiting. The Japanese walked right into the ambush.

Within minutes all hell broke loose. The carnage was tremendous and the Japanese retreated in disorder, retaliating savagely against any indigenous people who annoyed them. Japanese aircraft which came in later, to land at what they assumed was now a friendly airstrip, were shot out of the sky. Dogfights followed, and two of our fighters were shot down.

The following day, when Maieogaru happened to glance across at a small island some way off-shore, she saw what she thought was a figure lying on the beach. Other villagers asserted that it was only a log, but Maieogaru was determined to find out, so she launched a canoe and paddled out. Her first impression had been right. An

Australian pilot, gravely injured in the battle, had parachuted out of his aircraft. He had drifted for eighteen hours, supported by his "Mae West," until the current had carried him in to the beach some time during the night. He had just enough strength to crawl above high-water mark before he collapsed. Maieogaru took him back to her house, where she attended to his wounds. The whole village knew what she was doing, and knew also what frightful reprisals would be taken by the Japanese if this was discovered, but not a word was said. Warnings were given when patrols approached, and Maieogaru would hide the airman in the bush until the enemy had gone.

It soon became clear that the wounded man needed more skilled medical help than she could give so, putting him in the bottom of her canoe and covering him with vegetables, Maieogaru set out for the aid post at Gwavili. During her passage through the Japanese lines she was stopped by a patrol boat, but fortunately the sight of a village woman in an old grass skirt, transporting a load of vegetables, was so commonplace that it attracted no particular attention. Apart from a few perfunctory questions there was no investigation.

When Maieogaru reached Gwavili and revealed her mission she received a hero's welcome. All sorts of gifts were offered her, but she had only one request: a bicycle, which would help her to speed up her nursing work. She got her wish. She was also officially decorated for bravery and outstanding devotion to duty.

The training of Papuan nurses could not possibly follow the pattern set in Australian schools. For one thing, these women had not had the educational training to delve deeply into theoretical considerations. On the other hand, they would have very great responsibilities later on, when they would be sent to take charge of the medical work in some outlying area. To allow for these specific conditions, elementary anatomy and physiology were taught side by side with practical procedures in the outpatient department or the operating theatre.

First of all, it was essential for the student nurses to

have a knowledge of bacteriology, so that they might realise the importance of asepsis in this difficult climate. My first demonstration of the ubiquity of micro-organisms was highly successful. To prove my point, I opened the mouth of one of the students and, taking a scraping from the back of his tongue, I spread it on a microscopic slide. The tongue is always a fertile breeding-ground for a flora of spirochaetes and other organisms, but the sight of these moving on the slide horrified the nurses. They immediately looked on the student concerned as a pariah.

I repeated such demonstrations often, and soon my nurses were so aware of the inevitable presence of micro-organisms that a high standard of asepsis became automatic to them. Once they even absent-mindedly presented me with a set of freshly sterilised instruments to carry out an autopsy. On another occasion Freda thought that she might unknowingly have brushed against a tray of sterile instruments in the operating theatre. She asked Nedi if she had noticed whether or not she had done so; and Nedi, who normally would never have done anything to embarrass her, unhesitatingly said "yes," and re-sterilised the lot. Incidentally, I often found that students became confused with English words which sound alike but have different meanings. One school-girl, in answer to the question, "What are germs?" wrote, "Germs are what the Queen of England wears in a necklace around her neck."

Our trainees were of two classes: Kwato nurses and village nurses. The latter were those who did not have an educational standard high enough for them to undergo nursing training, but who could serve usefully as first-aid attendants in the villages. Reports on their work were sent to me every month, and from these I was able to see where they needed help. Looking through one of these reports one day I was rather startled to read:

Name	*Diagnosis*	*Treatment*
Mota	Sore tail	Eusol dressings

This seemed anatomically unusual to me, so I called across to Nedi, "Nedi, do you know anyone called Mota?"

Nedi looked surprised. "No, *Taubada* [sir]," she replied. "No one would be called by that name."

Afterwards I discovered that the word "mota" meant "snake" in the Suau dialect. This cleared up the mystery. The patient was Cecil Abel's pet python, a twelve-foot monster who used to live up in the roof of the store to keep the rats down. He had damaged his tail and had been duly registered as an outpatient.

Some of the other reports were, I considered, equally vague. "Belly-ache," I told one nurse, was just not technically good enough. I wanted to know the exact position of the pain in the abdomen. I was rewarded next month when a patient was reported as having "belly-ache west of the navel."

The teaching of the Kwato nurses was, as I have said, largely clinical. Apart from giving them formal lectures, I tried each day to show them some outpatient or inpatient with an interesting condition, so that we could discuss all aspects of practical anatomy, physiology, pathology, and treatment. By the time we had gone through each case slowly and carefully, most of the nurses had the details of the condition implanted in their memory for life. A friend recently told me that an American Surgeon Rear-Admiral, who had visited Kwato during the second World War, was astonished to find that the hospital was being run without a doctor, or a European nurse. He was, however, greatly impressed with the accuracy of the diagnoses of the sister-in-charge and with the high standard of medical care. It says much for the retentive memories of these nurses, as well as for their sense of vocation.

A large part of our work consisted of giving injections, and it seemed to me very important that the nurses should be correctly trained to do this painlessly. I explained to them that the nerve endings responsible for the pain are *in* the skin, not under it: therefore, the faster the needle penetrates the skin, the less the pain. The new trainee had to practise on a pillow while I urged her to put the needle in faster and faster. When it seemed that the girl had the knack, an unsuspecting outpatient who was due for an

injection would be selected as her guinea-pig. All too often the trainee would lose her nerve at the last moment; the needle would bounce off the skin, and the wretched victim would gaze up at his tormentor in reproach. This was my cue to pick up a stick and roar at the hapless student. If she didn't get that needle in before the stick descended, she would be in trouble. With the devil behind and the deep before, the needle would this time go in sweetly and rapidly. The patient would beam with relief, and the nurse would look surprised and relieved as well. From then on, she would have no more qualms about giving injections.

One afternoon I was called urgently to the hospital. One of the nurses, I was told, had poisoned a patient. I dashed up and asked to see the bottle of poison, but was relieved to find that it contained only a strong chloral hydrate solution. I had made up this new sedative mixture earlier in the day, and it could do no harm beyond making the patient sleep. Nevertheless, I put on a grave expression and asked the nurse what had happened. She said that she had wanted cough mixture, so she had gone to the usual shelf to get it, and had given the patient a dose. He promptly protested that the taste was not that of his usual mixture. They argued for some time, and then the patient started to lose consciousness and accused her of poisoning him. Only then did she read the label. She saw, to her horror, that it was indeed some unknown stuff. She was terribly frightened, but I did not spare her. How many times, I asked her, had I told her and the other nurses to read labels before giving medicines? This awful thing had happened simply because she had not done as I had instructed. "If he dies," I went on, "you will be placed on trial. They might even hang you for murder." By this time the nurse was nearly in a state of collapse, so I relented and told her that the patient was going to be all right.

Some time later, sounds of wrath were audible from the men's ward. The victim was after his nurse's blood.

By this time everyone except Nora, the nurse in question, had seen the joke, but there were no volunteers to accompany her when she went in to pacify the indignant patient.

I never again had to mention the necessity for checking labels.

Elderly Papuans have a natural dignity and courtesy which are often quite outstanding. However, junior nurses in Papua, like their counterparts throughout the world, are apt to forget the respect due to age. One bossy but inexperienced nurse had ordered around a very old man in our hospital until he decided that he had had enough. He called her to his bedside and looked her straight in the face. Then, very slowly and deliberately, he said, "Young woman, be careful. I ate your grandfather." Horrified and in tears, a very subdued nurse rushed to her mother for comfort. The mother admitted that, in his youth, the old man had indeed done what he had said.

One of my greatest problems in nursing training was to teach the girls to do the dirty jobs as well as the clean. Some jobs are incredibly revolting, but they must be done, even if he who does the work vomits his heart out afterwards. The man or woman who cannot or will not perform the most odious of tasks has no business in the medical profession. I knew that our nurses sometimes avoided unpleasant jobs, and this hurdle had to be overcome.

One day a villager with acute bacillary dysentery was admitted to the men's ward. I don't know whether he was naturally dirty in his habits, or whether he was just too ill to care; whatever the reason, he got himself, his bedding, and the floor into a frightful mess. The nurses, spotlessly clean themselves, kept well away from him. I saw what was happening, so without a word to them I put on an apron, took a bucket of water and a sponge, and proceeded to clean him up. One after another the nurses came up to me and asked me to let them do it, but I refused and went on with the job. I never had to say another word to Kwato nurses on the subject of inattention to patients. During the war, when I was not in charge of the hospital, their care was just as meticulous as it had been when I was there.

One of the most important sections of medical work to be undertaken almost entirely by our nursing staff was

that of midwifery; and for this, fortunately, nearly all the girls showed a natural aptitude.

Childbirth was a hazardous business under village conditions in those days. In our area, the custom was for the husband to build a rough shelter for his wife in the forest. When labour commenced, the expectant mother would go there with a woman friend and stay until the child was born, walking back to the village afterwards with the infant in her arms. Birth was aided by squatting on a coconut. (This method, in a more elegant form, has been advocated by a leading London obstetrician as being the most mechanically effective way of bringing the abdominal and pelvic muscles into action.) With normal presentation, this would result in a rapid delivery; but any obstruction could produce a dangerous situation. Should the labour be drawn out, the husband would be summoned to assist by putting his knee against his wife's back, and his arms around her abdomen, and pulling hard. Under this pressure, something would have to give. If the baby was forced through it would certainly result at least in an extensive tear. If the baby still refused to appear, the penalty was a ruptured uterus, which was always fatal.

When the village mother had been rewarded by a successful birth, she still had to face the next hazard: the delivery of the placenta. If this was delayed, the mother would simply stand up and do a sort of rock-'n'-roll shimmy, and with luck the placenta would fall out easily. Nedi introduced this technique to us at the hospital, and it often proved surprisingly effective in eliminating the need for a manual removal. Inevitably, if this first procedure did not succeed in removing a recalcitrant placenta, the village midwife would resort to pulling, none too gently, on the cord. This sometimes produced an acute inversion of the uterus. The last and rather desperate method was to suspend the mother from the roof beams over the fire. The smoke would cause coughing, which sometimes brought away the placenta, but all too often this harsh treatment killed the unfortunate woman.

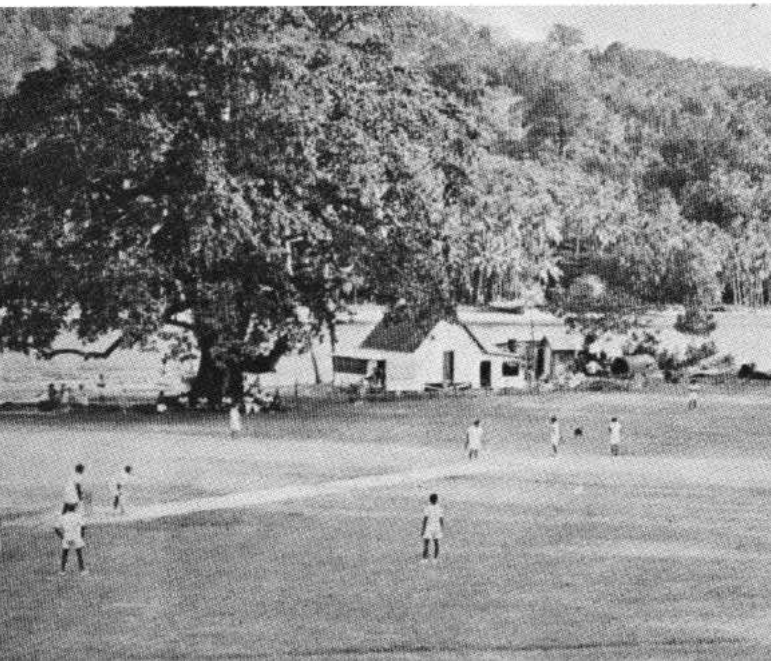
One aspect of obstetric training which I emphasised was

Top: Kwato mission staff. The author is standing on the far left in the back row, and Russell Abel is standing on the far right. *Bottom:* The author's younger son, Dermot, with one of the Papuan nurses









a rather unusual one—the mechanism which led to the formation of twins and multiple pregnancies. It was vital that this subject, which was largely of academic interest to European midwife trainees, should be fully understood by Papuan nurses. In Papua the popular belief at this time was that multiple births were the product of infidelity, a different father being responsible for each child. In pre-government times, many tribes would have both the mother and the children put to death. By the time I came to Papua the mothers were reasonably safe but killing of one or both twins was almost universal. The babies would simply be abandoned in the jungle. For that matter, the mother who was unable to breast-feed her baby often did the same thing: the woman, carrying the baby in the usual net sling on her back, would just release the sling and walk straight on without looking back.

We discovered one of these babies quite by accident when we were on patrol. Someone thought he heard a cry, and on investigation he found a tiny baby with an enormous ulcer which had probably been gnawed by rats. The infant was wasted away, and we thought it had little chance of survival. We were wrong. The baby is now a grown woman, married, and with children of her own. We gradually gathered up these "orphans," though I fear we missed many, and we let it be known that unwanted babies were always welcome with us. To my great relief an Australian nurse, Sister Joan Blake, joined us at Kwato in 1935, and before long she took over responsibility for these children. When she left a couple of years later an English nurse, Sister Mildred Bath, carried on her work. Having the help of a trained nurse made all the difference to me. She was able to teach the girls mothercraft and the finer points of nursing, subjects about which I knew little.

An ante-natal clinic had been started about six months after I arrived at Kwato and, largely due to Nedi's insistence, most of the young mothers on the island were enrolled. It was some time before the people realised what the purpose of the clinic was, but eventually it became obvious that women at Kwato were having babies more

Top: Huts thatched with palm-fronds in a typical Papuan village. *Bottom:* The attractive cricket ground at Kwato. Under Charles Abel's direction, and with his help, the area was reclaimed from swampland

easily and safely than before, and the word got round the district.

After that the ante-natal clinics became an accepted part of life. Eventually, nearly all the midwifery of the Milne Bay area was in the hands of Kwato nurses established throughout the district, and the maternal and neo-natal mortality fell steeply. The nurses became adept at estimating the period of gestation and the presentation of the baby by abdominal palpation. I soon came to rely on their special skills and when I was faced with a difficult manual removal of a placenta I would call Nedi or one of the other senior nurses to do it. Their small hands and sensitive fingers made a better job of it than I could.

When the clinics became popular and well-attended I thought, with some sense of achievement, that the people were finally coming to realise the importance of scientific medicine. My illusion was short-lived. As I thumbed through the ante-natal register one day I noticed that one of the mothers had only attended once. This puzzled me and I asked a nurse why the patient had not returned. The nurse was unable to tell me; all she knew was that the woman had come from a distant village. She determined to make enquiries and at last, among the outpatients, she discovered a man who came from the same village. But when she asked him why this woman had not come back to the clinic he looked at her in surprise.

"Why should she?" he said. "Didn't the doctor lay his hands on her?"

Nevertheless, many soon realised that the clinic was able to give genuine help, and information about the place spread far on the grape-vine. One mother turned up at Kwato with a remarkable story. It seems that she had come from a remote tribe in central Papua, far outside our sphere of influence. This woman had had a series of still-births and was desperately anxious to have a living child. Somehow word reached her that, far away in the direction of the rising sun, there was a place where mothers had babies in safety. She knew no more than that, but when she became pregnant again she set out on her odyssey, always travelling

towards the east. Six months later she arrived at Kwato. Sure enough, she had a malpresentation which we were able to correct. Her labour was carefully controlled, and when we presented her with a fine healthy son her joy knew no bounds. I hope the lad grew up to appreciate his mother's devotion. A six month's journey over those mountains in her condition was an impressive feat of endurance.

WITH THE RAPID GROWTH of the industrial development implemented at Kwato by the indefatigable Charles Abel, the little island gradually outgrew the framework of the London Missionary Society. About 1927 it became a separate mission under the legal title of The Incorporated Kwato Extension Association. Here again, by his use of the word "extension," Charles Abel prophesied a time when people trained at Kwato would carry their message and their way of life into every corner of the territory, and even beyond. Only now is this happening.

With the break from the London Missionary Society, which was allied to the Congregational Church, Kwato broadened out to become an interdenominational mission. During my years there the mission was staffed at various times by Congregationalists, Plymouth Brethren, Anglicans, Salvationists, Baptists, Presbyterians, and a Catholic. There may even have been other denominations represented. To all of us, such labels were irrelevant. The things that united us were so much more important than those which might divide us that we simply ignored the latter.

I myself had not always felt so completely in harmony

with the way of life exemplified by those who lived and taught at the mission. When I first arrived at Kwato, I did not realise that a Christian life which goes along smoothly and comfortably and which faces no challenges, has something wrong with it. Before long, I found out that most of the Kwato staff had been influenced by the Oxford Group movement (now known as Moral Re-Armament), and, firm in my own particular faith, I became critical of the way they declared that they were "guided" in most of their actions. I could produce any number of theoretical arguments to prove (to my own satisfaction, at any rate) that what they called "guidance" was mere wishful thinking; and that in any case the teaching of the Oxford Group was theologically unsound. Their answer to me was that if I could show them a better way to serve Christ, they would willingly follow my example.

The trouble was that, for all my brave words, I could see beyond all doubt that these people were leading a better sort of life than I was. Furthermore, many of their practical decisions in the running of the mission business—decisions to which they claimed to have been "guided"—proved, in the face of all commonsense, to be unexpectedly right.

The circumstances surrounding one such decision particularly impressed me. Two firms (to simplify matters, I shall call them A and B) regularly used to do business with the mission. We had a contract with firm A to supply us with a large tonnage of rice, costing many hundreds of dollars. Then firm B, a branch of a big combine endeavouring to dominate New Guinea trade, offered us a considerable discount on the cost of the same goods. We approached the directors of A and told them of B's new offer, and they said that, although they could give us a small concession, they could not possibly match B's price. They regretted that they would have to lose our business.

Our managing committee at Kwato made this seemingly simple decision a matter for prayer, and sought direction from God. Quite unexpectedly, all of us felt that we should decline B's offer, even though this would mean a considerable financial loss, which we could ill afford.

Only a few days later, disaster struck. One of our three boats developed engine trouble. A replacement part had to be ordered from England, and consequently there would be a long delay before it could be repaired. The second boat was already on the slips undergoing extensive maintenance, and it would not be ready for several weeks. The third, which was on a visit to western Papua, was caught in a storm and suffered damage on a reef. At the same time, we had contracted to freight in to Samarai a large tonnage of copra from a plantation at Gili Gili. We knew we would be up for heavy penalties if we failed to do this job on time, yet we had no boat to carry it out. Our people, as always, asked for God's guidance. The answer, when it came, was to go and see the manager of firm A. Cecil Abel, the head of our mission and the elder of the two Abel brothers, did as he was directed. Firm A's manager was very sympathetic. He said he would be only too glad to help, especially as we had treated him uncommonly well over the rice business but, regrettably, all his launches were already committed. Then just as Cecil was going out of the door, the manager called him back: he had thought of something. The firm had six sailing cutters used for trochus fishing, which had been tied up for the winter. If we could find crews to man them, we were welcome to use them free of charge. It was no problem for us to find crews. We used the cutters and brought in the copra just on time. The penalty we avoided was considerably more than our loss on the rice deal, and the other firm could not have helped us.

Time after time instances of this kind arose. With divine guidance, plans of action which commonsense argued to be foolish or impossible turned out to be highly successful. God's promise that if we give His kingdom first priority everything else will fall into line proved to be completely accurate.

One day while I was still pondering this (to me) unorthodox method of living, Cecil Abel came to visit me. Suddenly and quite unexpectedly he said, "You and I are, I hope, going to work together for a long time, so I think you should know me as I really am." He then proceeded to tell

me all about himself, dwelling honestly on both his weak and his strong points, and saying where he needed help, and where he had to be encouraged or pushed along. I was completely overcome. I had never met anyone who had been as honest and open as this, and I felt myself to be a hypocrite when I compared my own life with his. Our talk affected me so much that I asked Cecil Abel how I could get freedom such as his. He told me then that he had found it helpful to do a sort of spiritual stocktaking. He suggested that, to do this, I should take for contemplation four categories—absolute honesty, absolute purity, absolute unselfishness, and absolute love—and see what God had to say to me about them. He pointed out that it was easy to ignore or forget some uncomfortable thought, and that it was better, therefore, to write the thought down. After a night of spiritual turmoil, I did this. I needed a lot of paper to do my stocktaking and I did a lot of writing afterwards, admitting and making restitution for various things I had done. Some were costly decisions, but once they were made, I felt a sense of God's forgiveness that I had never known before, and an ability to help others which was quite new to me.

This was not the last spiritual milestone which I reached at Kwato. Another one rose before me some time later in an apparently innocent thought which came to me in the early morning, as I asked God's guidance for the day. The thought was, "Are you willing to have God overcome your shyness?" I had grown up to shun any parade of my deeper feelings. Of course, being an Irishman, I rather relished a fight on social questions, but when it came to spiritual matters I was a moral coward.

I faced this thought squarely and promised God that I would do anything He wanted if He gave me freedom from my cowardice. I realised I was sticking my neck out and, sure enough, during my time of prayer the next morning I had the impelling thought, "Go to the fancy dress ball at Samarai as the absent-minded professor." I had been brought up in a strict atmosphere which frowned on public dances and I could not dance; but like St Peter

of old I had to learn that what God decrees is not for us to question. At Kwato we had a habit of sharing with each other at breakfast any outstanding thoughts we had had for the day. Much of our work was run in this way. The first person to come in immediately announced to me, "I had the thought that you should go to the Samarai ball dressed as the absent-minded professor." Two others who came in later said the same thing. I felt a bit suspicious and asked them if they had plotted this but all denied it and said that the thought had come to them quite independently.

I realised then that God had taken me at my word, and when I thought what this implied, I quaked. That evening we all set out for the ball. I wore glasses on the end of my nose, a frock coat, a long shirt which hid a diminutive pair of shorts, socks round my ankles, and nothing in between. My trousers were carried over my arm and a badly rolled umbrella completed the ensemble. Those who got a preview of my costume roared with laughter and unkindly said that it suited me down to the ground.

We all walked down the hill to the jetty. At that time I was Acting Government Medical Officer while the regular Government Medical Officer was on leave and the official launch was awaiting me. When they saw this apparition in the semi-darkness the crew not only neglected to spring to attention, but they refused to allow me on board until I had persuaded them that I really was their doctor.

When we reached Samarai we strode up to the hall with what I hoped was an air of confident expectation. In spite of this the ladies taking tickets at the door were horrified at the sight of this uncouth figure, and some looked the other way. By this time I was shaking like a jelly, and my state was not improved when I heard somebody ask, "Who the devil is that?" The reply, "I think it's Vaughan from Kwato," was followed by, "It can't be, he'd never do a thing like that." When the fancy dress parade was over the ball got under way, and I felt reprieved at last. I changed into more civilised garb, joined in, and began to enjoy myself thoroughly.

At the ball I found myself talking to a plantation manager whom I knew. He was a hard case, a bottle-of-whisky-a-day man, and one with a big personal problem. I had tried to get near him before and had never got to first base, but now all the barriers were down and we were able to talk freely and deeply.

The ball itself was a hilarious affair. The orchestra consisted simply of a piano, a violin, and a bassoon. It took the bassoonist some time to insert himself into his instrument so the notes of the piano would herald each dance, then the violin would join in, and then suddenly the air would be filled with a monstrous roar from the bassoon, and everyone would be reduced to helpless laughter.

During the ball someone released a bagful of mice. Ladies clambered on to chairs while their gallant escorts rushed around the hall chopping half-heartedly at the scurrying animals. One elderly matron, who had been sitting quietly during all this uproar, suddenly let out a shriek like a banshee. "There's a mouse inside my dress," she screamed. She looked frantically in all directions and then, like a homing pigeon—or perhaps, more appropriately, like a homing ostrich—she made a bee-line for me, imploring me to get it out. I delved down into all the ironmongery, but because she was a lady of ample proportions I rather lost my way. After some minutes of fruitless searching I assured her that all was well.

She sat down again, but only for a few seconds—then the mouse moved. With a shriek like a runaway locomotive she looked accusingly at me before she vanished into the outer darkness.

If the Lord taught me a couple of good lessons that night, He also gave me a first-class evening's entertainment.

In accordance with the sort of belief held at the mission, the Kwato form of divine service was a simple one, such as the early Christian church must have used. Public confessions and apologies during the service brought a personal honesty and sincerity into our worship. No one would take part in the communion service if he had any trans-

gressions or unresolved quarrels on his conscience.

The church itself was built during my time at Kwato, and it was an architectural gem. It was not the largest church in the country—that distinction went to the huge concrete Cathedral of St Peter and St Paul at the headquarters of the Anglican mission at Dogura. Our church at Kwato was the product of the architectural skill and building expertise of Arthur Beavis and of the free-will labour of the local men. Arthur was a trained builder from England, who had in fact worked on the construction of the surgical block at Bart's. The church at Kwato could not have been more different. It was built on the plan of the Suau *dubu* (the type of hut built locally). A high roof swept up to a peak in front and was roofed with wood shingles. The walls were of local stone, and a cruciform window in front illuminated the interior roof beams, which were beautifully mortised together from local timber. A simple altar with a stone reredos, and a smooth concrete floor completed the building. It blended perfectly into the landscape, and the skill of its workmanship quite simply expressed the desire of the people to dedicate all that was best in their culture to God.

Mrs Charles Abel had taken a special interest in teaching choral singing to the local people so that now, many years later, everyone sang easily and naturally in harmony. When I heard this lovely music, the hymns sung in the Suau dialect to the traditional Welsh tunes, I was often reminded of the Welsh miners singing on the streets of London during the depression, their superb harmonies rising high above the roar of the traffic.

The services at Kwato were arranged very carefully. We had elders but no ordained clergy; everybody was expected to take responsibility for every part of the church. No single European or Papuan had any special priority. If any one felt that he had a message to give, he gave it. The words were plain and simple, sometimes awkwardly expressed, but they had often a great depth of wisdom in them. This, the priesthood of the laity, was to me Christian worship at its best.

When I was working out in the villages I used to look forward to Sundays. The church, in most places just a large village hut, would gradually fill with women in their best grass skirts and men in white calicoes. Men and women sat on opposite sides of the aisle on a rough coral pebble floor, the mothers contentedly feeding their babies or quietening the older children. Time meant little in these peaceful villages, and the service usually started late. Topical prayers and lusty singing of hymns would be followed by a sermon, and then, as so often happened, a village dog might poke his nose in to investigate the sudden quietness. Accompanied by hissing and shooing noises from the seated congregation, the interloper would sniff his way placidly up the aisle. But if he got too far, there would be a sudden eruption and, hastened by stones hurled from every corner of the church, the unwelcome visitor would streak out of the door yelping. The disturbance was always forgotten instantly, and the service would proceed with decorum.

In the days of which I write the Papuan had a very different view of life from the average European. The world of the European was, and still is, a material one, composed only of those things which he could touch, or see, or hear. The Papuan, in his natural state, attached little importance to these things. He believed that he had come from a spirit world, and that he would inevitably return to it when his time came. Spirits were all around him, in the wind, in the trees, in the rocks, in the bones of his ancestors. Sickness was to him the result of the spirits' displeasure. No one died from "natural causes;" death came only as a result of sorcery or witchcraft.

In this atmosphere of total credulity, the sorcerer was a powerful man, and one greatly to be feared. He was in league with the spirits; he knew the magic spells, and could either kill or restore to health, providing he was suitably rewarded. Some sorcerers were well known but others were believed to work in secret. In some places, consequently, there was an atmosphere of all-pervading fear.

In the dark wet depths of the rain forest in the Bohutu Valley, fear of sorcerers known and unknown became so prevalent that finally no one could trust his neighbour, and many villages dissolved into single family units living far away from each other.

On our staff at Kwato was a man named Merari, who later became a Member of the Legislative Council of the Territory. Merari was so concerned with the pitiful state of the Bohutu that he decided to become a one-man evangelist to the valley. He chose as his mission area one of the most remote of the scattered villages of the Bohutu, and went into the dense rain forest by foot. It was a long journey, and as he walked along the track darkness fell. He continued towards his destination, using an electric torch to light his way. Presently he heard footsteps. He realised that whoever was out at night in such a place was probably up to no good, so he switched off his torch and moved off the track, waiting in the shadows for the footsteps to pass. Soon a figure came level with him, and Merari promptly shone his torch in the stranger's face and seized him by the arm.

It was Lobai, a greatly-feared sorcerer who, as it was later discovered, was on his way to murder the village policeman. The terrified Lobai pleaded with his captor not to kill him. Merari explained that he had come with a message of life, not of death, and arranged to meet him the next day. He then continued with his journey. During the remainder of his walk that night he discovered two more sorcerers engaged on similar missions of evil.

When he reached his destination, Merari found shelter in the village rest house. He was alone and unarmed in this menacing valley. During the night he heard sounds, but no one approached him. He was conscious, simultaneously, of an all-pervading malevolent presence, and of the protection of God.

In the morning Merari met the three sorcerers. Two of them were soon convinced that this unexpected confrontation was the hand of God directing them away from their old lives. They publicly burnt their witchcraft charms and

announced that from then on their lives belonged to God.

Lobai was not so easily converted. After a lifetime of power and authority, with the benefits accruing from his profession, he hesitated to give it all away.

"Come," said Merari. "Put it to the test. You say your medicine is strong; I say God is stronger. Look—over there is the platform on which I sleep. You may come tonight and put on me any spell you like. Then we will see which is the stronger."

Lobai was silent for a minute then he said, "There is no need for that. I know you are right. I tried all my spells last night, but every time I threw my magic at you it came back at me." So Lobai joined the other two in allegiance to a new God and the news broke on the valley like a whirlwind. Before long the press of people wishing to find out about this new way of living was so great that Merari had to send for more teachers.

In another way, I myself indirectly helped in this work of spreading a knowledge of God. One day, while on patrol, I entered one of the Bohutu villages, where I was asked to go and see a very sick woman. I examined her in her hut, and found that she was suffering from a large subcutaneous abscess of the abdominal wall. These abscesses, probably caused by thorn punctures, were quite common in Papua. They could grow to an enormous size, and could yield anything up to two pints of pus when incised.

We carried the woman out and placed her on a wooden platform in the open-sided dispensary which we had built in the village. Instruments were sterilised and then Rali, my assistant, gave the woman an anaesthetic. As he sprayed the ethyl chloride on to a mask over her face, scores of eyes watched his every move. The woman's breathing became quieter and quieter, and finally her moans died away. Then came the moment of temporary cessation of breathing which always comes with this anaesthetic and I heard the murmur pass around the crowd: "She's dead."

It was the work of a moment to incise and drain the abscess. I put a dressing on it and then we turned away and

went on with our work, as the nurses and I had previously arranged. When a person has been in great pain and probably had little or no sleep for a long time, the anaesthetic sleep passes smoothly into natural sleep. I knew that it would be so in this case. Continuing my work with other patients, I watched out of the corner of my eye until the woman was clearly in natural sleep. Then, as I had told the nurses I would do, I walked over to the table and took the woman's hands in mine. The crowd was aware that something was about to happen, and every eye was fastened on the platform. I said, in a loud voice, "Sit up." My patient gave a groan, opened her eyes, and lifted her head. There was a hiss of indrawn breath from the crowd and the hair on every head seemed to stand on end as these incredulous villagers saw the woman apparently rising from the dead.

Later we talked to the excited people who had watched this "miracle." It was no sorcery, we said. The woman had never been dead; the *muramura* (medicine) we had given her had just made her sleep.

Our information was greeted eagerly as being a token of the vistas which were now opening up in the primitive lives of the Bohutu. The new freedom at last banished superstitious fears from the valley. Dwellers in disunited villages came together again, and their co-operative work in the gardens brought a harvest of food such as these malnourished people had never before experienced. But what was most remarkable of all was that the practice of sorcery stopped completely.

It is hard, in this modern age, to comprehend the philosophy of black magic. Long ago, our ancestors burnt witches at the stake, believing that the mental aberrations of these unfortunate people were inspired by the devil. Today, these same delusions would be treated successfully in a mental hospital. In Papua, however, it is a different matter. Belief in and fear of sorcery are deeply ingrained, and have become a part of everyday life.

Much or most of the sorcerer's power is in the use of suggestion, though I came across some effects which

seemed inexplicable on any rational basis. Some sorcerers, who later became Christians, were sure they had been possessed of a demonic power which they now felt to have been utterly evil.

The power of suggestion among primitive people is amazingly strong. This is most strikingly seen in the ability of the Papuan to will his own death. One doctor, who was respected for his care of the local people, once had a patient who announced that he was going to die. The doctor pleaded with him to change his mind and managed to persuade him to live. A few days afterwards, however, he was told again that the patient was willing himself to die. This time the doctor was not quite so sympathetic, but he did succeed once more in making the man reverse his intention. Later the doctor was just sitting down to enjoy his dinner when he again received the same message. In a towering rage, he strode down to the hospital and flourished his stick at the dying patient. "If you die," he threatened, "I'll give you the biggest hiding you've ever had!" This, finally, worked the cure.

My own first experience of this will to die was rather shattering. A young wife, in hospital for a minor operation, had had a quarrel with her husband whom she accused of inattention. She announced that she was going to die. When the nurses told me of this they warned me that she would die, but I did not believe them. I went down to the hospital and sat beside the patient, who thanked me for what I had done, then shut her eyes and composed herself as if for sleep. As I held her wrist, her pulse got gradually weaker and weaker, until it finally stopped. I could do nothing to start her heart beating again.

At last I hit on a remedy. When the next patient announced his intention to die I kept goading him until he had named a time when he would be dead. Then I put him under heavy sedation and kept him under until the specified time was long past, when I woke him up and told him how I had duped him. He looked sheepish at first, then I grinned, and we both dissolved into fits of laughter. That concluded that attempt, and the trick always worked in future.

DURING MY EARLY MEDICAL TRAINING in England I was given a good grounding in general surgery—perhaps better than most, for when it became known that I intended to become a missionary doctor I was given an opportunity to see and do more practical surgery than most of my fellow-students. Needless to say, such privilege was frequently accompanied by a great deal of good-natured banter. My chief would peer down a cystoscope or some such instrument, and suddenly a voice would come out of the drapes: "Vaughan, as a man of God, tell me what you think of this tumour," or "In your practice in the wilds of Tibet you ought to know about this." I think I gave back as good as I got, and as far as the other students were concerned, a willing "Aunt Sally" provided some welcome light relief. Later, I appreciated the extra experience it afforded me. In the same way, when I was a resident I was lucky enough to be attached to hospitals where the Registrars gave me plenty of opportunities for practical work, when in other institutions this was not always the case.

At Kwato, my surgical work covered an enormous field,

and I eventually became used to dealing with anything from cataracts to ingrowing toenails.

Accident surgery had a high place on our programme. There were all sorts of injuries which required surgical treatment. We were continually brought patients who had fallen from coconut trees, or been bitten by sharks or crocodiles, or, worst of all, been gored by wild pigs. This last mishap could produce some really shocking injuries. Papuans trap wild pigs in large groups, and the critical moment comes when the animal, which has been frightened into a net, has to be secured.

If the hunter makes a false move, the savagely sharp tusk of the pig can rip his abdomen from end to end, leaving a tangled mass of intestine and perhaps a torn liver or spleen. Few victims of an infuriated boar survived long enough to reach hospital.

Burns, too, were frequent. They were not primarily caused, as one would expect, by open fires in a leaf hut with a wooden floor—the Papuan through generations of use had learnt how to handle this, and hut fires were uncommon —but by the recently-introduced kerosene lanterns. These had brought in a new danger, and major burns were not uncommon. In the 1930s, tannic acid was the accepted treatment for burns. It rapidly promoted a hard skin, and this was good therapy, for an open burn would rapidly become septic in this hot and humid climate, and turn any collection of serum into an ideal culture medium. We knew little then about fluid balances and nothing about electrolyte control. The flame photometer, now considered essential for an analysis of blood chemistry, had not been invented in those days; but even if it had been, there would have been none available any nearer than Sydney, or perhaps Brisbane.

For that matter, even the handy Soluvac (a commercially prepared sterile solution for intravenous injection) was not yet in use, and we had to make all intravenous solutions ourselves, laboriously triple-distilling water in a small glass still. Try as I would, I could not successfully prepare a pyrogen-free infusion. Blood transfusions gave

less reaction than other fluids but there was always some fever as a result.

My cross-typing of blood with serum against cells on a glass slide was a primitive technique compared with today's accurate work, but I was better off than some. I remember once going around the Papuan hospital in Port Moresby with the medical officer in charge. The doctor was a man who was widely respected for his diagnostic acumen and for the outstanding care he gave to his Papuan patients (this last being a quality not always seen in government hospitals in those days). As we went through the crowded wards, we came to a bed where a Papuan woman had just had a massive haemorrhage after childbirth. Turning round, the doctor looked outside to where a number of male patients were standing. He selected one rugged-looking individual, called for a needle, and plunged it into the man's arm then and there. Afterwards he poured the citrated blood into a funnel, from which he promptly transfused the patient. I was rather amazed at this rapid procedure.

"What about the blood groups?" I asked. "How do you know that the donor and the recipient are of the same group?"

"Oh," he replied casually. "We don't bother about that sort of thing here."

When I was dealing with burns, I found that the tannic acid treatment gave a good eschar, or slough of dead skin, but all too often the burn beneath the eschar became infected, and even after incision, the results were sometimes fatal. I do not know if skin grafting would have been any better. Certainly, at that time the grafts I made rarely took, and I wonder now how many of the present skin grafting procedures would succeed, if carried out with blunt knives and no antibiotic cover in such a climate.

This was not to say that the Papuan was particularly prone to infection. On the contrary, whether by genetic or acquired immunity, Papuans had an astonishing resistance to most of the ordinary germs. On one occasion, when I was passing down Milne Bay in a launch on holiday, I was

beckoned to the shore. There I was told that a local woman had had a baby a week previously but the afterbirth had not come away. I ducked down through the low door of the grass hut, and made out the figure of a young woman, sitting on the coral floor. Between her legs I could see, not a placenta, but the fundus of a completely inverted uterus touching the ground and crawling with flies. I had no equipment with me, but we carried the woman to the launch and took her to a nearby mission station. There I scrubbed up, washed the uterus thoroughly with soap and water, and then douched it with about two gallons of boiled seawater while I re-inverted it manually. Whether it was the cleansing or the hypertonic douche or neither, the woman had a perfectly uneventful convalescence and was back at work within a fortnight.

One of my earliest accident patients, Binehoa, stayed with us for many years after his recovery, and became known as "the father of the hospital." Binehoa was a young man from a distant tribe. He had been discovered by some passers-by, lying in a river bed where he had been pinned down by a large boulder, which had fallen and crushed his leg. When he was picked up, after four days of lying in agony, he was in a bad way. The tibia and fibula were fractured and sticking through a gaping wound. At this time the Winnett Orr treatment for compound fractures, as practised by Trueta in the Spanish Civil War, had just become popular. I decided to try this method on Binehoa. Accordingly I gave him a spinal anaesthetic, thoroughly cleaned the wound of putrefying tissue, packed it with Vaseline, and enclosed it in a plaster cast.

At the end of a fortnight, the cast was reopened. The smell was indescribable; I could only marvel that my nurses had the endurance to stay and help me. However, when all the discharge was swabbed out, I was delighted to find healthy pink granulations underneath.

Over many months and many changes of dressing the wound gradually healed, but during this time Binehoa

became so unpopular, because of his olfactory effect, that he was exiled to a hut some distance from the hospital. About half-way through his treatment, he began to complain that something was moving underneath his plaster cast. I carefully explained that such a feeling was entirely due to his imagination. If there was any slight sensation, I said, it was probably because the leg was getting better. Finally I was forced to demonstrate to this unbeliever that there was nothing there. I tapped sharply on his plaster and suddenly, to my astonishment, out shot a large maggot. Peering underneath, I could see that the entire wound was infested with them. Surgical literature of the pre-antibiotic days has rightly pointed out that maggots can help the healing process by feeding on the decaying flesh—but how anyone can put up with the intolerable itch is beyond me.

In time, as his fractured bones began to knit, Binehoa was restored to human society. He began to take on various duties for the hospital and soon assumed the role of a prefect, who keeps a close watch on the new boys. He was intensely proud of the hospital and painstakingly meticulous in his care of it. One evening the day staff-members were finishing their work in a back room when suddenly there was a roar from the men's ward, followed by what sounded like a riot. Everyone rushed in to find Binehoa surrounded by a mob of gesticulating patients. It took some time to restore order and discover what had happened. It seemed that Binehoa had seen the last patient into bed, and then, having swept the floor, got into bed himself. He then leaned over to dust the place where he had stood. Once this ritual was completed, he had composed himself for sleep. At this moment one of his flock had decided to get out of bed again. This lack of consideration for his immaculate floor was too much for Binehoa; hence the explosion.

When I was a student at Bart's, one of our lecturers was a surgeon, Mr Girling Ball. Ball was both a fine surgeon and a skilled lecturer. In his ward rounds and clinics he

combined the detective sense of a Sherlock Holmes with a pithy style and a vivid imagination. On one occasion his lively inventiveness proved strangely premonitive. As he was demonstrating a spiral fracture of the tibia, he turned to me and said, "Mr Vaughan, you are on a lonely island in the Pacific. The nearest X-ray machine is 1,000 miles away, and you are confronted with a fracture like this. What do you do?" I attempted a suitable reply but all the time I was thinking, "What poppycock. As if I would ever be in a place like that." Five years later I was on a lonely Pacific island called Kwato; the nearest X-ray plant was 1,000 miles away on the Australian mainland; and I was faced with a spiral fracture of the tibia.

The victim was a Papuan woman and the fracture was, as these fractures usually are, a very unstable one. I decided to use skeletal traction and a Bohler frame. A knitting needle doubled for a Kirschner wire and a stirrup was made out of steel rod in our workshops. I drilled the needle through the patient's heel, attached it to the stirrup and applied traction by a weight over a pulley. The fracture was soon pulled into line and kept in place by plaster.

The procedure created quite a bit of interest, as it was the first time skeletal traction had been used in the Territory. The woman herself was immensely proud of "the nail through my foot" and exhibited it to a stream of callers. Today this procedure is commonplace, but Vitallium or tungsten alloys are always used for the rod through the bone because of electrolysis by carbon steel. Maybe I was lucky; I had no such trouble then or subsequently.

Some injuries – particularly wounds from shark attacks – called for amputations. On one occasion I had two amputees in the hospital. Both were women, and as in Papua the woman is the bread-winner, it was clear that both patients would need some kind of prosthesis. As a substitute for the amputated arm our workshops supplied a steel hook with a wooden base, held by a shoulder harness. The woman soon became skilful in the use of this apparatus, and used it to help her good arm in such jobs as hoeing in the gardens, carrying baskets, or cooking.

For the leg amputee we created an artificial limb based on a design evolved by Keith Gillison of China. This was a wooden pylon finishing in a dowel which was sleeved with a six-inch length of one-and-a-half-inch water pipe. The whole contraption was hardly *à la* Roehampton, but it was strong, and we reckoned that the iron end should last the patient a lifetime of walking on soft earth paths. In less than twelve months the woman returned to the hospital with the iron ferrule of her artificial leg already worn down for most of its length. She had not only been wearing the limb to work in the gardens, but was also walking across tree bridges with it. These bridges consist merely of a tree felled across a river or a ravine; they can be anything up to twenty or thirty feet across, and they are usually slippery. I would cross them with trepidation.

I have said that in the beginning of my time at Kwato it was not easy to get Papuans to come for surgical treatment at an early stage. Possibly much of this resistance was the natural unwillingness of any person to submit himself entirely to an unknown person. In Papua this had particular significance because the traditional witch doctor always required something from the patient's person, perhaps a wisp of hair or some nail clippings, before he could work his magic. Also there was, naturally, ignorance of any possible remedy for their troubles. Sometimes, indeed, they were not even entirely aware that they *had* any troubles.

One sunny morning I was down near the beach when a boat grounded close by me and two men got out. One, I casually noted, had what I thought to be a torticollis, or wry neck. He approached me and told me that he had been coming in to see me about a stiff knee. Before coming, however, he had climbed a betel-nut tree to get some nuts. He had fallen out, and now his neck was crooked. There was an ominous bulge on the convex side of the neck, together with a marked angulation to one side, and some unmistakable overriding. I did not need an X-ray to know that his neck was dislocated; how the spinal cord had not been divided I cannot imagine.

I had a very anxious half-hour while he was carried up the hill to the operating theatre, and the stretcher-bearers were told in no uncertain words that they must not put a foot wrong. Finally I got the man under general anaesthesia, and I gently straightened his neck by manual traction, praying hard that it might not slide the wrong way. At last there was a sickening clunk, and the neck was straight. There was no sign of a fracture. The patient, thus relieved, did not appear to be particularly overjoyed nor particularly grateful, and we realised afterwards that he had scarcely noticed his deformity. His uncle, he said, had been born with the same condition; but for himself it was just a nuisance that had come to him late in life.

This acceptance of the inevitability of fate was gradually altered as reports of medical successes at Kwato were spread by word of mouth. Sometimes, however, the rumour outstripped the reality.

On one occasion a little boy, only a few months old, was brought to me. He was afflicted with talipes-equino-varus. With this malformation, popularly known as a club foot, the foot is turned downwards and inwards, and at the same time is rotated so that it is over on its side. This condition appears before birth and the foot is fixed in this position when the child is born. Dennis Browne, a London surgeon, had recently published some important work on this subject and had invented a special splint. I wrote to him and he kindly sent me a sample of one of his splints which we were able to duplicate in our workshops.

In the Dennis Browne method, the foot is manipulated into the correct position under an anaesthetic and then fixed on to a metal frame, which is fastened to the other leg. By daily adjustment the deformity is gradually over-corrected, so that the foot finishes up in what I can only describe as a "Charlie Chaplin" position. It is held in this position for several months, so that most of the built-in muscular strains can relax. Then, when the splint is removed, the foot swings in just enough to reach the normal position. By this time the child has reached walking age, and walking tends to keep it in position.

When the treatment on this particular baby was finished, I was delighted to see that his foot came nicely into line. My success in this case created great interest, because the child's uncle, and, I think, his grandfather, had all grown up with a similar deformity. Soon other babies with the same lesion started to arrive from quite a wide area, and the Dennis Browne method proved highly efficacious. The only modification I found necessary was to substitute plaster of Paris for the adhesive tape, which caused excoriation in this climate.

One day I received a message from a missionary living about 200 miles up the coast, asking if I would treat a boy with a club foot. Unhesitatingly I told him to send the patient along; but to my dismay the "boy" turned out to be a young fellow of sixteen. The Dennis Browne technique is useless at this age, and I could find no reference in my surgical textbooks to any treatment for adults or adolescents. I would have sent him back as untreatable if he had not come from so far away. As it was, I decided to work out a treatment on mechanical principles. The downwards deformity could be corrected by lengthening the tendon at the back of the heel, and the inward turning could be modified by removing a wedge of bone right across the foot. The method would involve reflecting up and down the neuro-vascular and muscle layers over and under the tarsus. The wedge of bone would have to be removed with a Gigli's saw, and then the forefoot could be rotated externally. I did all this, but I was hopeful rather than confident. Then I put the foot in plaster until stabilisation could occur. It worked; months later the lad, whose name was Kamona Walo, was able to play cricket and football for the first time in his life.

Today Kamona Walo is the Local Court Magistrate at Alotau in Milne Bay. I last saw him in Melbourne, where he had been attending a conference, and was gratified to see that the only sign of deformity now is a slight limp.

Some of the growths and malignancies with which I had to deal were the same as those one would find among European populations; others, like the oral carcinoma

associated with the lime used in betel chewing, were less common. This cancer of the mouth occurred with depressing frequency among the Papuan people, and by the time the patients had come to me the condition had often progressed beyond the scope of my surgery.

Filariasis, too, was common in Papua before the second World War. Elephantoid structures sometimes reached enormous size. The largest scrotum on which I operated weighed twenty-one pounds, and the unfortunate victim had to carry it in a home-made wheelbarrow, as the pendulum-like motion would otherwise have swept him off his feet. It was anything but easy to dissect out the genitalia from this mountain of flesh, and I fear the result would have grieved Michelangelo with his views on perfection.

Leprosy also provided its share of surgery. One young fellow who was brought to me told me that he had been woken during the night by the smell of cooking. Like all Papuans, he found the aroma irresistible until he discovered that the roasting meat was in fact his own anaesthetised toes, which had somehow got into the fire. His old grandfather came to the hospital with him and, while the theatre was being prepared, I chatted with him. As I scrubbed up he told me how, when he was a small boy, he had taken part in the last cannibal feast in the area. Down there, he said, pointing to the shoreline of Logea, the conquering tribesmen had corralled their captives, cut holes in their hands, and threaded them with lawyer cane. The cane was then stretched between trees and the captives were wrapped in leaves and set alight, so that they ran to and fro on the cane. The old man warmed to his gruesome tale, but when I turned from him and began to amputate his conscious grandson's toes it was too much for him. He went outside and was sick.

Surgery in and around the chest was quite common, but during the whole of my time at Kwato I only carried out one radical mastectomy for breast cancer. The patient was a middle-aged Papuan woman who had been living

under European conditions. (It is interesting, in passing, to note that abdominal surgery was comparatively infrequent. There might be an occasional peptic ulcer needing gastro-enterostomy, or an intestinal obstruction, and hernias and cysts or uterine fibroids were not unusual; but I never saw a case of gallstones, and appendicitis occurred only in Europeans, or in Papuans who had adopted a Western life-style. This pattern stood out because, of course, the number of Papuans living under European conditions was small compared with the population of the villages. Appendicitis, particularly, appeared to be unknown among the primitive people.)

The commonest surgical lesion was empyema, the presence of an abscess inside the chest. This condition was quite frequent, and required rib resection followed by wide bore drainage. Patients suffering from empyema were unable to have a general anaesthetic because of their chest condition, and so they had to have a local anaesthetic with an intercostal nerve block. This method presented no problems until the rib was resected, when the loud cracking of the bone used to frighten the patient. We racked our brains over this difficulty for some time, and finally came up with what must surely be a unique solution. A gramophone was installed in the theatre, and the needle was lined up on the track of "Colonel Bogey," this being the noisiest of the records we had. When the rib shears were in position, I would signal the nurse. The sudden *fortissimo* blare of music attracted the patient's attention; I would simultaneously give a sharp squeeze on the bone forceps; and with that, the section was over. The music became quite a feature of the procedure, and soon most of the people on the island could tell when we were operating.

One of our most difficult cases for chest surgery came up in 1938, just as my family and I were bound for Australia on leave. The ship was on the point of sailing when I was handed an urgent message, saying that a boy had been found badly wounded at a place about 100 miles up the coast. At this stage all I could do was to send the launch; the treatment would have to be done by our medical staff,

under the guidance of my senior medical assistant, Rali Ikudede. The full story of this case reached me later, in Australia.

While he was out hunting, this boy has been accidentally injured by a spear which had penetrated the right side of his chest. His companions had tried to pull it out but it was immovable, and when he arrived at the Kwato hospital, he was in poor condition. He was breathing through a hole in his side. The wooden handle of the spear, about four feet in length, was hanging outside his body, and the heavy steel shaft with its homemade barb was inside his chest for almost its full length. The first thing to be done was to cut off the handle of the spear with a hacksaw. When he had done this, Rali made him as comfortable as possible for the night and gave him as much resuscitation as he could.

In the morning Rali and Phyllis Abel puzzled over what to do. There was a government doctor not far away, but he did not perform surgical operations. Should they send the wounded lad there, knowing beforehand that nothing would be done? The only way out of their quandary was to ask for guidance. After they had both prayed to God, they saw clearly that they must carry out the operation themselves. They also saw how it must be done; the spear would have to be treated as if it were a fish-hook.

This solution may sound obvious to any surgeon, but it must be remembered that these two people had no medical qualifications and that this type of operation, if it were performed in any large hospital, would have been conducted by a thoracic surgeon and a trained team of helpers.

Rali had no idea where the point or barb of the spear were lying, for they were completely hidden inside the chest. Phyllis Abel administered an anaesthetic. Rali then resected the boy's ribs above and below and opened the wound so that he could see along the shaft. The spear had opened the pleura, lacerated the lung, and gone through the mediastinum (the space between the right and left lungs). But they could still not see the point of the weapon. It was a terrible risk to proceed with the operation; for

all they knew, the point might be resting against the heart. However, both Rali and Phyllis were so sure of their guidance that Rali summoned up all his courage and pushed hard at the spear. When he felt the point jutting against the chest wall, he angled it through the skin. He cut off the point behind the barb with a hacksaw, then sterilised the shaft as well as he could and withdrew it. Finally he packed the track left by the spear with Sulphanilamide powder, and stitched up the external wound, leaving the usual drainage tube. Some time later Rali wrote to me to say that the boy had made a good recovery and had left the hospital.

There was an interesting sequel to this operation. In 1942, when I was escaping from the Japanese invaders, I was forced to climb over mountainous terrain with a number of Papuans. I was suffering from malaria and felt ill and tired, and the case in which I was carrying all my possessions seemed to become heavier and heavier. I was ready to collapse from exhaustion when one of the young lads took pity on me, took my bag, and bounded up the hills ahead of me like a mountain goat. While I panted along behind, I noticed a scar on his rib-cage. Being curious about such matters, I asked him how he had got it. "*Taubada*," he said, "I was the boy who had the spear in his chest."

One other chest wound I came across was just as dramatic in its circumstances, but had a less pleasant sequel. A European mine overseer at a gold-mine in one of the neighbouring islands had a bad reputation for brutality, and one of the Papuan mine-workers, whom he had ill-treated, determined to take revenge. He waited for the overseer at the top of the shaft, and when the man's head appeared, he drove a pickaxe with all his strength into his back. The overseer, with air whistling from his lungs, laid his aggressor out and then collapsed himself. The interesting thing to me, later, was that the overseer told me that he had been conscious of a tremendous blow but felt no pain. I have heard of this same phenomenon in the case of bullet wounds, but find it hard to believe or

understand how a gross injury with a blunt weapon such as a pickaxe could be painless.

The results of this incident were predictable. The Papuan was convicted and sentenced for attempted murder, and the overseer, when he had recovered from his wound, was placed on the next ship to Australia and warned never to return.

Crime does not pay; but unfortunately neither always does kindness, as I shall relate.

One fine day, a man on our plantation at Koeabule, on the north shore of Milne Bay, was approached by a woman from the near-by village of Rabe. She was carrying a large jungle knife, of the sort which those who served in New Guinea during the second World War will remember; it was about eighteen inches long, and solidly constructed for the purpose of hacking down saplings. She asked the man to sharpen her knife and, being a kind man, he obliged by honing it up almost to razor sharpness. The woman thanked her benefactor, and went on her way.

Later in the afternoon I arrived at Koeabule on patrol. I had just fallen asleep that night when I was wakened by a tremendous row coming from the direction of Rabe. It sounded like a pitched battle. Everyone got up, and by the time I was dressed a panting boy had arrived saying that someone had been killed with a knife. I hurried down to the hut indicated, to find it looking like a slaughterhouse. There was blood everywhere. It turned out that the woman who had had her knife sharpened earlier that day was the wife of a philandering and faithless husband who had left her for another. That night she had burst into her rival's hut and attacked her viciously with the knife. The victim had just had enough time to throw up her arm to protect her head, otherwise she would almost certainly have been decapitated. As it was, her arm was practically severed, and later had to be amputated. She also suffered thirteen other wounds about the chest, exposing the shoulder-blade and ribs.

It was some time before we could resuscitate her and suture her wounds, but in due course they healed and I

was later able to fit her with an arm hook. The wife was tried for attempted murder and sentenced to gaol. While there she was frequently visited by our Kwato girls, as was the injured woman in Kwato Hospital. As a result the rival women became reconciled to each other and eventually became firm friends. So much so, in fact, that they decided that neither of them really wanted the erring husband, and they both left him out in the cold.

I found at Kwato that, with the help of operative surgery textbooks, I could tackle most general surgical procedures. Eye surgery, however, was a different matter. I had had virtually no training in this specialised field, but here in Papua I found a vast number of older people in urgent need of eye surgery, and I was frequently faced with the difficult problem of whether or not to operate on cataracts. I might easily fail and render the eye useless; but on the other hand, if I did not do it, there was (apart from one brief period when one government medical officer started doing eye surgery) no one else who could or would operate in these cases. I was very reluctant to embark on this highly specialised work, yet the sightless people who came my way affected me greatly. I eventually decided to do this much-needed work. If I failed, the patient would be no worse off than he had been, but if I succeeded he would recover at least some degree of sight.

After many rehearsals, I did my first cataract operation, which proved to be much simpler than I thought. My next eye patient was an old man whom I met on a visit to Rossel Island. He begged me to give him back his sight, and we took him back to Kwato together with his son to act as interpreter. The son, of course, could not speak English; but he could translate into a language which my assistant, Rali Ikudede, understood. So the old patient was taken to the operating theatre, accompanied by this younger man.

In cataract operations local anaesthesia is used because the patient's co-operation is essential. After giving the local anaesthetic I bent over the patient and made the incision. Then, passing the scalpel through the cornea from

side to side I started to cut upwards. At this stage, without looking up, I told Rali to ask the patient to lower his eyes so that I could see where to end the incision. Dead silence resulted. "Tell him to look down," I repeated, more sharply. There was a pause, then Rali's quavering voice said, "Sir, I can't." The interpreter had taken fright and vanished. We appealed to the patient to look down in every language everyone present could muster, but he just smiled seraphically and continued to look straight ahead. I was in a quandary. I could not go on with the operation because I could not see where I was going under his upper eyelid. On the other hand, if I pulled out the scalpel, he would probably lose vitreous fluid and the eye would be irreparably damaged. Eventually I had to rotate the eye downwards by force. I completed the section and removed the lens, but it was a poor job and I was not hopeful that the operation had been a success.

The eye was duly bandaged and the patient was told, when we had eventually located the missing interpreter, that he must lie "allsame dead man." It was essential that he remain completely motionless, in order to avoid an intra-ocular haemorrhage or a loss of vitreous fluid. That night he was found missing from his bed and we discovered that he had decided to go for a walk. He was persuaded with some difficulty to return to bed, but the next morning we found him rubbing his eye with a dirty rag. He eventually claimed to be able to see, but I doubt it. Nothing would have induced me to tackle his other eye.

The multiplicity of languages in Papua meant that attempts to obtain a medical history were frustrating and fraught with difficulty, and the results were often inaccurate. One Australian doctor, writing of his experiences during the second World War, described how he had encountered this problem when he was examining a small Papuan boy for suspected appendicitis. Prodding the child's abdomen, he asked, "Does it hurt here?" The first interpreter spoke to the second, the second to the patient. Back through the channels came the eagerly-awaited answer, "He say, 'Maybe next week.'"

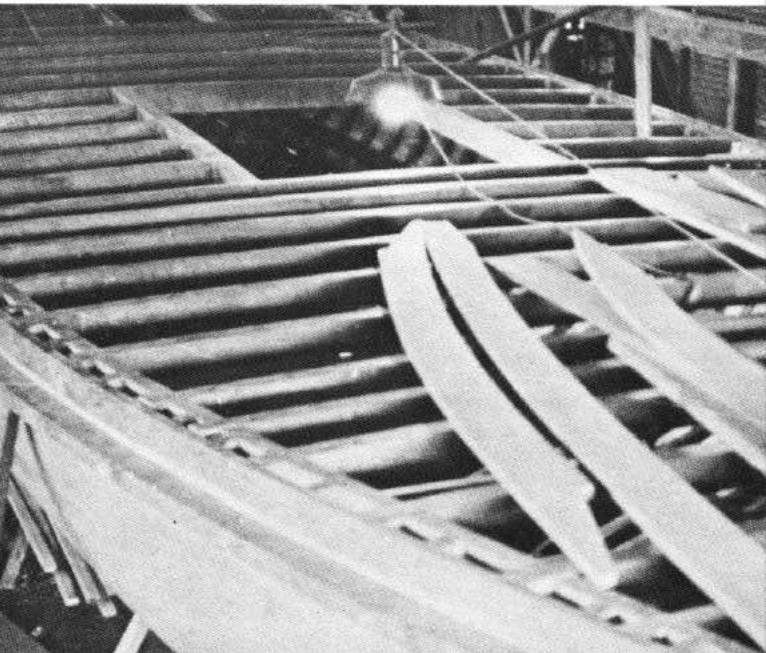
I worked hard to learn Suau, one of our main local languages, but never became fluent. My small daughter, on the other hand, could prattle away in it like any Papuan, and still speaks it easily.

One morning in the outpatient department I decided to air my knowledge of Suau, and asked an old man the question, "*Navarai asiebo u abi*?" which was intended to mean, "How long have you had it?" My question was greeted first by a stunned silence throughout the room, then by a gale of laughter. If a brown-skinned Papuan can blush, my patient did. My nurses were so doubled-up with laughter that it took some time before I could get one to explain that what I should have said was, "*Navarai hisa asiebota u abi*?" What I had done, instead, was to ask him if his monthly period was on time.

An assembly of patients for the ante-natal clinic at Kwato







LANGUAGE DIFFICULTIES are more than just a nuisance; they have national significance. New Guinea, including Papua and West Irian, is the second largest island in the world. From one end to the other it stretches for a distance equivalent to that between Melbourne and Perth. The country, shaped in outline like a giant bird with its neck outstretched, has a coastal fringe of flat land, then rises into the towering mountains of the Owen Stanley Range and its extension north-westward. Some of these peaks tower up from 12,000 to 15,000 feet high and have snow on them, while down on the coast the climate is hot and humid.

In this sparsely-populated area, something like 700 different languages are spoken—not just dialects, but completely separate languages, as dissimilar as English and Russian. Most of these have not yet been reduced to writing. In those cases where the groundwork for a written language has been laid, nearly all the work has been done by missionaries, who have produced translations of the Bible or of educational textbooks.

We were fortunate at Kwato because the majority of the

Top: The landing stage at Kwato. The mission launch, m.v. *Kwato*, is tied up at the wharf. *Bottom:* Boatbuilding at Kwato—one of several industries introduced to the local people by Charles Abel

population in this district spoke either Suau or Tawara, although there were also small groups of people, sometimes within a few miles of each other, who spoke vastly different languages. In the old days there was little communication between villages apart from the clash of warring tribes, and each settlement was to a large extent self-contained. Only comparatively recently has any sense of national solidarity developed.

When I first came to Kwato I found it hard to adjust to the almost universal lack of communication, both physical and mental, between different areas. A great deal of improvement had been achieved in a few years, but still it would be difficult for anyone used to the present day ease of travel to realise how slow it was to get from place to place in Papua in those pre-war days. Admittedly, air transport to and from the goldfields of New Guinea was so far developed that in 1931, according to Idriess,* Guinea Airways carried more air cargo tonnage in one month than all the other airlines of the world combined had carried in the previous twelve months. In Papua, however, air transport was virtually non-existent, and there were not many roads apart from those which extended for a few miles into plantations or into the bigger towns. In our area coastal transport was carried out by sea, or inland by foot.

Charles Abel had realised early that it was essential for the people of Kwato to build their own boats. They had the timber and soon acquired the necessary techniques. Boat building advanced from small dinghies and sailing craft until it culminated in the sixty-foot, twin-screw *Kwato*, Arthur Swinfield's greatest achievement, and the largest and best-equipped boat built in Papua up until that time.

As soon as a new boat went into service, it was always taken over to Samarai, where it was assessed by all those who liked to consider themselves marine experts—and their name was legion. Some would look knowingly at the boat and decide, pontifically, that it was three feet too long; others would declare that if only it had been made a bit

* Ion Idriess, *Gold Dust and Ashes: The Romantic Story of the New Guinea Goldfields*, Sydney, 1933.

longer it would be a good boat. By the time all the comments had been put forward they usually cancelled each other out. I happened to come in on the *Mamari* when she brought in her first full cargo of copra and unloaded it on to the wharf. When I returned some time later, I found a group of experts examining the heap of copra and was delighted to hear their verdict that it could not have fitted in to the *Mamari*. They had measured both boat and heap, and concluded categorically that it would be an impossibility.

Given the right conditions, travel on the *Mamari* was very comfortable. When we travelled to Milne Bay, we would board it in the evening and lay our mattresses on the hatch cover. There would be time for a chat with the captain and then we would turn in and sleep soundly. The big diesel engine had a soothing burbling note and the night air was usually pleasantly cool. With Mahuru or one of the other experienced captains in charge, no one had any worries about pilotage, and by dawn we would be at our destination in the bay. Of course, when it was rough, things were very different. I have never been a good sailor and it seemed to be always in bad weather that something went wrong.

One evening, as we were returning from the bay, Mahuru received a message that a woman had broken her leg at a village about ten miles down the bay on the opposite side. It was a pitch black night and blowing half a gale. There was not a light of any kind to be seen but after a long trip Mahuru dropped anchor within twenty yards of the shore right off the village. We decided it was too rough to treat the woman on deck so we lowered her into the hold where I splinted her leg. I had to do the job there by instalments. I would get one fastener on, then have to clamber up and dive for the side, and no sooner would I get back to my patient than I would have to repeat the performance. One Papuan man, seeing me rush past him at regular intervals, said sympathetically, "*Taubada, u malue*? [Are you being sick?]" It was not a time for sarcasm, but I felt like replying, "Oh, no, I'm only pretending."

It was the fate sooner or later of nearly everyone who

lived in the area to have to travel in a small boat in bad weather. There was a clear need, I thought, for some sort of remedy for seasickness. On theoretical grounds it seemed that a combination of atropine (to paralyse the stomach nerve endings and so stop vomiting), plus something for nausea, plus a headache preventive, would do the trick. I made a generous offer that anyone who was willing to try the latest concoction could have a free bottle. After numerous experiments I was sure I had at last got the magic elixir. I found my volunteer patients easily: a party of Samarai men was going out for a day's fishing, and cheerfully accepted a bottle. When I sighted the boat returning in the evening, I strolled down to the wharf to receive the accolade for my research. I never saw a more dejected-looking lot in my life as they stepped on to the wharf. They had not been sick, it was true. The fact was that they could not *be* sick, however much they wanted to be, and apparently that was a lot.

People in the Milne Bay area were not as isolated as others elsewhere, as there was a frequent service of boats to and from the bay, but if sickness struck in some of the outlying islands tragedies sometimes followed. One planter, in an isolated area, was suffering from a toothache so agonising that he could not endure the time he must wait before a boat could arrive. In desperation he tried to blast the tooth out with gelignite. He died as a result. Another man, driven to a frenzy by an acute urinary obstruction, tried to clear his tract with a length of fencing wire. Again the outcome was disastrous.

The first stage in the answer to this problem of isolation came with radio, when the various missions in south-eastern Papua were linked up to the radio station at Samarai with small transceivers. A radio ham in England came to our rescue by presenting us with an amateur transmitter which we were able to alter to the forty-eight metre band. With this, and a good receiver, I was able to help the other missions by conducting on the air a daily medical round. Every morning I would call up each mission in turn and they would describe to me, as succinctly as possible, the

symptoms of their various sick people. I gave advice or, if necessary, arranged for a boat to be sent to take them to hospital. Naturally, patients had to be very frank about their symptoms and I had to ask searching questions in order to arrive at a diagnosis. However, the forty-eight metre band was well off the beaten track and I was not worried about eavesdroppers—that is, not at first. Several of our mission staff did complain that when they visited the store at Samarai in the early mornings they could not get service, because all those who should have been serving had disappeared to the back of the shop. I did not attach any particular importance to this until, one afternoon when I was in Samarai, a member of staff from the store came up to me and said, "Say Doc., what happened to Mrs Smith? I missed this morning's schedule." Apparently our radio dialogue was being avidly listened to all over the country.

Partly with the idea of secrecy, we built what I think were the first V.H.F. transmitters and receivers in the country. These operated in the fifty-six megacycle band, in harmonic relationship to our main transmitter. Under the callsigns VKW5, VKW6, and VKW7, these were intended to provide service to Samarai and across Milne Bay, using Yahgi directional antennae. The sets had been completed and were undergoing testing when the second World War stopped their development.

Radio communication brought another great advantage to my work. By the time we had radio, several years had elapsed and the medical work had grown and become more complex. We were dealing with in excess of 20,000 out-patients per year, apart from inpatients; and I found it difficult to get far from Kwato because all sorts of problems might suddenly arise. The radio made it possible for me to leave the hospital base. I took a portable receiver with me when I went on long journeys, and I could listen to a daily report, given by one of my staff, on the Kwato transmitter. Although I could not reply, I knew when it was time to turn for home.

One of these long journeys was to Rossel Island. I

accepted an invitation from two friends on the staff of the Methodist mission to accompany them on a visit to their work there. Rossel Island is at the tip of the string of islands off the south-east end of the mainland of Papua. It is a remote island, rarely visited and with an interesting indigenous culture and history. Many years ago a ship went aground on a reef about two miles off the coast of the island. The crew were delighted when some canoes appeared, as they had lost their own lifeboats. The islanders were friendly and took one of the crew ashore. The next day the canoe returned laden with vegetables, and the oarsmen explained that they could only ferry one man ashore at a time. So it went on. Every few days, the canoe would appear and one of the crew be taken ashore. When there were only a few men left on the stranded vessel, another ship hove in sight and put off a lifeboat to investigate what was happening. The remainder on board explained the situation, and the lifeboat set off for the shore. The crew members were greeted by the islanders but when they asked where the other European men were they met with blank incomprehension. They claimed to have seen nobody, and certainly a thorough search failed to disclose any foreigners. It was fairly obvious that they had eaten the men, one by one, but this could not be proved. Even when I visited the island, many years later, there was a notable reticence about the whole matter. But, still, foreign coins keep turning up in Rossel trade.

I found the island a fascinating place. As it was far off the beaten track, much of the old culture and taboos remained. It was also one of the few places in the world where polygamy and polyandy were practised together. The circumstances were unusual. Some of the senior islanders had several wives, and this inflated the bride-price of the remaining women. As a result the young men could only acquire a wife by clubbing together to buy one. Needless to say, there was a considerable amount of discontent about the system.

Rossel Island also provided the spectacle of a tame crocodile. I was astonished when the islanders told me of

this, but they assured me that if I crawled out on a tree branch overhanging a certain creek I would see it. Although they guaranteed that it was harmless, I kept my rifle handy. Sure enough, when I had positioned myself over the creek, I saw a large crocodile just under the water, looking up at me. On the way back I told my guide that I had never seen a harmless crocodile before, although I had seen plenty of the other variety. On one occasion, when I was standing on what I thought was a log in order to get a good aim at a crocodile sunning himself on a sandbank, the log shot out from under me. It, too, was a sleepy crocodile, but it was far from harmless.

Still incredulous, I asked my guide, "Is it true that this crocodile has really never hurt anyone?"

"Well," he admitted, "it did take a bite out of a woman yesterday."

Apparently this did not count against him.

Nowadays isolation in Papua has been largely ended by efficient radio communication and by aircraft. Airstrips dot the air maps of the country like currants in a bun, though flying can be hazardous because sudden lowering of the cloud ceiling in this mountainous country can, within minutes, turn a peaceful flight into a hazardous one. One of our friends, acutely ill with a strangulated hernia, had to wait so long because of flight delays that he died in the aircraft during the journey to hospital. This was only a few years ago.

I myself was extraordinarily lucky (or I believe, more accurately, that God was good to me), as I might well have been in the same situation. I developed acute appendicitis only a few hours after I had returned from a patrol, where for some time I had been miles away from civilisation. The local Government Medical Officer, who fortunately did some surgery, came to the rescue and operated on me straight away. Incidentally, I was amused at a dialogue which I overheard in the ward where I was recovering. An elderly planter, bent on demonstrating the loyalty of the Papuan "boy" who had been working for him for years, called him to his bedside.

"Sam," he said, "if I die, I don't want you to take me over to Logea [the cemetery], just light a fire outside here and put me on it."

He looked most gratified when Sam said, "Oh, *Taubada*, I couldn't do that!"

"Indeed," pursued the planter, hoping to draw out further expressions of affection. "Why couldn't you do that?"

"Too much stink, *Taubada*," was the devoted manservant's reply.

When the early administration of the country put down inter-tribal fighting they removed therewith the whole discipline of fighting training. Previously, young men in Papua had proceeded from tribal initiation to full manhood via this warlike activity. Now there was a vacuum. To fill this, as well as to provide labour for plantations, the government introduced the system of indentured labour. European recruiters travelled through the native villages recruiting young men to work on the plantations or in various industries, on a two-year contract. Nowadays indentured labour is referred to by some politicians as if it is synonymous with slavery, but actually it was very different. These young men were brought before a magistrate to sign on, and he made sure that they knew what they were doing and what their rate of pay was. Each man was examined by a Government Medical Officer and only accepted if he was healthy. The men selected were provided with food on a fixed scale of rations, and at the conclusion of their two-year contract the employer had to transport them back to their villages.

During my time I examined hundreds of these young men, and the contrast between the malnourished and sometimes diseased men so frequently seen among the incoming labourers and the fit and well-nourished fellows concluding their term was striking. There were, of course, disadvantages. Two years of enforced celibacy brought complications. Also, many of these young men, having once obtained a taste of civilisation, were reluctant to return to their old village life.

One of the diseases which all Government Medical Officers looked for was leprosy, and not infrequently the sufferer was not aware of his condition until he had undergone this signing-on examination. Lepers so detected at Samarai were transferred to an island nearby for treatment.

I was particularly interested in leprosy because I had found several lepers among our own Papuan people at Kwato. The disease itself was obviously of fairly recent origin in the area; there was, for example, no Suau word for leprosy, and we used the English word, modified to "lepera." From talking to the old people, I found that the disease had started about fifty years previously, when a Malayan or Indonesian seaman who had the disease settled in Milne Bay. I was able to construct a chart which I presented to the government, showing who had lived with whom and so acquired it and passed it on. Unfortunately this failed to convince the government that if the disease was to be checked compulsory segregation and treatment were necessary. Bureaucracy in Papua was as obstinate as anywhere else in the world.

Shock tactics were required. My opportunity came when the Lieutenant-Governor, Sir Hubert Murray, was due to visit Samarai. I approached my leper friend, the boy whose toes I had amputated.

"You grow good vegetables, don't you?" I asked him.

"Yes, *Taubada*," he replied.

"Would you like to earn some money by selling them?"

"Oh, yes!"

"Well," I said cunningly, "the Governor will be here next week; he'll give you a good price. Go and sell your vegetables to him."

The lad duly paddled his canoe over to Samarai, and, as I had suspected, the Governor's cook was happy to be able to buy such good-quality produce. I saw the vice-regal visitor the next day, and asked him how he had liked the local vegetables.

"Very good indeed!" he commented, enthusiastically.

"Yes," I agreed, adding conversationally, "it's good to know that lepers can be useful doing work like this."

There was a pause, while the Governor's face turned slightly green. "Do you mean to tell me that these vegetables were handled by a leper?"

"Of course," I said. "There is no restriction on them or on what they do."

The plan worked; segregation and treatment were made compulsory soon after.

In those days treatment for leprosy was a long-drawn-out business, very different from the rapid cure now effected by chemotherapy. To make matters worse, the government had stipulated only a brief period of compulsory segregation, which was far too short to permit recovery. All attempts to have this period extended proved fruitless, and I found that subtler tactics were again called for. I had my opportunity when I was asked to relieve the Government Medical Officer at Samarai while he went on leave. I agreed to do the job and discovered that, by cutting out patrol work, I was able to run both hospitals quite easily.

As one of my duties I had to visit the leper island. When I did so, I asked all those patients who had been there for the statutory time and who were not yet completely cured, if they wished to go home. Naturally, the response was 100 per cent affirmative. Nearly all these lepers were indentured labourers, so when I returned to Samarai I sent an official letter to their employers, stating that I was returning the following lepers to their barracks. The letters had hardly been delivered before the telephone started to ring.

"This is the manager of ——. What's all this rubbish about sending us lepers?"

"That's right," I would reply. "They have asked to be allowed to go home, and I can't legally prevent them."

"But where am I to keep them?"

"In your barracks, I suppose."

"But I can't have lepers in my barracks; they'll infect the other men."

"Yes," I would say in a sorrowful tone. "I sympathise with you, but there's nothing I can do about it—the law won't allow me to detain these people."

That day the radio must have run hot between Samarai and Port Moresby. Next morning I received a radio message from the Chief Medical Officer, telling me to detain the lepers. My reply was short and to the point: "Sorry, cannot break law, lepers leave tomorrow."

The Executive Council meeting which amended the law must have been one of the most rapidly-convened in history. But by such prompt action the disease was prevented from spreading and its victims were given sufficient time for a full cure. These results were, I hope, sufficient justification for my somewhat unorthodox actions.

I was not the only person who had to battle with bureaucracy. One young Government Medical Officer at Misima was faced with an epidemic of bacillary dysentery among some of the labourers. Such an infection can spread like bushfire if it is not checked promptly. This young Medical Officer soon found that his hospital was filled to capacity, and that there was every prospect that the disease would spread to the labour barracks. There was only one solution. He negotiated with a local landowner for the lease of a small island just off the coast, where he could run up a temporary hospital. He radioed to Port Moresby and urgently requested approval for the lease, but got back a reply that his application would be considered at the next meeting of the Executive Council in three months' time. In desperation, he threw caution to the winds and went ahead and leased the land, paying for it out of his own petty cash. He stopped the epidemic but nearly stopped his own career as well, when the accountants at Port Moresby examined his books.

Chapter Eight

DURING THE YEAR BEFORE OUR ARRIVAL at Kwato, an apparently commonplace event occurred. This was to be the forerunner of a remarkable series of happenings which came to be known later as the Kunika* story. This story of the dramatic change in some of the headhunting tribes of the Owen Stanley Range became known to the world through government reports, newspapers, and magazine articles, and at the time it created widespread interest.

A complete record has never been published, but when he died, Russell Abel left an unpublished manuscript in which he describes his own experiences and those of his brother, Cecil, among the Kunikas. Russell's widow, Mrs Sheila Abel, has allowed me to retell his story.

It all started one day with tea on the verandah of the big house at Kwato. Every afternoon, anyone free at the time—teachers, office staff, engineers—used to gather for a break. On this particular day there was a guest, a Government Officer. The conversation turned to the subject of the Dorevaidi† mountain-dwellers, who lived on the main

* The word Kunika is applied generally to the mountain people as a whole.

† Dorevaidi are a specific tribe of Kunikas. They take their name from that of the principal village in their tribal area.

range of the Owen Stanleys. The Government Officer had been on patrol among these people, and as he told his story, everyone listened, spellbound.

The Dorevaidi were murderers to a man, refusing to be either forced or cajoled into a peaceable habit of mind. The women, too, were as tough as the men. It was they who kept the old cults alive by their plain refusal to favour the poor specimen who could not sport in his headdress the homicidal hornbill feather. Until a murder had been committed for her, no girl with pride would marry, and there was evidently no shortage of pride among the mountain women of the Dorevaidi.

The Government Officer told the Abels that his last trip inland had been to round up murderers. It was an exciting tale of hide and seek in the depth of the Papuan jungle, up and down the razor-backed ridges of the Owen Stanley Range. The chase came to a successful conclusion in Dorevaidi village, with the prisoners in handcuffs. In his role as magistrate, the Patrol Officer held court; and after passing judgement on the accused men, he harangued the sullen mob of villagers who had come to watch proceedings. He then had a quick meal before setting off again.

While he was thus fortifying himself, some women grouped themselves at a respectful distance, swayed and swung their grass skirts, and intoned a little dirge. The officer was pleased by this unexpected gesture, the first spontaneous sign of deference to authority. He smiled his acknowledgment, and set off down the tortuous mountain track on his three days' journey to the coast. The prisoners were safely to heel.

"*Taubada,*" said his agitated Papuan sergeant, "the song of the women was not good. The words . . ." He shook his head. The officer learned with dismay that the picturesque farewell had been aimed at the departing prisoners, who were bound for long terms in gaol, and doubtless needed every possible aid to morale. "We will be faithful to you because you are killers," the women had chanted. "We will only give our favours to real men."

"No Dorevaidi qualifies as a man until he has taken life,"

the Government Officer explained to his hosts at Kwato. "And to think that I nodded my approval at all this anarchy!"

The name of Dorevaidi brought shudders to many Papuans. These men of the mountains were renowned in legend for their cunning and audacity, and the hapless coastal folk, although they were numerically superior, lived in mortal dread of them. Sooner or later, it seemed, the Dorevaidi, like the bogeyman, "got you" if you didn't watch out. They stalked the quiet, hard-working people of other tribes in their gardens, and murdered them wantonly; they set fire to houses; and even worse, they laid sorcery spells on the forest tracks until people were afraid to venture too far into the bush. Salt-water folk in their big canoes would look up to the distant skyline of the Owen Stanley Range with fear. Somewhere up there were the lairs of the Dorevaidi. With the ocean on one side and the mountain wall on the other, they were literally between the devil and the deep blue sea.

Wild customers these bushmen looked, with their hair hanging out in half a dozen heavy, horny tails, bark bound, and plaited permanently on to their heads. They were a constant trial to the government, and their infamous story runs right through the long series of Annual Reports.

A brief statement in 1899 records their first blood-stained mark on history: "Informed here that the hill tribes were fighting." From then onwards, murders, raids, and reprisals never fail to enliven every reference to this particular part of Papua New Guinea.

"Dorevaidi natives," states the report in 1900, "have overwhelmed with their power and terror the tribes not only in this side of the Main Range, but also Okaudi, and probably other tribes."

Dorevaidi ranged afar on hunting expeditions, killing on principle anyone they might come across in the bush. Their normal reaction on meeting a stranger was to kill him, for by this act they might gain some satisfaction to their pride, and added status on their return home.

In 1904 the coastal Hulas, culturally and numerically

superior to the Dorevaidi, were in a constant state of alarm. Their villages were stockaded, and the mountain tribe had been conducting a war of nerves. The government party, however, rushing inland to forestall trouble, found that the Dorevaidi themselves had this time come off badly in a skirmish with neighbouring mountaineers. Unfortunately, no record exists of these intrepid people in their moment of triumph, but the report of this particular contact gives an interesting view of the natural life of these Papuan tribes.

Dorevaidi villages are strongly situated on a series of steep spurs, all strongly stockaded and all provided with numbers of tree houses and fighting platforms. The inhabitants were somewhat crestfallen over their recent defeat . . . it appeared that the outlying village had been attacked in the daytime by the tribes inhabiting the country near the upper Musa tributaries. Most of the people escaped, but a woman and her child were killed in the village. The assaulting party attempted to burn these men out by setting fire to a house immediately beneath it, and it was not easy to understand how the inmates above escaped being half roasted, for an examination of the tree showed that its leaves were scorched as dry as cinders from top to bottom. Having been foiled in this ruse, however, they stood at a safe distance to avoid the spears of the men in the tree house, and hurled stones at them. One side of the tree house was partially demolished, and the surrounding branches were almost denuded of bark, by the stones thrown. The inmates, nevertheless, kept the horde at bay, economising their ammunition of spears and stones for anybody venturing too close to the foot of the ascending ladder. Meanwhile they had the mortification of watching their relatives, who had been slain, eaten before their eyes. (The bones of these, with the flesh gnawed off them, were found by the patrol, still lying round the ashes of the fire.)

Finally, towards sundown, the attacking party went away, and the men came down from the tree and fled to

the upper villages. Here they were found by the government party, bruised and cut with stones from scalp to sole.

When a Government Officer tried to procure guides to take him in the adjacent grasslands, the terrorised coastal folk refused, describing the bush gangsters as "ghosts, not real men."

"Raids large and small," wrote Dr F. E. Williams, the Government Anthropologist, in 1935, "as well as individual murders, were usually due to some provocation and were mostly retaliations for previous killings, or supposed killings by sorcery . . . There were a number of possible motives for joining in—sympathy with the cause, the obligation of blood kinship, the mere lust for excitement; and it was quite likely that sometimes if there were hesitation, the scale might be tipped by the weight of a hornbill feather . . ."

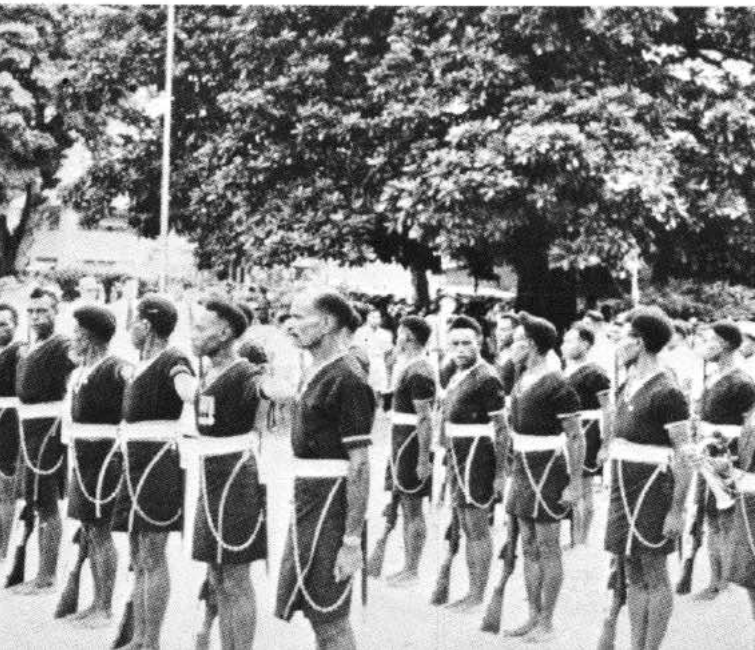
Around Christmas 1934, the tracks to the government station at Abau were crowded with bush folk, Kunikas: headhunters. Mile after mile they came with the quick, springing gait of mountain people. The men wore their feathers, shell bandeaus, and carried murderous spears. Silent in the bush, they broke out into a babel of chatter when they reached their halting places, on river beds, or in friendly villages. Usually a trip to Abau meant a trial, probably a long term in goal. Abau was an interfering element they were often up against. In all expeditions of tribal honour Abau had to be taken into the strategy. For nowadays life was complicated by the necessity for evasion and for covering up one's tracks.

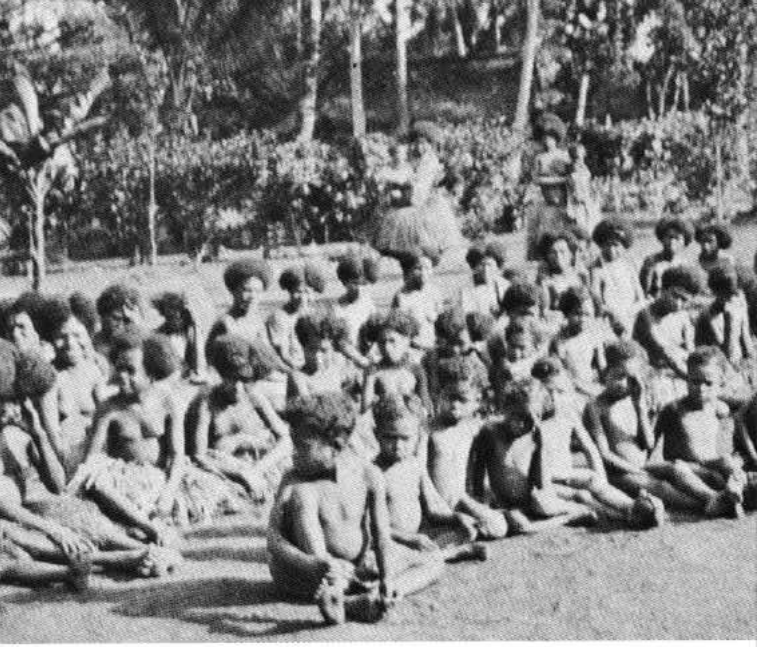
This time, however, it was different. The government had been threatening stern retribution for a long time now without any very encouraging effect; after all, Kunikas were no better at learning lessons of history than other more civilised races. The inlanders were invited down to feast and make merry, to learn that the punitive power, if they could only see it, was directed in their best interests.

They came and celebrated. They donned their feathers

Top: Building the church at Kwato. The design is clearly based on that of the local village huts. *Bottom:* An elite corps of men: a company of the Royal Papuan Constabulary









and danced, and put on their tribal airs. They went home warmed and cheered, but unchanged. Only too soon some of them were to return to the former scene of festivity, handcuffed and defiant.

Girls still demanded a life as token of their conquest. Prestige still attached to the killer. The traditions of the tribe remained, and to the vitiated mountaineers, life sagged a bit without the ancient thrill of murder.

At this particular gathering the Kunikas met Cecil Abel of Kwato for the first time. He has a way with Papuans. He greeted them like long-lost brothers, and he met and chatted with their chiefs. Others gathered round and soon they were laughing at his quips and slapping each other in enjoyment. They made humorous comments in their turn, for they enjoyed having a joke on the white man, and so they laughed immoderately. They had heard of Kwato. There was a Kwato family struggling with a little school and centre at the coastal village of Duram, on the mouth of the river that was fed by their own mountain streams. The Kunikas disliked these mangrove dwellers. But Cecil said, "You people look out, I am coming along to see your country soon. No fooling, I'll be along!" And the way he said it made them respond: "Fine, *Taubada, Namo!* Come along! Wait till you see our steep hills, you'll want to go home again. We notice white men don't like steep hills!" There was loud laughter, but no offence was taken. The white man enjoyed it all. He didn't mind having his leg pulled.

Many months slipped by. One day, true to his word, Cecil Abel and a cheerful party boarded big *puapuas* (rafts) at Duram, where the Kwato mission had established a coastal base. They piled their gear high, and paddled upstream under giant mangroves that almost roofed the winding river.

By noon they found that the river had narrowed and shallowed, and soon the great rafts came aground. The members of the party uncramped themselves and scrambled up the bank. They strapped on their swags, set off in single file, and disappeared into the forest.

Top: Break at a village school. *Bottom:* Dermot and Michael pose for a family snapshot before going off to school

Davida, who had established the base at Duram and had procured the carriers and a canoe, led the way with Cecil. There were four young men and women from Kwato, and others from Milne Bay and the Bohutu Valley. They were all on a quest for adventure, and all were determined to blaze new trails of friendship through the forest.

Amau was the first camp struck. Here the houses, built on high stilts, stood in a circle on a low cliff. A stream gushed and swirled below. Outside a wooden fence, blind pigs hopefully pressed their snouts against the heavy upright poles. They had had their ears and tails shorn off to show that they belonged to someone, and their eyes had been skewered to prevent them from straying. This had made them so bad tempered that they lunged savagely at every passer-by. The team mounted a stile over the stockade, the only way into the village.

Here they won their initial victory, which proved to have far-reaching effects. The head of the village was named Belei. An important man among the Abau-Kunikas, he was ancient, twisted, and covered with the scars of former conflicts, but he had an unchallenged record and was old enough to rest on his reputation. He was credited with special powers of sorcery, often attributed to age. His fame had not been built up on solitary waylayings or murders in the dark, in the present-day fashion. He had made his name in the good old days; when whole villages had been wiped out, Belei had had a hand in it. His name carried weight, and the people listened when he spoke.

This old man crawled out of his hut, and slid down the rickety pole that served as stairway. He looked at the strangers, blinked, and decided he would be friendly to them. They seemed a merry crowd, happy in each other's company. More important, they paid particular deference to him. They called him Hanai Biaguna—"village boss"—and a little courtesy is very mollifying, to Papuan and European alike.

They told him a little about Kwato and said that they wanted to be friends with him and his people. They showed interest in his young wives and even a tolerance of the

spoilt, bumptious son of his old age, of whom he was vastly proud.

They set off next day, choosing their route on his recommendation, and being led by the guides he had provided. A personal word from Belei, they found, was a great advantage.

When the old man gazed at the departing line of people, boring their way once more into the bush, he could not recall all the things that they had said. He only remembered that he had seen a new thing, a thing that he who had lived long and seen everything, had not seen before – white men and Papuans sharing the same life together, talking, laughing, and eating together. This was a new fashion altogether. What did it mean?

For the next few days the travellers found new villages and new mystified faces. They heard new, intriguing, incomprehensible, guttural languages, and all the time new carriers tagged on to the lengthening train.

The team was having a thoroughly good time. They prayed together last thing at night, and met together in the quiet of the murky dawn, to organise their daily plan and strategy. They did not know beforehand who was in any centre they touched, but they felt, nevertheless, that they were being guided to the right ones; the chief's nephew, the owner of the land, the top sorcerer. Finally they started to climb. Their first taste of the steep slopes of the Owen Stanley Range was enough to daunt them. Cecil wrote in his diary:

> Looking up through the trees, towering above us away up in the clouds, we saw the ridge we had to reach. It was like climbing straight up a ladder. We soon became enveloped in mist, and here moss grew profusely everywhere. Great masses of it, dripping wet, hung from the ledges of rocks and cliffs. All the tree trunks had beards and looked lank and hairy. We looked back, down the valley from which we had come. It seemed to belong to another world. The weird stillness was broken only by the dripping moss. Then the mist blotted out everything

and we seemed to be cut off from everything. As we were about to start down the other side of the ridge, icy cold rain came down. I have never been so cold in Papua. We followed a stream, jumping over boulders and down crevices and plunging into icy pools up to our knees, in order to keep up with our guides. It was getting dark when we met a man with a native umbrella, wearing the pigtails peculiar to this district. He was from Dorevaidi and had come to meet us.

Three wonderful days were spent in this notorious village, meeting individuals and groups, talking, observing village life, making friends. Then the travellers pushed on further, through more jungle, until at last they emerged from the eternal hills to the rolling grasslands of Keveri. By now their numbers were considerably increased. They had made friends at each centre. Several leading villagers had attached themselves to the party and offered to accompany them back to the coast.

At one place the chief of the locality came out with the query: "*Taubada*, why are you people different?"

"Why do you think we are different?"

"You have one mind: you are like one family, though your skins are different."

Here was the golden opportunity.

"We *are* all one family. We belong to the Great Spirit. We listen to Him. His command is friendship, one mind between man and man, between tribe and tribe. That is the new way He tells us to live."

More talks followed. It was easier now that they were asking questions.

One morning Cecil went out into the grasslands with some of his friends, looking for kangaroos. They trekked and stalked in vain, and then as the sun was diving fast, they turned to go home. Old man kangaroo, however, had been watching them. As soon as they turned aside he made one great bound and was off towards the horizon. There was a shout. Cecil spun around and fired a lucky shot. He caught the kangaroo on the hop. With this, he found his

prestige had soared. One man wanted to know what "medicine" he put in his gun. He was determined to come to Kwato and find the secret for himself.

The trek at last led back to Amau, from where it had started. Old Belei welcomed them back like his own tribesmen, and gave a feast in their honour; Belei's little "cooking pots" were famous. The best produce of Amau gardens was carried to the village on the backs of the women.

Inlanders cook their food in stone ovens. They start by piling firewood and stones in mounds three feet high, then light the wood and after twenty minutes pick out the stones with bamboo tongs. Then, very carefully, they build a second mound of the hot stones, together with the food wrapped in leaves. When completed, the mound is carefully covered over with more leaves weighted down. There were rows of these ovens. At length the steaming masses of food, deliciously tender and savoury, were pulled out with the tongs and piled on a thick carpet of palm and banana leaves for the feast. The food consisted of pigs, charred and bloated and roasted whole, with wallabies, possums, goannas, and pythons thrown in to complete the menu. The villagers and their guests, including the Kwato party and Biruma, Ofekule, and Sibodu—all chiefs of different tribes—sat around, packed tightly, shoulder to shoulder. This was necessary, because outside the ring of eaters ravenous dogs would scrap and howl and try to get a nose in.

During the eating old Belei rose to his feet. Immediately the hubbub of feasting stopped. He gave a lengthy harangue in the strange local tongue, and what he said had a marked effect on his listeners. The gist of his oration was that if there was to be any future for the Kunika peoples, they would have to change their ways. Otherwise, through killing and being killed, their numbers would continue to dwindle. The Kwato folk were showing them a new way to live; the way of friendship. He himself was too old to change; he had walked too long in the ways of his ancestors.

"You young men, it is up to you. Heed what these folk are saying. That is the word of an old man. I have seen too much. I say this way is right for our people."

Various members of the Kwato team responded, and said that they believed there was a plan for the Kunikas that was greater than destructive enmity. They foresaw the day when manhunters would use their courage and strength to bring, not death, but new peace and new living to their neighbours in the ranges. They urged them to pray to the Great Spirit, to let Him direct them into His way and plan.

When the team had first arrived at Amau, an important member of the community had been absent. This was Maiau, Belei's heir. The old man had sent a runner to find him. Eventually a thin, surly young man appeared, with a face like a mask. Maiau was the natural leader at Amau, and often acted on behalf of his aged father. He had followed the Kwato party, on their journey, with the other village headmen. A shrewd and silent observer, he missed nothing of the freedom and spontaneous friendship that existed in this mixed company.

Back on the coast at Duram, these men had sat and talked with Cecil Abel. At his suggestion they bowed their heads quietly to listen for the enlightenment of the Great Spirit in the things they discussed. They wanted to know more, and were ready to come to Kwato for this purpose.

"This way is good," said Sibodu of Kuroudi, repeating the thoughts that had come to him. "I will speak of these things to my wife when I return."

"Killing must stop," said Maiau. "It is an old way. When *Taubada* came to Amau I was away. I wanted to kill Bobokom at Domara. I hid in his garden. When I return from Kwato I will go and confess this to him. I will shake hands with him and be friends."

Ten days later, on New Year's Eve, the launch *Lantic* chugged into the narrow passage between Kwato and Logea, after several days being buffeted by the north-west monsoon. Standing at the bows was a group of strange, bedecked warriors. They were chiefs from Dorevaidi, Makaea, and Dou, and Belei's heir from Amau. As they neared the anchorage they broke out into their war-cry: "*Abi-gumini-sulimi-waiagalooooo!*"

The blood-curdling paean echoed from hill to hill. Sleepy Logeans whose grandfathers were accustomed to such sounds, ran down to the beaches and blinked. The Kwato colony, with Russell and Phyllis Abel, turned out in full force to meet them, thronging the wharf to welcome the first of the Kunikas. All members of the mission team were thinner from their arduous scaling of the Owen Stanley Range razor-backs. As for the wild-eyed Kunikas, they looked a blood-thirsty set of rogues. Actually they were men in earnest, keenly looking for something.

PAPUANS FROM THE BUSH or the mountains who visit Kwato for the first time must find it a little bewildering. There are workshops, schools, a saw-mill, and always the hum of machinery. Boats arrive and depart. Bells ring throughout the day, marking off the busy timetable of a training centre.

One old sorcerer and rain-maker from Duram became almost hysterical at his first contact with civilisation—although it is possible that he was putting on an act for the benefit of his hosts, to show that he appreciated the wonders when he saw them. He asked to be shown the interior of a white man's home, and so Russell Abel took him to the big house. The first shock was the sight of his wizened, almost-naked form in a wardrobe mirror. The second was when Russell, as guide, told him he need not think he had a monopoly on magic. The white man's magic was so superior that he could make rain at will, in the spot where it was most needed—indoors in the privacy of a bathing room. Whereupon Russell turned on the shower, and the old sorcerer emitted a yell which he kept up till he was hustled, still yelling, into the open.

After that he was in a desperate hurry to go home, and

worried the lives out of those at the mission by continually asking when there was a boat sailing. He couldn't wait to tell his friends what he had seen.

This old man had not been a murderer, and he lacked the broadening effect on the mind of a term in gaol. The Kunika men were of a very different type. They were mentally alert and intelligent as head-hunting and cannibal people (Maoris, for example) often were. They appeared to be observant, but were inclined to reserve their opinions.

The mission sent these men out from Kwato so that they could see Christianity at work among their fellow-Papuans. They were welcomed with joy by warm-hearted Christians who had long prayed for the Abau-Kunikas in their meetings and had covered the recent inland journey with faithful intercession.

The Kunika headmen were entertained royally at Sariba Island, at several villages in Milne Bay, and in the Bohutu Valley, where dispersed villagers had reassembled through the guidance of God. All these people told their stories and shared their experiences with their visitors.

These Kunikas, enemies of all strangers, found themselves honoured and cared for in villages whose very existence had been unknown to them; and the only reason for this was that here were followers of Jesus Christ (for this was the name they had begun to attach to the Great Spirit), who had taught their new friends that as His children we all belong to each other, and that there must be no barriers.

The biggest barriers in Bohutu had been created by sorcery. Then, as people listened to God for the solution to this problem, three united villages had sprung up. The Kunika guests stayed at each village in turn, and found themselves swamped by the thoughtfulness and kindness of a strange, unknown tribe, on whom they had no claim whatever. They began to see the miracle of Christian love that knows no narrow limits of village, tribe, or race.

It was all new to the Kunikas, and they expanded to its warmth. The hardness of their faces began to change. They returned to Kwato distinctly humanised, no longer critical

spectators, but participators who were taking steps in a new life. They had begun themselves to pray to the Great Spirit, and to listen, and to learn.

Soon a boat was due to sail west, and they had to leave Kwato. A farewell party was given for them, at which Biruma of Dou village expressed their thanks and their parting thoughts. He referred to the record of their tribes, and to the sentences they had all served in gaol: "four, five, six years, and more."

"We did not mind," he said. "Government rice and biscuits are very good. We came back unchanged. At last God's children came, out of love for us, and changed us right round inside. Your food at Kwato is very good, but we have not come for that. We have good food too, in Dorevaidi. Your schools and works are very good. We would like to learn too, but we have not come for that. We have only come for one thing; to learn about God. Our hearts are burning to go back and tell our friends all we have learnt."

The Kwato staff were not without qualms when they thought of what these men would have to face in their old surroundings. No one could know how much Christian theology they might be said to have grasped. Nevertheless, they each had certain concrete convictions that they were determined to carry out, because they believed that God had spoken to them. These concerned the necessity of building up friendship among neighbouring peoples at home, and this was something which could only be done by taking the definite, practical, if highly risky steps which had been shown to them during their times of meditation, or "quiet times."

When the four man-hunters sailed away to their home, Christian folk throughout Kwato and the Milne Bay district felt keenly the difficult road ahead for each of them. They prayed for them solidly and constantly.

Three months later Russell visited the Kwato station at Duram, at the river-mouth in the Abau district. He and his companions travelled in wild, wet weather, but managed to dodge into a landlocked harbour just before the south-

easter, that was blowing steadily, had worked up to its peak. There they hid until the peak had passed, and then they laboured out into the aftermath of high rolling seas. They reached Duram five days after leaving Kwato. Even that depressing spot of swampy foreshores, black sand, dust, and crocodiles seemed to the weary travellers like the psalmist's "desired haven."

After a few busy days, Russell and some companions decided to make a quick sortie into the bush to the nearest of the Kunika villages, to see how their friends were getting on. The way was simple, they were told: "Keep the canoe up-stream till you reach the food gardens. Strike inland keeping straight on till you reach the government road."

But all they reached was an impenetrable tangle through which they had to hack their way with sixteen-inch knives—those tools as indispensable to one's personal equipment in the bush as fountain pens to white-collar hordes in a city.

The sun was sinking by the time the party found the elusive government road, and Amau was reached at nightfall. The next three days of their stay there were crammed with interest. They were given a rather shaky, unfinished house, built on high piles perilously near the cliff's edge, to camp in. It had a thatched roof and rattan floor but no walls, so that the camp provided a source of non-stop entertainment to all the houses around.

As usual the Kunikas proved to be wonderful hosts. For instance, there was a hanging basket of fruit and sugar cane in the house, and whenever the house was vacated, the basket was replenished. On the first night the Duram guides regaled the Kwato party with story after story, dealing with the inevitable murder theme. Duram dwellers had no reason to love the Kunikas. Their embellished stories, however, were no more sinister than the plain statement of the government reports. Undoubtedly murders occurred, from motives either mean or mighty; or sometimes merely because some youth was impatient to get married.

The members of the expedition stretched out upon the floor and slept side by side. Russell Abel was on the out-

side, so close to the edge of the floor that he could almost have rolled over and fallen into the gurgling stream that formed a deep whirlpool at the foot of the cliff. He dozed off, with all the extravagant tales he had heard swimming in his brain. A silly thought struck him, prior to oblivion. "How do I know," he thought, "that here and now there isn't some love-sick swain eating his heart out for one of the bright little lassies that seemed to be doing all the work in the village, with much hip-swinging evidence? If so, the solution is obvious; just reach a hand over the frame of our rattan floor, slit the nearest gullet (mine), and the girl is his!"

Next morning they were all up early. For sheer glory there is nothing like the Papuan bush in the early morning. A chorus of pigeons, Birds of Paradise, and other songbirds, fills the air. Bright parrots shriek their excitement over the prospect of a new day. Dawn touches the towering trees, sending shafts of light through palms and festooning creepers of the Papuan jungle. Scarlet d'Albertis creeper runs riot over the tree-tops, and spreads a soft carpet of fallen petals on the ground.

And here there was the river, cleaving the forest and opening up vistas of bold Keveri mountains.

The travellers from Kwato had their morning snack, to which local families had contributed sweet potatoes, bananas baked in the embers, and sugar cane. They then gathered round, as was their custom, to plan the day and to share with one another the convictions and promises that each had found in the early quiet of the day. Everyone had something to contribute, except the cook-boy, a naive, simple sort of youth who was rather overlooked.

"What about you?" Russell asked him, just as the group was breaking up.

"I am very ashamed," he replied, "but I was convicted this morning of fear. Last night, after listening to all those stories, I thought, 'How do I know that one of these boys here isn't longing to marry one of these girls? All he has to do is to climb on the platform, slit my throat, and creep away, and the girl is his!'" A burst of laughter cut the

honest cook-boy short. All had thought the same thing and none had been brave enough to admit it. The cook-boy's frankness made each of the other eleven in the group more honest.

The high spot of the visit was a reunion with the Kunika chiefs, who came down to Amau when they heard the men from Kwato were there. Russell and his companions sat on the floor in one of the houses, and listened to their stories. Overhead, by contrast, hung a bunch of spears, along with other household possessions, each one adorned with little plaited tags of human hair.

The Kunika warriors were once more on a quest for men; this time without their spears, and with the object of bringing them back alive. Their faces shone, and there was the light of adventure in their eyes. They had visited former enemies to apologise for the outrages of the past, to tell them that they wanted their friendship.

True, they had hesitated over this. Supposing the apology were not accepted? They had gone unarmed. Supposing their enemies were to see their chance and take advantage of it? But in their time of listening to the Great Spirit, the thought kept recurring that they must take these steps.

At last they obeyed their guidance; and, as a result, one of their old opponents was present.

"Here he is," said Biruma, with a gesture towards their first convert. "He is my friend now."

These men had grown out of recognition. Hard decisions calling for moral courage, obedience to the promptings of a newly-awakened conscience, had changed and developed them. They were fearless, positive, and determined.

There were some great meetings in the village compound in those evenings, at which Biruma of Dou, and Maiau, old Belei's heir, witnessed to their own people. Russell Abel described such a meeting in his diary:

> . . . there would follow a general talking contest, everyone joining in and haranguing the crowd in their queer lingo; Biruma, Maiau, and the old chief would hold forth on the new way, then others would express

their opinions, objections—occasionally quite violent—or their agreement. Those who looked as though they would be in opposition were the reverse, in spite of hardened appearance. One woman sat and wept. She thought life would never be the same if killing ended. A man who heard that Mary Abel [the Abels' cousin, who lived at Duram] might be going up there, pointed to a row of betel nuts he had planted and said, "Chop down those trees! The *dimdim* woman will only come and take it all." I told him through an interpreter not to worry, that he would be glad to know that Mary didn't chew! Others thought it was all a ruse to get hold of the children and cart them off to Kwato.

"New times, new ways," was Biruma's great dictum. "I used to think there was nothing so good in the world as to plan a murder and carry it out to the finish," he said. "Now I know there is no joy like planning to win a man to this new life, to watch his whole life change as he begins to obey *Dirava* [God]."

Belei welcomed the party with fatherly kindness and a feast was promptly arranged. The men seized their spears, whistled for their hunting-dogs, slapped their thighs, and disappeared whooping into the bush. They reappeared in the afternoon with two wild pigs which had given them an exciting day's sport, a cuscus, a bandicoot, and a reptile or two for the feast.

Everyone sat on the ground. Russell was fascinated as he looked down the long line of people: painted men with marvellous decorations, hooded widows swathed in yards and yards of dirty, ragged *tapa* (bark) cloth. Palm and banana leaves were spread on the ground. Those in charge of the feast went round with large wooden bowls doling out the edibles. Russell himself endured the honour of being hand-fed by the old chief. He would pick out some speciality from his own bowl, pick off any skin or gristle, and proffer it to his guest, and Russell would gulp it and say fervently, but without much honesty, "*Namo herea*! [Very good!]" The feast ended with speeches.

Then the function seemed to break out into what seemed like a terrible fight. Men leapt to their feet and raged. The clamour was terrible. Completely bewildered, Russell appealed to Biruma for an explanation or at least a translation. Apparently there was indignation because some people who had been invited from Dou had not turned up. This was felt to be a deliberate insult—or an unfriendly act. The feast was a sign of the new day of friendship, and if Dou were going to hold back, well there were some who jolly well wanted to pay them out and teach them a lesson! All of this, as Biruma pointed out, was most contradictory. He poured oil on the troubled waters, calmed everyone down, and re-told with a beaming face the story of his own conversion. And so the evening ended.

Warmed and heartened as he was by the brave determination of these men to win their people, Russell came away feeling dubious about the outcome. As far as he could see, the community by and large was against them and looked on the new teaching with a sort of ferocious suspicion. As for "peace on earth and goodwill towards men" the whole idea was unpopular; the very opposite seemed to have been achieved. Quarrels broke out in the village with the utmost frequency, and there was much shouting and sometimes brandishing of spears. And always, when the alarms had died down, it seemed that the eruption had been caused by the efforts of the leaders to bring the philosophy of friendship to their people. Russell felt somewhat burdened by it all, and prayed on the track going home that God would reward His courageous servants, or at least protect them from being murdered.

The party reached the coastal depot at Duram once more, and Russell sank into an oblivion of malaria for several days. He was only roused by the killing of a crocodile with a tomahawk a few yards from his flimsy grass and bamboo shack. Eventually a boat picked them all up, and they ploughed home for days in the rough seas that usually occur during the wild months of the south-east monsoon.

The weeks slipped by at Kwato, and no more was heard from the Kunika.

Three months elapsed. Then came a message from Duram in the Abau district, forwarded by Mary Abel. It was an invitation from the Kunika converts to meet them at the next full moon in the bush village of Domara for a "peace feast." This was something new. Intrigued and full of anticipation those at Kwato packed up their camping gear. Cecil Abel was now in England, but Phyllis, Russell, and a party of representative Papuans boarded a vessel late one night and set off for Duram.

They trudged on through mile after mile of dripping forest, squelching ground, and pouring rain, in a long, bedraggled queue. They had sailed from Kwato four days earlier, spent a day with Mary Abel at Duram, preparing swags, apportioning and eliminating, and airing their ideas of what was necessary for the journey, with resultant lightening of loads. Early the following morning they had moved up the river in a procession of large, laden canoes, winding through the tall mangroves.

At last they had left the canoes, loaded their swags, and struck inland. They seemed to have been travelling for hours.

"Why must they make their villages so far away when there are miles of empty land everywhere!" Phyllis moaned.

"Far away from where?" asked Mary.

At last, towards dusk, they glimpsed fences, gardens, and stockades, then wet thatched roofs with the smoke seeping through them. A rousing shout welcomed them.

Strange mountain folk were lined up in the rain, waiting for their guests. It was a moving sight. Most of the women had never been to the coast, and had never seen white women. All looked eager and pleased to see the visitors. But rain drove the Kwato team to their huts, where they settled themselves in cramped, primitive quarters, made fires and tea, and tried to dry their bedding.

Later the leaders came round and everyone packed into one little hut, conferred together, and tried to get their bearings. They prayed that they might be able to get close to these people; that their sojourn here might help them.

The following week spent with these mountain murderers was filled with crowded impressions. Russell felt that history was being made among the Kunikas. There were over 100 of them present, and they had come from all directions, some of them walking for three days. Some had never been to Domara before. They came now in good faith, accepting the village's promise of its willingness to forget the past. Some would normally have made a detour to avoid Domara when travelling to the coast.

They did not realise at first that hereditary enemies were joining in a common cause to clinch a proffered friendship, and were living in the same village. A great miracle of change was being effected before their eyes. It was the more noticeable because the delegates to this particular peace conference were a rough-looking crowd, whatever they professed. Many of them still carried spears, some of which were adorned with those little tags of human hair.

On the first morning in Domara, Russell had said he would like to meet the men. Not all the men; just those who were genuine seekers, who had begun to live a new life.

He entered the chief's house and sat on the floor. Around him sat a large circle of savages, wearing homicidal ornaments and feathers. Change the colour of their skins, thought Russell, and substitute clothes for a strip of bark and ornaments, and a convention of Chicago gangsters would not have differed very materially from these men. His heart sank to know what to say to them. "Man looketh on the outward appearance, but God looketh on the heart," he quoted to himself. He asked them if they would tell him in turn what their names were, where they came from, and why they had come to Domara. They did, and Russell sat spellbound.

In simple sentences so that their guest could understand, one after another took up the story, each adding his own personal part in it. They spoke in pidgin Motu, a language they had all learnt at different times in Port Moresby gaol. Russell had to concentrate very hard and still do a lot of guessing, and always he had one or two of the Kwato team at his elbow to supply the gaps in his vocabulary.

It was the same story over and over again. One of the chiefs had spoken to them, told them how his life had been changed when he had obeyed the Great Spirit, and had urged them to listen to Him. The thought that had come to them had been of friendship—not as a vague impulse, but as a matter of practical steps to take. They had made apologies. They had courageously faced up to old hatreds, had gone to former enemies; in some cases, eaten humble pie. Their presence together that morning was a miracle. These hardened sinners had risked spears and staked life itself—all because that "still small voice" that humanity has known all down the ages, had prompted them: "Make friends with those folk you hurt. Apologise to them. Tell them killing is finished now."

These men proved beyond doubt that conscience is not the prerogative of the civilised, and that God, who made man capable of desiring Him, speaks to all impartially.

Russell Abel suggested that everybody prayed, and those who opened their hearts most joyfully and readily in simple petitions to the Great Spirit were those who had taken the hardest first steps in Christian living. They were murderers, sorcerers, adulterers, polygamists, and fornicators; how horrified many good folk would be to consort with them! But God had guided them to stop killing, and resolutely to pull down the barriers against their fellow men. And because, inexplicably, they were out to seek His way, one could not doubt that he would lead them further.

All who came to this gathering at Domara brought their own stock of provisions. Yam and *taitu*, however, make bulky loads for long-distance carrying, and were soon eaten up. Domara folk announced that their gardens were open for all. After that, all the visiting women repaired to the local gardens each morning and helped themselves.

To those who know how frequent are the jealousies, the squabblings, the accusations of theft or trespassing that originate in the carefully sub-divided and apportioned food patch, this was real evidence of a family spirit extended to strangers and former enemies. It spoke of real forgiving and welcome. It was the first practical lesson in sharing: a

principle of life that was to be applied again and again in the next few years, not only to food but to lands and privileges.

Such simple, inspired acts did more to establish new relationships, and to bring release from old jealousies and possessive attitudes, than all their talk of the Christian way of life could possibly do.

One day, a woman who had walked three days to be present had to retire (rather to her impatience) to give birth to a baby. Kunika women are shunned by all on such occasions and it is considered unlucky for them to remain in any inhabited precinct. This woman "went bush," trailed, in the traditional way, by an older woman. Her husband had thrown up a little rough shelter for her, some distance away, of sticks and palm leaves. As it was raining hard it must have been far from waterproof.

A baby girl was born. No one was near, not even her husband. The woman attendant took her some food. Russell sent a little boiled rice, which the Kunikas thought a great treat, and this was left at a respectful distance from the temporary shelter. The following afternoon, the woman was back at the meeting, listening earnestly and cuddling a tiny pinky-brown morsel lying in a strip of bark cloth. The father asked the mission folk to name his daughter, suggesting "Conference" to remind him of this gathering. Russell suggested, however, *Labini*, the Suau word for "peace," and the parents seemed pleased with the name.

Ten days were spent with these eager, determined folk. They crowded round close at the meetings, straining forward not to miss a word of the short sentences that were being translated through to them. It was a crucial moment in the history of the Abau-Kunikas. They were at the crossroads. Here could be generated a genuine experience and a fire that they could carry back to their scattered settlements, an experience that would revolutionise the furtive, destructive life in these mountains. They had to be given something real and vital that would grow and spread of itself, without outside shepherding.

The guidance of the Kwato team, often translated through

two interpreters, was not to rush in with ideas, doctrines, or ethical teaching, or to lay down new sets of rules, but to let the Holy Spirit lead them; to link them to God and encourage them to obey the convictions that He gave them. The standard advice on any question was, "What does God say to you about this?" It was difficult to pass on the simplest of Christian standards; there were no words for love, or honesty, or unselfishness. Instead Russell and his team could speak of friendship and unity, and demonstrate this in their own lives, guiding the Kunikas along the lines of becoming reconciled with their enemies, and of building unity between villages. For these people, their first conception of God was of a Supreme One, who willed brotherhood and friendship. Elementary as this was, and incomplete, it was a far cry from the old animism with its fear and placations, and it vastly changed their whole outlook.

Confessions brought convictions. A conscience dawned. Things once boasted of became matters for shame and regret. Homicidal emblems began to disappear; their wearers were now apologising to those whom they had bereaved, and were concerned, not with further scores of blood, but with making amends.

The days passed, spent in long individual talks. All realised that they were sharing in spiritual warfare. Each morning after breakfast the whole crowd would gather, and the meeting would be thrown open to any who wanted to share the new discoveries they had made. *Davalia* (finding) was the word they used for guidance.

"This is what I have found today," one after another would exclaim. Then would follow their simple precepts and injunctions that revolutionised personal and tribal life.

"Killing won't stop until I am willing to leave my spear behind."

"I must greet all strangers, and show friendliness to all."

"Call so-and-so into my house, it is not enough to apologise: I must make him my friend now."

The hardest thing of all, for men who had never ventured

forth unarmed, was to let go of the security of their spears. The first victory for many was the affirmative answer to the question, "Am I willing to trust God?" When the Kwato team heard of some of the confessions of lonely wanderers overpowered in the bush; or of hapless creatures speared at waterholes, they needed faith, too, to see them do it, and to give them the confidence that what they were doing was right.

When new convictions were shared in public they spread like a fire, touched everyone, and resulted in general contrition. Occasionally a whole tribal group would realise its past crimes and ask forgiveness for them.

One woman got up in a meeting and spoke with conviction about cruelty to children. One of the Papuan girls from Kwato was a kindergarten teacher who had taken particular interest in the children. She wrote down their names.

"Why do you want their names?" she was asked.

"So that we can pray for them at Kwato."

This young teacher told of the schools at Kwato, of the babies' crêche, and the orphanage, and of Papuan girls who were learning to care for children. One day, she hoped, the Kunika children would have schools too. This impressed a Kunika woman who had been listening to the conversation, taking it all in thoughtfully. During her meditation time that morning, she thought, "At Kwato they will be praying for my children, whom I abuse." She immediately thought of the temper that her children roused, and the beatings she had given them. Some of the children had permanent scars on their bodies as a reminder of their mother's ill-use. For the first time in her life this woman saw as wrong the violent emotions she had taken for granted. She stood up in the meeting and confessed her new feeling on the subject. All the women were impressed with her contrition, and subsequently all confessed to having ill-treated their own children. Some looked back over years of heated, violent acts. One old woman had once assisted in a fight, had stoned a little girl and killed her.

Out it all came: as they brought those crimes to light, they acquired a sense of guilt over them. A new life was inaugurated; not because the white man said this was right or that was wrong, but because individuals were able to say, "This was the word of the Great Spirit to me this morning." Day by day faces grew brighter, clearer, happier. The impulse was from within, and the conviction was their own, not the acceptance of someone else's philosophy.

The spiritual growth of these people took a unique course. Many things that loom very large in our lives were passed over. Their own guidance was concerned first with such elementary things as physical cleanliness. Early morning bathing becomes a solemn ritual. "*Dirava* wants us to be clean: the river is His gift to us." Yet the dirt that cakes on the normal Kunika in his native state is his chief garment; it keeps him warm.

There was a perfect psychology in this. Matters of hygiene and community affairs of housing and gardening were straightened out long before any convictions came concerning the redirection of their sex life. They probably did not know what, if any, was the relationship between any of the mixed team from Kwato. On a later occasion an old man, who had come down from further inland, asked Russell which of the women were his wives, and was astonished when Russell told him that he had no wife, as was then the case. The Kwato team must have seemed fabulously wealthy with their camping gear, enamel mugs, pots and pans, clothes and blankets. He could not understand why so rich a man would not have purchased that most fundamental possession: a woman. He himself had three wives, and pointed them out with a superior air.

At some inland villages there seemed to be the two extremes of polygamy or nothing. Men of standing all seemed to have two or three wives, but there were men between thirty and forty years of age living in the bachelors' house, unmarried simply because there were no girls available. At a village in Keveri one or two old men monopolised the little girls, who trailed dutifully after them. Cheated of childhood, they were like little miniature

adults, trudging off to the gardens in the mornings, returning laden with produce in the afternoon, peeling potatoes, cooking, but never playing. Mortality here seemed higher among the women than among the outnumbering men, possibly due to child marriages and immature motherhood. However, God had the answer to these social problems, and little by little they were solved. The first inklings of this could be seen at Domara.

Sibodu, the Chief of Kuroudi village at the foot of Mount Clarence, was one of the most changed and enlightened of the Kunika leaders. He, above all, led in pioneering new ways for his people. He had only one wife, a hot-tempered woman named Mui. One after another of her five children had either died at birth or not long survived her Spartan methods of mothercraft. Sibodu wanted an heir. One imagines there were no unbetrothed girls to be had, for surely the Chief of Kuroudi could have added to his household, if anyone could. He and his wife had given themselves to God, and were of one mind in their determination to lead their people along new paths. They had their quiet times together every morning, and prayed together each evening about the people they were seeing, and the enemies they were trying to win over, as well as their daily work and plans in the food garden. A great miracle happened in the woman. She found that her fiendish temper disappeared when she asked God to take it away, and she apologised to her neighbours for her previous outbursts. By the time they set out, with other mountain-dwellers, for the conference at Domara, her rages were a thing of the past. A changed woman herself, she had taught other women to pray, and brought them along to Domara.

Here they waited several days for the arrival of Russell Abel and his helpers. And here, unfortunately, is where the tale goes awry.

Among the women from another village was the strange and dangerous phenomenon of an unattached girl. Here was Sibodu's chance for an heir, and the prestige of an additional wife. He was determined to have her. He told his wife the news, and alas for the witnessing angels, she flew

into one of her real old-time rages. Her husband had every right to another wife, but she would have none of it.

"It is she or I!" she cried.

"Very well," he blazed back, "if that's the way you want it, you can go!"

There was no prayer together that night.

Next morning the *Kibi** blew a blast. The villagers and their guests arose and filed out chattering to the river. The second *Kibi* brought silence: this was the quiet hour.

Poor Mui! *Dirava* had told her about friendship and oneness, and she had tried to break down all the barriers, but her temper, that she had confessed to God, had come back. Sorrow of heart dominated her devotions that unhappy morning. But being a practical, hard-headed Kunika woman she wasted no time, went straight to her husband, and had it out with him. She apologised for her anger, which she knew was all wrong and belonged to the old life. She was quite willing for him to marry the girl. He had learnt at Kwato to pray first about everything, and that was the way they had been living since. If this was the guidance of God, who was she to take exception? Sibodu thanked her, and admitted that he had neither prayed nor listened for God's leading in the matter of taking another wife. He suggested they both prayed about it now.

For a long time they sat quietly together with their heads bowed. During that silence, the knell of polygamy sounded in Kuroudi. Sibodu's guidance was clear. "It is wrong for me to take the woman," he announced. "God's way is for a man to keep to one woman until she dies."

Mui's convictions were identical. When the mission team arrived in Domara, this was the first thing that they shared with them as the latest truth they had learnt. Later, they shared it with the assembled crowd, for whom it was rather a shock. One or two at least felt that this was indeed going too far; that the new movement that promised so well for the future of the Kunikas, was now getting out of control.

Two years later there was no polygamy in Kuroudi. No

* A conch-shell horn.

arbitrary rule of monogamy was laid down, no law imposed. One by one, from their own convictions, the people had settled this matter for themselves. There had been no upset of the social system, but a gradual resorting and remarrying of the women under guidance, collectively sought by the villagers concerned.

The passing of polygamy meant the passing of old bachelors, and the straightening of a social maladjustment.

The climax of this gathering was the feast that was to celebrate the new peace.

A feast is the natural Papuan mode of expression. Death and burial, harvest, the completion of house or canoe, the initiation of adolescent boys into manhood, are all occasions to be marked with the killing of pigs; except where formerly—and possibly still in unexplored areas—a human victim was found to be more stimulating. So it was natural that a feast should be made to mark the beginning of this new era in the tribal history.

A whole day was devoted to its preparation, and this absorbed the energy of the whole crowd. The men and the dogs went off to hunt; the women retired to the gardens. This sudden ebb of humanity left a peaceful lull, welcome after the constant flow of voices in those overcrowded huts. During the afternoon the tide of human beings came in again, reaching a high crest of chatter and bustle.

Stones were heated and set in rows in little hot cairns. Food was wrapped in leaves and carefully packed in among the stones, and sealed up within thick layers of banana and breadfruit leaves. Jets of escaping steam were quickly plugged. The people from Kwato were unwise enough to watch the preparations of special items on the bill of fare, and this, of course, made enjoyment of the feast difficult, if not impossible. Sometimes, to shut their eyes, think furiously of something else, and gulp these morsels whole was the best policy.

The final result—the food piled up on carpets of leaves, steam rising, a din of voices, women running hither and thither, men giving orders all at once with similar tones of authority and similar lack of effect—made Belei's little

slap-up spreads look insignificant. Russell and his companions were seated with great care, in order of priority and importance. Each white person sat by a chief, and their wives accompanied the Kwato women. About 250 people partook of the feast; a good crowd for these dispersed mountaineers. Many of them were visitors for the occasion.

Towards the end of the repast, spokesmen for the two main tribal groups represented harangued the crowd, extolled the new day of friendship, and pledged themselves jointly to spread it further. Two chiefs who had formerly been enemies, publicly shook hands. This was not a local custom, but neither was the voluntary absolving of the bitter memories of the past in favour of co-operation and unity. It was their sign that the age-long cult of killing was at an end.

The following day everyone dispersed. Obviously there were pitfalls and dangers ahead for these folk, and the wiseacres, as ever, foresaw the risks of Christian revolution far more acutely than the results, badly as they are needed in the world today.

The new order was not initiated easily, and enlightenment had come to only a comparative handful of people. They were uneducated but they had faith, a vital experience of God, a clear programme to which they whole-heartedly committed themselves, and courageous leadership.

"All men of personality," Dr F. E. Williams wrote of their leaders. He added: "If their education did not amount to much they certainly lacked neither intelligence nor character. There can be no doubt that this little band of zealots, aided and abetted as they are by enthusiastic fellow-villagers, must have a very strong influence on the whole Main Range population."

THE FIRST TASK for the Kunika converts was peace-making. This took the form of deputations to villages where old antagonisms were still being nursed, to tell them of the new way of living.

These peace-making visits were not always successful. One village, in particular, was antagonistic and hostile. The villagers looked on the overtures of friendship made by the Dorevaidi with as much suspicion as many a staunch Briton must have viewed the landing of Rudolph Hess on the Duke of Hamilton's acres. There was obviously a catch in it. They cannot be blamed for thinking so, for their long memory of Dorevaidi was nothing but a record of craft and calumny. Eventually, this community suffered badly from crop failures and food shortage. What a chance for enemy rejoicing! Their former enemies did indeed rejoice, for here was a golden opportunity for actions to demonstrate what persuasive speaking had failed to do.

The Kunika people scoured their gardens and set off with their string bags bulging with gifts of yams and sweet potatoes as their answer to enemy suspicion. In Papua, food talks. Former enemies realised now that the professed

friendship was not just words. It was real. Before long, another "peace feast" had been achieved.

At Kuroudi the leader, Sibodu, had eager followers, but their personal commitment to Christ was slender, and their own sincerity still had to be proved. What their leader feared most was that a sudden flare-up might take them unawares, and trigger off a recrudescence of fighting. His guidance was repeatedly to be forearmed. Readiness was their best defence. So he drilled his people in what to do if raided.

"If we fight back," he reasoned, "we are done. We shall become killers again." The people all agreed, and decided that the best strategy for them was to flee if possible.

"Let them burn our houses," said Sibodu. "We can build new ones. The important thing is to win our enemies."

One night, a handful of men maliciously made havoc of the food gardens and topped off an evening's hooliganism by setting fire to a couple of houses in Kuroudi. Sibodu and his two lieutenants faced the assailants.

"We do not want to fight you," he said. "Burn our houses if you must." The answer came back much as he had expected: he was slashed viciously with a long knife. Sibodu calmly covered the wound with his other hand and waited. However, the shouting tribesmen, mad for a fight, were completely demoralised by this unexpected reaction and by Sibodu's fearlessness and poise. They seemed to lose their spirit, for they disappeared without doing any further damage.

A few days later, two of the vandals returned by daylight. They stopped the first man they met and asked him what had happened at Kuroudi. They were simply told, "We listen to God now. He tells us not to fight, to make friends instead." A long talk followed, and at the end of this they all three prayed to *Dirava*, and listened. The man who had knifed Sibodu said he felt he should go and see him and ask his pardon. Sibodu was sitting by a fire in his house, still healing from his wound. He welcomed his assailant like a long-lost brother, and together they planned how to bring this spirit to the other village. These two men have

been close personal friends and a real team together ever since.

Kuroudi's resistance to attackers, however, was the only passive thing in their new life. They have been on the warpath ever since: raiding villages for God, going further and further afield, over still more distant mountain ranges.

"I have the deepest respect for the zeal, energy and determination of these men," wrote Dr F. E. Williams, who was staying in one of their villages when a team of nine men and three women returned from one of their journeys, exhausted after two-and-a-half weeks of extremely stiff climbing. "The evangelists seem to make good," he reported, "in almost every place they set foot in. They could hardly do so without this remarkable capacity for getting themselves welcomed. But, of course, they are looking further ahead. The universal friendliness which they set out to establish and which they cultivate by example and teaching must be accounted a very great benefit to all who come within its scope. It is what the Keveri need more than anything—not to mention the rest of the world."

These bush evangelists were visited from time to time by a team from Kwato and Milne Bay. A centre developed at Amau, to which Cecil Abel, escaping the calls and claims of Kwato, would disappear periodically. He climbed those mountains, pressing further on, visiting new centres on an ever-widening frontier. But his chief work was the training of Kunika teams, who themselves became messengers of the new day to their neighbours over the next range. He always came back aglow with news.

The Papuan church in the Kwato district was now a missionary church, and it increased in power for this responsibility. The teams would come back somewhat thinner and stringier for all their unaccustomed climbing, but always refreshed and inspired. Many testified that they went to give, but always found that they had more to learn, of simple faith and brave obedience to one's lights.

It soon became clear that this new orientation of these primitive inland folk was going to affect their social

system deeply. Murder and sorcery had been the chief cornerstones of their culture. Most ceremonies were closely concerned with the production or prevention of magic, or the glorification of murder, as was the case with certain ornaments and headdresses. There was much that disappeared naturally, just as the shivers of the haunted are forgotten when the light goes on.

The leaders were determined to wage war on all that pertained to the cult of killing. These ex-murderers were determined that old tendencies should not break out again. They feared that killing would recur, and undo the firm stand their tribes had made.

They were not the only ones who were afraid. They were being keenly watched by many observers who had the best welfare of the country at heart, including the Lieutenant-Governor of Papua, Sir Hubert Murray, with whom they had had an audience in Port Moresby. They had talked with him of their new experiences, and made a clean breast of many undetected crimes. One man told how, as a prisoner, he had become ill and had been transferred to a hospital. There he had seen his chance to acquire the prestige of a murderer, and had quietly choked to death a feeble, dying patient whose groans had irritated him.

Sir Hubert had shown the keenest interest and sympathy with these men in their determination to lead a new life, and in view of this, had granted them wholesale pardon for the past.

Kunika leaders knew how deeply rooted was the homicidal tradition, and debarred many picturesque effects because of their grim association. They feared that bright feathers and drum-beats and dancing, even indulged in for its own sake and without the magico-religious significance that underlies primitive ceremonies, could stir the blood and bring back the old lusts. It was too risky. "If we do these things we shall want to kill," they declared, as they banned some seemingly harmless social pursuits.

Dr F. E. Williams made a thorough investigation of the results of the movement among the Keveri and the Dorevaidi. He deplored the disappearance of many old

rites, and was intrigued because he could find no evidence of any personal compulsion to account for this. These people seemed to have dropped their customs by common consent. He observed the new life of the mountaineers, keenly attended their meetings, when they would switch from their own unknown tongues into pidgin Motu out of courtesy to their guest, and paid tribute to their sincerity.

"I never heard a Keveri pray," he wrote, "in any manner that could not be called reverent, dignified, and seemly." He was struck with the universal habit he found of natural, spontaneous prayer:

> They appeal to *Dirava* to guide and protect: to lead them from the evil ways of the past; to make them peaceful minded, forgiving, etc., as well as a servant of the various practical rules of living. A group will unite to pray on any occasion. When on the track and anxious to get on after a spell, I would have to wait while they prayed for a safe continuance of their journey. When a party came from Bam the village policeman gathered them into a group to pray in front of the Rest Home before turning to deliver his salute; when some of us went to a deserted village, my informants sat down to pray for protection from the evil influences that might haunt it; and once when sitting down for an ordinary talk on a house verandah in Eruru, they prayed simply and affectingly that their minds should be cleared to understand my questions and answer them. I felt so abashed on this last occasion that I hardly knew where to begin.

The most evident sign of change to the outward observer was the friendship, demonstrated impartially and on principle to all and sundry, by which positive means the old suspicious mentality was overcome. Williams' report continued:

> The Keveri are seized of a new idea, viz., that they should be friendly, and demonstrate their friendliness,

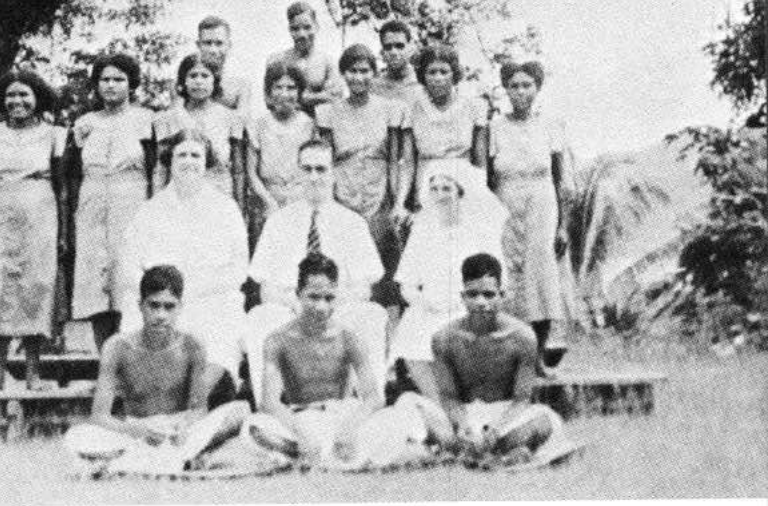
to all and everyone. That idea, I am prepared to think, lies at the very centre of the Kwato teaching; and, in so far as it has been realised among the Keveri, it represents a very great advance . . .

They are opposed not only to the old habit of murder for the sake of murder, but to strife of all kinds. Quarrelling, vengeance, violence, are all denounced; the people are to be friendly to all. They should neither offer violence nor fear it. The remarkable courage and confidence of the evangelists who have penetrated far and wide, often into the midst of people hostile to their cause, are said to be inspired by the advice and example of Mr Cecil Abel. When certain ill-disposed villages were reported to threaten death to the evangelists if they came again, he told them not to resist, nor repay violence with violence, but to trust God and they would have no fear. They greatly admire his own genius for friendliness towards them and declare he fears nothing. I am sure that this genius for friendliness is held by Kwato to be an end in itself, an essential factor in successful human relations; but even if it were only a policy, it must be of immense value.

In all the new trends of thinking that now swept the Abau hinterland, the Dorevaidi, as of yore, led the way, under their determined old chief, Ofekule. Tall and straightforward, a leader by heredity as well as by force of character, he was described by the Government Anthropologist as "a young-middle-aged man of personality, who looked physically, and in character, as hard as nails."

He had spent years in gaol and had a record well in keeping with his high position in primitive society. He had two wives, an older woman, and a newer acquisition, young and tender. His first wife, older than himself, was childless. Six lives were said to have been lost before she was finally settled in marriage. In each case the suitor, while serving a weary sentence in gaol, would be supplanted by another, who treading the same hard path, would repeat his predecessor's performance. They went in a procession to gaol.

Top: The author (*centre*) with the staff of the Kwato hospital, photographed in 1938. *Bottom:* Garionedi Tariowai with a young candidate for club foot correction









They shared a clumsiness in concealing their tracks which left the bride unclaimed. Thus her early life had consisted of a repetition of farewells to the men who were willing to pay so much for the hazards of marrying her. Jacob's long apprenticeship for his Rachel was nothing to what many a Kunika went through, only to find on discharge from gaol that the girl of his dreams was married to someone else.

Ofekule's first wife was like an indulgent mother to him, but he had put his hopes for an heir in the new girl. Perhaps she would bear the future head of Dorevaidi. One of the hardest things that his new life demanded of him was to give her up. But it was his conviction that he must now keep to his original wife; that Dorevaidi would thereby gain the added power of a new Christian family unit. This was costly patriotism. The girl, herself converted to Christianity, was given to a staunch lad of her own age. Ofekule provided the marriage feast for the new couple, who became his most loyal supporters.

This renunciation brought two things to the Dorevaidi leader: a new baptism of power, and a new unity with his first wife. She was an intelligent woman of strong character, a leader among her own sex, who has undoubtedly been a power behind her husband.

Tribal activity, that formerly had found its highest pitch in murders and reprisals and in effecting the appeasement of the spirits by magic, had to find new scope. Now the people could concentrate their energies on the future. The Kunikas were looking ahead, thinking on new levels. There was really no purpose now for isolated units hidden away in mountain pockets. Inaccessibility, once an asset, now became a liability, a hindrance to the fellowship of other people, and to the new stimulation.

The first new community effort of the Dorevaidi, therefore, was the carving of a better road to their mountain eyrie. At this time, Ina, the pass over Mount Clarence, was alleged to grow more and more vertical as one gained the cloud-hung summit. Dripping mosses and shrouded trees covered the mountain top. Through rifts in the clouds

Top: On a medical patrol: village outpatients being treated for trachoma. *Bottom:* Building the hospital at Koeabule. The method is easy and inexpensive, and the result is both cool and attractive

appeared breath-taking vistas of heavily-timbered mountains and valleys, magnificently indicative of Papua's enormous economic potential.

The Dorevaidi worked with a will and achieved great results, using only primitive digging sticks, native mattocks, and their bare hands. When one of them, visiting Kwato, was asked what tools they had used, he replied, "Our chief tool was *lalotamona* [unity]."

The lessons learned in this joint enterprise were valuable, but Ofekule, chief of the Dorevaidi, was not satisfied. In his opinion, the people were temporising. His guidance was that Dorevaidi and kindred villages should move down to the plain and combine with other communities. Coexistence with the people of the plain would mean further growth through co-operation, as they had learnt through the making of the Ina Pass. Fighting would be less likely to recur if they lived together as good neighbours, and became absorbed in new activities. Schools for the children, out of the question in their present scattered mode of living, would be possible in the new community.

This revolutionary step was not popular. Ofekule felt that he should not press for it: that the rest would come round to his point of view, if it was right.

On one occasion Ofekule had gone down to Amau, on the plain, and was visiting a team from Kwato, camped near-by on the river bank. It was customary for them to meet very early in the morning for prayer and Bible study, and those from round about who had picked up enough English or Suau often joined in. The team sat around on the floor with Bibles on their laps, studying the life of Abraham.

" 'And the Lord had said unto Abraham, Get thee out of thy country, and from thy kindred, and from thy father's house, unto a land that I will show thee.' "

Ofekule interrupted. "Read that again," he said. "Who was this man?"

"One who lived a great many years ago—*mumuga eai*—in the very past, before the times of the white man, long, long before Christ."

"Why, that is what God said to me! That is my guidance: that there is no future for us in the mountains; that we must leave the lands of our fathers and go to new country that He will show us."

He was eager to know what happened next, whether Abraham obeyed this injunction, and what came of it.

He returned to Dorevaidi more convinced than ever that they must join forces with other tribes and seek a common destiny, and work out a new social life under God's direction.

At this stage there was a lot of opposition to new ideas in Dorevaidi. There were certain sorcerers whom the new movement must have left high and dry, and these men persisted in warning the people that dire consequences would follow if they offended the spirits. "Our crops will fail," they reiterated. There was a whole list of possible disasters. The sun would wax hotter and hotter, and finally burn them up. Some of the predictions were obscene and horrifying. Finally the general expectation was narrowed down to a catastrophe that would destroy the village.

"Expect it quite soon, and serve us all right. *You* are to blame most of all!" cried the sorcerer, pointing a sinister finger at Ofekule. And, as is often most disconcertingly the case, this was exactly what happened.

One wet night the Dorevaidi heard a growing roar as an avalanche of earth and rocks poured into their village. Panic followed. The face of a steep hillside had been perilously loosened by the clearing of scrub and planting of food terraces. Then, sodden with heavy rain, it had collapsed upon the village.

One or two houses were destroyed, an entire food garden was lost, and part of the village was buried. However, no one was killed, and the damage was not so great as the frenzy might have warranted.

But it was serious enough, and the people were excited and upset. Feelings ran high. The sorcerer looked very important and wore a bland expression as he inspected the damage. Ofekule decamped into the forest. Not knowing

how to meet the clamour, he did the best he knew. Like the prophets of old, he enquired of the Lord.

After a long time alone in the bush with God, he found the answer. He returned completely reassured.

"Might not this be a sign," he asked his people, "that God, who speaks to those who listen, cannot so speak to us Dorevaidi because we are not prepared to obey. Some villagers are moving to the plain because God has spoken. That is not enough for us! We need a landslide to move us."

The landslide proved to be the final shove required. It was not long before the entire village had migrated to Amau.

The Spirit moved in many places towards one objective. Thus, to several separate villages came the impulse to move together, to become a team of villages building a new community life together.

Simultaneously with these big decisions—for it undoubtedly was a big step for a tribe to uproot itself and sacrifice its individualism for new, untried ways—new ways of life were developing at Amau. Maiau, Belei's thoughtful son, was doing a lot of thinking. As his father's successor he was recognised owner of the rich, well-watered tract of forest land where the Amau folk made little clearings, and planted their small fenced-in plots. Pride of ownership, with its prestige, had been strong in him. Now, he had told himself, everything must be submitted to God.

Finally, in his early morning meditations, his thoughts began to centre on his land: his and Belei's. It was theirs in title. They had held it for the people of Amau, who roamed its length and breadth, and cleared their gardens where they would, in virtue of the Chief's ownership. If it was his in name, it was theirs in actual fact.

"The land is not mine, it is God's," concluded Maiau. He shared this thought with his father and one or two who were closest to him in Amau. The next day he was led a step further: "The land is not for the people of Amau, it is God's. He is the Chief of all."

This simple statement represented a revolution in his thinking with regard to his lands and possessions. Maiau was thus led, in simple stages, to open his land to all who

wished to enjoy its special benefits. And so the new Amau grew: a new model village, and an experiment in social reconstruction. Tribal horizons were vanishing, and a new patriotism was born.

Dorevaidi, Kuroudi, Okaudi, Domara, and parts of Keveri, were villages that transplanted themselves to Amau. Each was granted a large area of land for future enlargement and cultivation, and each rebuilt its village, keeping the old tribal names. The basis of their collective life was the understanding that God was their Chief, and that they should build their village life under His direction.

This was put into practical effect by means of an early morning work meeting, at which responsible members of each community shared their guidance for the day and checked their plans. Even the styles and positions of the houses were carefully checked, allowing for ample compounds, playing fields, and flower gardens. Dr F. E. Williams reported:

> The natives are a clean, healthy looking lot, while the village itself is charming. The various sections of the community have their rows or clusters of dwellings; the houses are well built and in good repair; ornamental shrubs are making good progress; the grounds are neatly drained, and careful householders tend their borders of crimson balsam. Some of the houses show quite an amount of ingenious carpentry. More important members of the community occupy two-storeyed dwellings, with wooden shingles. And things are kept clean and in good order. I came on one man systematically scrubbing out his house (which had a number of separate compartments) with broom and bucket of water. The people themselves look comparatively tidy and there is a good deal of bathing—though no doubt for pleasure as much as for cleanliness—in the stream that flows through the village.

"We knew, when we began, that it would be a better way for us to live, than in the small scattered villages, but

we never foresaw how good the result would be," said Biruma.

The lesson of the Ina Pass was repeated sevenfold. The surprise in store for them all was the undreamed-of amount they could accomplish by working co-operatively and to a plan, instead of as haphazard individual units. When the daily objective agreed upon was cultivation of gardens, the whole manpower would devote united energy to this, and the area felled would be larger than any they were accustomed to cultivating. A new era of prosperity had arrived. Gone were the days when they grudgingly counted out a few withered potatoes they could ill spare, for the screw of salt (inland currency) they yearned for.

The same applied to building. Where previously one man might laboriously collect timber and drag it home for his new hut, now all was done, according to guidance, in groups. Naturally, the pile of fine timbers amassed by a large company enjoying the social stimulus of combined activity, was far greater. The result was bigger houses, and a new, improved architecture arising from the superior materials to hand.

Normally, the Papuan is conservative. He clings to his prejudices and has the unenlightened attitude that "what was good enough for my father and my grandfather is good enough for me." He bends his back to laborious work, scorning the simplest labour-saving aids. Now, for the Kunikas, everything was questioned in the light of new thinking and the guidance of God sought in the most insignificant details of everyday life. The zest with which new ideas would be tried out was refreshing. Some of the Kunikas had visited Kwato and seen boys engaged in splitting wooden shingles for roofing. Roofs were always a problem inland, as sago palm and nipa palm, from which their thatch is made, are scarce, and have to be carried long distances. One man was inspired at a morning work meeting with the idea that they, too, could use wooden shingles. Accordingly a boy was sent to Kwato to learn this art and stronger, more permanent roofs came into vogue at Amau.

RUSSELL ABEL VISITED the new Amau for the first time on the occasion of the opening of the new mission house, across the river from the settlement. Fine healthy gardens with taro, sweet corn, sugar-cane, and pumpkin in close cultivation bordered the approach to the villages. Russell was especially struck by the ample wooden roofs with their generous gables, rising in the distance. The new Amau stood on the site of the old one. Across the river were the new settlements of Dorevaidi, Domara, and Kuroudi, each in its own separate area, with its building area and allotted garden lands. Bush had been felled, unscreening the bold outline of the Owen Stanley Range, and greensward had spread quickly over the cleared area.

The Magistrate from Amau came up on this occasion, inspected the villages, and formally opened the mission headquarters. He congratulated the people on their homes and offered to help them in any way they would like to suggest. After a brief consultation together they decided to take advantage of this, and asked him to procure for them citrus fruit trees from Australia.

From the first, Sibodu of Kuroudi made food production

his speciality. He was responsible for the introduction of rice-growing among the Kunikas as a regular part of village agriculture. He had been guided towards the idea of having bigger gardens, so that his people could have a surplus to feed those who would come down from the mountains to learn the new way of life.

After the first harvest of the new gardens, the Amau community invited 400 people to visit their villages, so that they could get to know them, share the results of their new experiment in living, and help them into that same experience. Their guests came from a distance of several days' journey. It would have been impossible for them to carry sufficient bulky food all that way. However, they came, and stayed for a convention that lasted from ten to fourteen days, and were fed on the surplus from the gardens of Kuroudi: the results of Sibodu's foresight several months earlier.

This was a new development of activity. For in spite of much preoccupation with their immediate programme, their work was still that of changing men and women. Murderers still had to be made into law-abiding citizens and constantly, with this aim, teams would go forth on long treks inland.

By now they were reaching into new territory and the kind of reception they would meet was by no means assured, so each journey was a venture of faith. In addition, a certain amount of food had to be carried. The world knows today something of what cartage means in the Owen Stanley Ranges. Often these tours were severe physical tests, and they took their toll.

At a remote end of the village, overlooking the river, was a sacred spot: the tiny enclosed garden that was the grave and memorial of the old chief, Belei. All regarded him as a pioneer of the new Amau, although he did not live to see it. The villagers met there for thanksgiving, because they realised how powerfully his vision had influenced them all. "I am too old to change, this is for you to look to," he had advised his people, before he changed as much as any of them. He had been in the past

a hard, pitiless criminal; but he gave inspired leadership in his last days, learned the power of prayer, and died the death of a saint.

At the centre of the Amau settlements stood the House of Prayer. It was entirely an expression of Kunika devotion, and did not look like the accepted idea of a church. But it was a hallowed spot to the Kunikas, and cool and convenient to their needs. People could come in and go out at any point with freedom and without disturbance.

When the building was opened, leaders from each section of the community carried their now-unused spears, which they publicly broke as a pledge of loyalty to Christ. These broken spears, symbols of the peace that had come to them and their tribes, adorned the church together with the old treasures, headdresses, and carvings that had once hung in ceremonial houses. Biruma, addressing the assembly at the opening, had said: "The spear has been broken by the power of God, but we must not rest there. We must go on till every barrier between village and village, man and wife, father and children, has been broken in Papua."

The first to feel the effects of the migrating of villages to one centre were the children. They swarmed round their new surroundings like chattering little monkeys, bright, intelligent, and utterly hard. The combining of communities brought them the prospect of education.

With Kunika children the survival of the fittest was the rule. Every mother wore her baby on her head, clinging to her woolly hair. Enquiries as to the ones so worn the year before in many cases met with a fatalistic, "*Ia mase* [he died]."

Once, after a battle for the life of a baby suffering from a high fever, a disconcerted nurse caught sight of the mother trudging dutifully off to her garden in the pouring rain, with the wailing infant hoisted on her head. Needless to say this infant did not long survive his mother's care. Other such instances of lack of care through ignorance were staggeringly common.

Sikulu (school), however, was a new ambition for some parents with a newly-awakened conscience towards their children. Others, while endorsing many changes, still preferred to keep their children to themselves.

However, the growing desire for education was a far cry from a scene that had occurred in old Amau, two years earlier. At that time, as a means of getting to know the children and of testing their intelligence, two of the Papuan girls from Kwato had gathered the children for a lesson, during an idle afternoon while their mothers worked in the gardens. The children, keen to try any new game, sat on the ground while the teachers wrote large letters with charcoal on an old piece of tarpaulin, and illustrated the letters with drawings of familiar objects. It was all very merry and harmless, until suddenly an infuriated father thrust himself roaring on the scene. Apart from being almost incoherent with rage, he shouted his feelings in the local language, which, fortunately, was completely unintelligible to the girls from Kwato.

Russell Abel was in a house nearby, and he clambered down the rickety stairway to find out what was wrong. By this time half the village was joining in, such outbursts being a frequent source of diversion in those days. To make things a little more fearsome, the spear-brandishing parent was blackened with a soot-and-oil coating right up to a line across the middle of his face. The paint showed that he was dressed in mourning for one of his three wives. With his eyes bulging from his normal chocolate tonings, he looked as though he had been dipped by the hair into tar and raised again by a relenting hand, just in time. Eventually he became calm enough to be able to voice, intelligibly, his objections to his children being taught the white man's magic. He pointed to the mystic signs, *A.E.I.O.U.* He felt sure these letters represented some foreign enchantment from which there would be no restoring the children. "We may as well kill them, for we will lose them," he declared, and looked so menacing that it might be thought he was going to carry out the deed on the spot.

Russell, of course, apologised to him and said that the girls had no intention of teaching children against their parents' wishes. At the same time he expressed his pity for children of narrow-minded parents, who would stand in the way of their gaining merely what their generation all over Papua, from Buna to Daru was now being privileged to have.

When the man was calmed down and mollified Russell enquired which were his children, and asked them to retire from the class. Both refused point-blank. The father sternly ordered them to leave; but the prestige due to his unique appearance was somewhat impaired by their utter disregard of his command. This was too much. With heavy-handed forcefulness, he descended upon his small son, whom he dragged away, screaming, kicking, and biting. The girl, however, was quite unmoved. She made a short sharp speech to no one in particular, of which the audience seemed to approve, and continued to sit with her eyes glued on the magic signs. Her father by this time had exhausted his anger and retired, content with his victory over his hopelessly-overpowered son.

"What did she say?" enquired Russell, greatly impressed by her deft handling of her parent. He was staggered at the answer: she had merely reminded all and sundry that she was a married woman and intended to take orders from nobody.

It proved to be so. Falana's story was an unusual one. She had been her father's pet, and he had not bartered her in marriage. But she was a precocious little girl. One day her eye fell on a youth from another village, and she told her father that she must have him. Her father informed the boy, who, although already married, was delighted with this free offer, and promised to fulfil the required obligation of a murder without delay. He vanished into the bush with his spear, and was not heard of again for a month. During this time he enlisted the help of sorcerers, then, finally, he went towards Otomata plantation on the coast, where a contingent of new indentured labourers had been recruited.

Sundays seemed to be the ideal times for the young man to find a would-be victim, for then the labourers painted themselves, stuck flowers in their hair, and went "walkabout" in the surrounding bush. They usually went in groups to search for *lugu* (pepper leaf) to chew with their betel. Falana's suitor took no chances. He bided his time, and at last he came across a lone wanderer, whom he startled and knocked out before the man could realise what was happening. This done, he removed a finger from the dead body as evidence that a murder had been accomplished. The joints of the finger, smoked and strung on a piece of bark, would ultimately become a bridal possession.

Now that he had proved himself, the young man hurried home to claim his girl. First, though, he stopped outside her village to put on his finery. With bush flowers in his hair and crinkled pandanus streamers waving in all directions, he marched, head erect, into the village. One glance at the herbaceous hero told the villagers all. Spontaneously the men broke out with the war cry: "*Abi-gumini-sulimi-waiagalooooo!*" The women joined in with a high-pitched, yapping accompaniment.

Falana heard the sounds of triumph and was thrilled. Her father proposed to kill the pigs right away, and they were thus engaged in activities, when they were interrupted by a government party consisting of a Patrol Officer, Papuan police, and carriers. They had discovered the murder of the plantation hand at Otomata, and they were looking for the culprit. The deflated bridegroom was accused, convicted, and sternly removed to Port Moresby gaol.

Many changes occurred before he was released. Falana herself was doing her best to live a Christian life, and according to her new principles she had relinquished this boy to his original wife. She herself eventually achieved fame as the first girl in her village to marry without demanding bloodshed.

Education at Amau was first made possible by the

granting of an acre of land, separated by the river from the main group of villages. Here a house, a hospital, a married couple's house, and a house for boys were built. This was the Kwato centre in that district, and it became the school centre. Alice Wedega, a Milne Bay woman and one of the Kwato staff, was in charge of this work with a few junior girls as helpers. She had to start from scratch with completely untrained children. Her pupils had long been accustomed to all sorts of depravity, and some of them showed the most vicious traits. They were cruel to animals and insects, and were often even at each other's throats. The favourite game was murder: little toddlers would stalk, waylay, and finally do to death some hapless stray dog or cat. They seemed to exult in killing, and their parents had given every encouragement to pugnacious impulses in the hope of breeding killers.

Gradually these characteristics were eradicated, by the introduction of substitute games.

A football provided a wonderful outlet. The little boys slapped their thighs and shouted "*Kunika boroma!*" (Kunika wild pigs) as they hurled themselves after the ball. This cry was a quotation, from an exasperated Assistant Resident Magistrate, who had reasoned with a group of Kunikas: "When are you going to become tame like other Papuans? You Kunikas act like wild pigs." His hearers took this as a great compliment, and "Kunika wild pigs" became a kind of battle-cry.

Patience, however, is a Papuan virtue and Alice set to work to win these children, as well as teach them. Instead of reproducing exactly the system and curriculum of existing schools in the very different circumstances of the Kwato district, she showed complete originality in her approach to the problem. Both she and her Papuan helpers felt that this school should be in keeping with the ideals and thinking of Kunika leaders, and with the new pattern of village life they were working out. If the children could learn to relate their actions and decisions to the basic standards of Christ, they would be better equipped to carry further the new living that their parents were trying

to establish. The basis of their education was to teach them to pray and to listen for guidance. The development of character, integrity, and responsibility was to be the background for the "Three Rs" and the teaching of the English language was to be fitted secondarily.

Every morning the clarion conch-shell called the children to school. They would come tumbling from their houses, trailing over the swinging cane and bamboo suspension bridge, to gather on the ground floor of the mission house, full of eager importance. Here the methods devised for their development were unusual, in fact revolutionary; for in the Amau school, the children did not obey their teachers; the teachers obeyed the children. In this classroom democracy, the children themselves were responsible for their own scholastic welfare.

After a certain amount of disciplinary drill and the usual opening exercises of combined singing and a prayer, the children met in groups of their own. They discussed what they had learnt, how they were progressing, or what they felt they needed most. After a liberal airing of the subject they bowed their heads and were quiet. Young as they were, they all sought for guidance on the day's schooling. Then they pooled the ideas that had come to them and called in the teacher, checking with her what they wanted done. The day's school would proceed along the lines the children had planned.

In this system, the responsibility was no longer on the teachers to round up, lead, or drive, and in every way impress knowledge into the irresponsible heads of their unwilling charges. Instead, the onus was on the children themselves. It was their school, run on their thinking; if there was any failure, they were the losers. At its beginning, the school was something new and exciting for the children, and because not all the children were allowed by their parents to attend, the sense of privilege in being attached to the school was keen.

Alice kept doggedly to her system, even though at times she felt tempted to improve on the children's plans or to over-ride them with quicker, better ways. However, she

believed her principle to be right, even though from a commonsense point of view it might appear laborious and slow. She tried in all circumstances to avoid telling the children what to do, and insisted always on their forming their own convictions by means of a moment's quiet reflection. "*Dirava* will show you the right way, if you listen to Him," she used to tell them. Always the children carried out their own directions, not their teacher's commands. Alice was willing to forego some of the more spectacular results that can be achieved by adult organisation and drive, in favour of this slower, more natural growth and the real-life training it afforded. When the children grew up and met crises in their daily lives, she was confident that they would know what to do.

Russell Abel visited the school after it had been operating for some time, and the first thing that impressed him was the straightforward, business-like air of the children. Even the youngest had an expression of serious alertness which he could see was due to the fact that, in all practical details, they ran the institution themselves. The climax of his inspection was to be a concert given by the students. This, however, had been postponed until the following day because one of the chief performers was ill.

There were to be songs—painstaking and somewhat painful efforts, as the inlanders, unlike the coastal Papuans with their keen ear and easy harmonising, are not musical, and Alice had taught the Kunika children some amusing sketches which had the additional advantage of giving them practice in a basic set of English sentences. They would also perform a Kunika version of "The House that Jack Built," dressed to resemble the different animals in bits of fur, feathers, and bark-cloth, with impressionistic touches to suggest the "pig with a crooked tusk," the dog that it tossed, et cetera. The final sketch was a conversation between a kangaroo and a cassowary, discussing the changes that had come about in the district and calling in some Kunika children who explained it all to them. The animals were deeply impressed, fluttered and hopped around, and both agreed that the new way of friendship,

and of making God your chief, was a good idea. The kangaroo, however, doubted whether his wife would approve, even though it was just what she needed. The cassowary, too, wished her husband had a bit more of this kind of spirit, though she really did not think that he would quite like it!

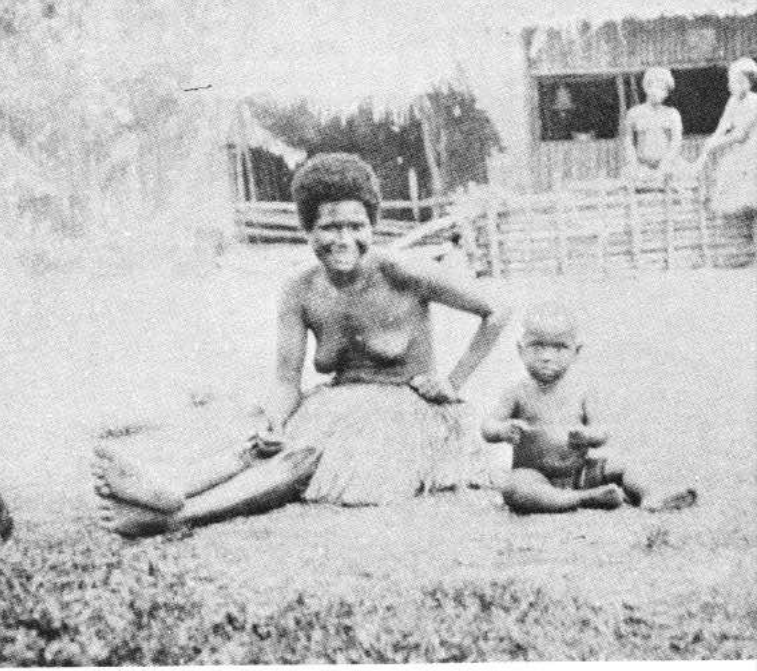
On the next day, the star of the show was no better, but as Russell was due to leave that day the concert had to proceed as best it could. Alice told the children this but left it to them to arrange the programme. About half a dozen boys and girls, aged eleven or twelve, ran off to the nearest tree and sat in its shade, where they engaged in earnest discussion. Woolly heads bowed for a while; then there was more animated talk and they returned, all smiles, to their teachers. Though they had never given a concert before they had decided to rearrange the programme. A girl thought she could substitute for her sick playmate; her own part was easily understudied. The show went on. The children threw themselves heart and soul into the performance and succeeded in reducing their audience utterly to laughter. The teachers seemed to be as detached as the other spectators. It was the children's show, but so very different from many school shows, with the teachers rushing about frantically in the background and the children being shoved into position like little morons.

"As we laughed and enjoyed the fun," said Russell Abel afterwards, "my mind went back to the Peace Conference nearly four years earlier, the confessions, the grim stories that were part of everyday life for the Kunikas. Children murdered, abused by habitually violent parents, trained in vice, encouraged in cruelty. I thought of the little girls I have seen at Bolubaba, in Keveri, trudging stiffly after a hard-faced elderly husband, prematurely bowed down with endless carrying of yams, firewood, and sugar-cane. And I went further in my conclusions than 'Mrs Cassowary' and resolved that this new deal *was* a good idea, even if there *were* some who did not quite like it!"

Alice's ambition was to develop a residential boarding

The ravages of leprosy







school for the village children, keeping them under conditions as similar as possible to their village life, but introducing order and discipline, hygiene and proper diet. They would go home for weekends so that they would not lose touch with their own people. The school compound was to be a miniature Papuan village, with its own food gardens, and its own elected village council. The aim was to make it in every respect a model for the Kunikas, to fit future villagers for improved standards of living. Beginnings were made in this venture with a small handful of boarders, but when the second World War broke out Alice had eventually to hand over her job to her assistants and return to Kwato to fill the places of the evacuated European staff.

In the meantime the need for a school building became more urgent. The ground floor of the mission house, an upstairs verandah, certain selected shade trees used as alfresco class rooms by the little group of pupils, were all right for a start; but as the school flourished and the pupils began to justify the educational ideals laid down for them, something better was only their due.

Kunikas, however, were so moneyless that they were exempt even from the minimal head tax to which all coastal inhabitants were then liable. The men in one inland village near Abau argued with rather perverse logic that they had no desire for a school. "We are ignorant, therefore we are let off the tax," they stated. "If we have schools we shall doubtless become wise: wise enough to be taxed." They preferred to prolong the bliss of ignorance. However, it was because they lacked the means of earning money, not because they were ignorant, that the government was satisfied in lieu of tax to let them keep their roads clear, and their Rest Houses in repair.

The children prayed for a school building, and the more they thought about it, the larger their vision grew. What their school building was to mean to the Kunikas—to all Papua—became the theme of many earnest talks. There were plenty of stones in the river-bed: the building was to be of stone, it would last for ever. "It will be a sign of our

Top: A mother and child enjoy the peaceful atmosphere of a Papuan village on a sunny afternoon. *Bottom:* Village conference

faith, it will be a challenge to future generations," they said.

The problem of how to succeed in their ambition brought them sharply back to earth. These were not children of the "rice Christians." The benefits their people had derived from Kwato were not material, and just now Kwato was struggling against a depression in the copra market that had dragged down the economy of the whole country. It was far from able to help.

The children took this most pressing problem with them into the morning devotions. The general feeling was that they must be willing to start the project themselves. "We are weak," said twelve-year-old Kelau, "but we have some strength even if it is small. We can use it to build the new school." "When I was small," said Auveakala, "my tribe came down from the hills and built a new village at Amau because that was their guidance. This new school is our guidance and we must build it." Namaki, the youngest, aged eight, merely remarked: "This is right. Do it!"

So there was nothing for it but to go ahead. First of all they made a special garden, and fenced and planted it. What must have seemed an eternity of months went by before the children reaped their first harvest fruits: a bag of sweet potatoes, a bunch of bananas, some fine cobs of corn, and some sugar-cane. These were bought by Kwato. The children went on planting, tending, and weeding their plot. The next lot of food was carried down to the coast and sold to the Assistant Resident Magistrate at Abau, who was always glad to buy food for his staff and prisoners. These transactions brought in only a few shillings at a time, but the Kunikas are a stubborn breed and never lacked determination.

There was a growing market for vegetables in this fast-changing country. Port Moresby was filled with bronzed, khaki-clad men who called for boatloads of supplies from along the south coast. The Kunika children persevered with their task, and the little tin cash box gradually became encouragingly heavy as more shillings were dropped in. Then a strange new thought came to

them. It cut right across their thoughts and efforts of many months and told them that they must surrender all their money, and send it overseas to help little children in England who were bomb victims.

They knew about the war. Every now and then a visit from Cecil Abel with his portable radio brought echoes of the great world struggle right into the Papuan jungle, which it was soon to penetrate. Teachers at the school had given them some information, and special prayers for those who were suffering were a feature of their school life now. Much hard work was represented in that cash box, and the children's teacher felt a real pang for their sakes when they shared this thought with her. "God has shown us the way to peace," they said. "We think of other children who are suffering because their tribes have not learnt what we have learnt."

The box was opened, and seven pounds in cash was counted out. It seemed a fabulous amount, and it had taken long and involved much work to accumulate. But it went to England just the same, as a tiny but defiant challenge to the forces of materialism and greed that reach their consummation in war.

AS I WAS WORKING on an island mission, I only saw the inland settlements where these astonishing events had taken place when I went on patrol. Nevertheless, I had seen the fearsome-looking Kunika chiefs when they first visited Kwato, and I later saw the new community at Amau, a thriving village with its well-built houses, and its flowering shrubs and vegetable gardens. I was particularly impressed by the church there, with the spears of the former warriors hung high on its walls. Many of these weapons were notched from end to end, each notch being a sign that a man had been killed, but they would never again be used for purposes of destruction.

Our medical patrols made an exciting and often welcome break in the routine business of the hospital. I would head the team, accompanied by an orderly, two nurses (usually Nedi Tariowai and Nora Bagi), and perhaps a couple of trainees. Preparations for our expedition would be made quickly and simply. Everything was carried in our shoulder packs: food, clothes, medical gear, and drugs. We had long since given up the orthodox rucksack made of canvas, for in conditions of torrential rain or when crossing

flooded rivers they were quite useless. Instead we used the ubiquitous square-sided kerosene tin. This, with a closely-fitting lid, and enamelled in white with a red cross, was worn on a light webbing frame and soon became a well-recognised sight even in remote villages. We appreciated these tins too—after a long day's tramp in heavy rain and mud, it was good to be able to take a hot shower and then change into completely dry clothes.

We travelled lightly compared with some of the government patrols, with their ample retinue of Papuan police, porters, and prisoners. One Government Officer even used to carry his bed with him. This man weighed something like twenty stone, and had once suffered the very unfortunate experience of having his slumbers interrupted when he fell through the cane floor of the village rest house. Henceforth, in his travels up mountains and down valleys, four police constables solemnly carried his iron bedstead on their shoulders. Another officer went to further extremes. Preferring an electric shaver to a blade razor, he always took with him, slung on a pole borne by two policemen, a six volt accumulator to work his shaver, a petrol motor-generator to charge the battery, and a drum of fuel.

My personal pack held merely a change of clothes and some food. The medical packs contained an assortment of things—instruments for minor surgery, large supplies of bismuth in oil to inject for yaws; iodine and salicylic acid paint for tinea imbricata, a prevalent skin disease; epsom salts, a very popular medicine, which we bought frequently in hundredweight lots; quinine for malaria; aspirin; and sundries.

On one of these patrols we visited a group of villages behind Milne Bay, using this as our starting-point before we went through the whole area. We boarded the launch during the afternoon. Our destination was twenty miles off, and I liked to get there before dark so that we could get an early start the next morning. The patrol started off well. The day was fine and there was a light breeze blowing. Progress was easy on the flat earth road in from the coast, and jokes and gossip flowed up and down the line.

After a few miles we left behind the gardens with their rows of sweet potatoes, yams, and other foods, and as we started climbing the track began to peter out. Ahead of us went our guides with their big bush knives, chopping off obstructing canes and tree branches. Soon the jungle had become so dense that visibility was limited to a few yards. I could not see any track at all, but the guides seemed to be quite sure of their direction. As they went they kept cutting down odd saplings and taking chips out of big tree trunks. I presumed they could see evidence of old slashes in the trees to keep them on course.

By now the talk had faded away and the line was beginning to straggle. The mountain seemed to get steeper and steeper. We looked for footholds in tree roots or rocks but found it difficult, because everything was wet and slippery. Just then a shout came from down the line; one of the party had been bitten by leeches. Matches were produced and everyone watched to see which would catch fire first: the hairs on the victim's leg or the leeches. Off went the leeches, a handkerchief was tied round to keep flies off the blood and on we went. Now and again someone would spot a tree-orchid and we would briefly stop to admire and then push on. I was struck by the quietness of the jungle. Apart from the call of a distant bush turkey, there seemed to be no animal life. I was brought sharply back to reality when, brushing past a bush, I dislodged a bull-ants' nest. In an instant, a cascade of biting insects fell down my back. There was much slapping and stamping, and we escaped as quickly as we could. I was beginning to think this mountain must be Everest when there was a shout from our guides: they had reached the crest. We broke through the trees and looked across to where on a ridge opposite us and separated by a deep valley we could see the village which was our destination. It seemed very close, and a lot of yodelling went on across the valley between our party and the villagers.

We called a halt, and in no time someone had a fire going and the billy boiling. After a good cup of tea we all felt better. Then everything was packed up and we started

off down the hill. Unfortunately the going was worse on the downgrade. I could hoist myself along with the aid of tree branches or lawyer cane on the way up but this was not much use going down. Slipping, sliding, and jumping, we all finally managed the descent. After this rough going, the big boulders in the river were easy. Then up we went again.

By the time we had reached the village we were all tired, but we got a warm welcome and soon made ourselves at home. A hessian shelter was rigged under a tree branch, a rope thrown over the limb, and up went the bush shower. This ingenious device is made simply from a bucket with a rose and tap underneath. When it is filled with hot water, it makes a very efficient shower.

Refreshed by this and a change of clothes I joined the party at the fire. The isolated villagers wanted to hear what news we had, and the talk flowed freely. The local language of these people was unfamiliar to us, so out of consideration for their visitors, most of them spoke in Suau. I could follow some of what was being said, and when I was stuck for a word Nedi translated for me.

Soon it was time to eat. The Papuans consumed heaped plates of taro, yam, sweet potatoes, and coconut, with green leaves (*aigaru*) for flavouring. This vegetarian diet is adequate for nutrition if taken in large quantities, but because I was used to more concentrated foods, I could not eat as much. I added some tinned meat to my serving, and this, combined with the vegetables, made a fine meal. We drank green coconut juice and tea.

When it was dark, following the sudden sunset which is characteristic of the tropics, Kahana Pita, my orderly, extracted my Li-Lo mattress and started to blow it up. In no time the village belles were clustering round, and oohs and ahs filled the air while Kahana put on a virtuoso performance of blowing. When he had fully inflated the mattress, some latecomers arrived, and so he had to give a repeat performance. When the job was completed I slid under the mosquito net, accompanied by a horde of buzzing fellow-travellers. I am inclined to agree with

Mark Twain's advice to open the net, let all the mosquitoes in, and then sleep outside.

I read for a time, said a short prayer, then put out the light and was asleep in minutes. Once or twice during the night I awoke to hear someone talking. I cannot understand what these people find to talk about, but it is a fact that you can go into any Papuan village at night and someone will be talking. Presently I heard a bump, as a pig decided to scratch himself on the piles of the house, then suddenly some misguided rooster considered that dawn was at hand and greeted it with his raucous noise. Immediately a chorus started up as the roosters in the village joined him. The dogs, not to be outdone, started barking furiously, and away in the distance the next village's roosters started up. I could hear the sound repeated in village after village. At Kwato these roosters were such a pest that I had often thought of removing their vocal cords but the cunning birds seemed to divine what was in store and I was unable to catch them.

Morning came, and after breakfast we got to work in the outpatient department—here, the village street. The sick parade included old people with bronchitis, children with malarial spleens, babies with nothing wrong with them (but with mothers who wanted reassurance), ulcers, and wounds which needed dressing. Meanwhile the word had gone out for those with yaws to fall into line. Yaws, caused by a spirochaete nearly indistinguishable from that of syphilis, is carried by flies or contact. It was very common in these inland areas, and caused deep penetrating ulcers and bone destruction. Bismuth injections were highly effective and immensely popular. Apparently they were regarded as super magic, for when I was visiting Papua New Guinea twenty-five years after I had left it, a Papuan came up to me in the main street of Samarai and greeted me.

"*Taubada*," he said, "do you remember me?"

"No," I said, puzzled. "Who are you?"

"*Taubada*," he answered with a beam, "when you were here you injected me."

The bismuth was suspended in oil, and because of this it had to be given through wide bore needles. Because of the great number of people needing injections (these ran into many hundreds in some patrols) we had worked out a mass-production technique. Banana fronds would be spread on the ground on each side of the village street, men on one side, women on the other. The steriliser would have already been started, so the procession could commence.

Each candidate bared a suitable place on his rump. One of the nurses went in front of me with a bowl of antiseptic lotion and cotton wool. The target area was cleaned, presenting concentric rings of dirt like the roundel on an R.A.F. aircraft. I selected a needle and plunged it into the bull's eye. Behind me came Kahana with a large syringe of bismuth, from which he injected the appropriate amount like a mechanic greasing a car. Behind him, another nurse plucked out the needle and transferred it to the steriliser. Our royal progress created tremendous enthusiasm, and everyone turned out to see the fun. Those who had had their injection doubled up to the front and in lurid terms assured those yet to be treated that it hurt like anything. Their pleased relief, when they found that it did not hurt at all, only made them more eager harbingers of doom. By this time there would be a noise similar to that of a crowd at a football grand final. Some argued that if one injection did good, a second would do twice as much. They would try to get back for a second shot, and have to be forcibly restrained. By the time all had had their go, the villagers' entertainment was complete.

Next came the much less exciting dental work. All those who needed extractions formed a queue. Each patient provided his own cup (a half coconut shell) and rinsed his mouth with antiseptic. A log served as a dental chair. "Mouth wider open," I would call. "Push his tongue over to the other side, Nedi." With some rocking and pulling, the tooth would be extracted, and this successful result would be greeted by obvious relief on the part of the patient and approval from the watching crowd.

Meanwhile treatment would be started for those with tinea imbricata. "Imbricata" is the Latin word for a scale, and this unpleasant fungus disease was so called because it showed on the body in large scaly patches resembling the leaves on a tree. It was both unsightly and very itchy. A saturated solution of salicylic acid in strong tincture of iodine was used to treat the ailment, and although this was highly effective it was also extremely painful. A single application was enough to kill the fungus, but the solution had to be used with care because of its toxic effect.

The nurses had told those to be treated to go to the nearest creek and scrub their rash with sand and coconut fibre to remove dry scales. When this was done, a patch would be painted with the solution, using a paint brush. Immediately the unfortunate patient hopped about like a dervish while his or her relatives fanned the air to ease the pain. Then another patch was done, and so on. After it was over everyone was grateful because it stopped the incessant itching.

When we finished our time in the village, we would give parting advice on further treatment, leave some supplies, tell the mothers about the nearest ante-natal clinic, and go on to the next remote settlement. A few days later we would get back to Kwato; and it was back to work again.

Medical patrols often provided us with a number of stories to tell when we got back to Kwato. All sorts of amusing situations might, and did, arise. Once, I was half-way through a patrol when I decided to take a short cut through the back of a European-owned plantation. I and my party were nearly at the next boundary when a boy ran up to us, saying that the boss wanted to see me. The planter was waiting on the verandah of the house when I came up, and he asked me what on earth I thought I was doing. I explained that I was on medical patrol, that I and my helpers were tired, and that we had simply taken a short cut.

"You shouldn't pass without coming in," he admonished me.

I apologised, and agreed to go inside to have a drink. He was obviously a lonely man glad to have company, and we got on famously. As I finally rose to go, he shook my hand warmly, and then suddenly burst out laughing.

"Do you know who I thought you were?" he spluttered. "A bloody missionary!"

"Well," I said, "you were perfectly right. That's exactly what I am."

On another occasion I joined forces with Sydney Elliott Smith in a joint patrol of Milne Bay. Syd, at that time Assistant Resident Magistrate at Samarai, was a friend of ours and a man for whom I had a great deal of respect. During his time at Samarai the control of law and order was never better. He was a firm administrator, but at the same time knew how and when to turn a blind eye.

His aim at this time was to build a road round Milne Bay, something which would be of great benefit because it would make vehicular traffic possible. Of course there were no funds available for this purpose but this did not deter Syd Smith. He would walk into a village on the route and after tea would talk to the headmen about the advantage of a road to the next village. Everyone would agree with him, but with no great enthusiasm. They would estimate how many man-hours would be necessary to do the job, and Syd would then appear to drift into a sort of coma during which he would mutter something about inspecting the village the next morning. If he found so many roofs needing repair, or pigs unrestrained, or the Council house not in order, he would have to impose prison sentences or fines adding up, by a great coincidence, to the figure needed to do the road. He would then appear to wake up, and would abruptly begin to talk about something else. The next morning he would be in too much of a hurry to inspect the village but would warn the inhabitants that he would return in a month. Four weeks to the day, he would be back, to find that the village was in perfect order and, amazingly, that there was a new road leading to the next village. Syd would congratulate everyone effusively on

their public spirit, then pass on to the next village on the route.

Our joint patrol was a hilarious affair. Syd had a robust sense of humour and as we walked along he produced a fund of stories about various eccentric identities. The government expedition on this occasion was the annual taxation patrol. Under legislation, each Papuan had to pay a head tax of ten shillings per annum. The idea was partly to produce revenue but more importantly to induce the villagers—many of them somewhat indolent by our standards—to do some productive work. In this it signally failed because when the time for payment of taxes drew near many villagers would take a dish and go panning for gold, usually returning within a day or two with enough to meet their dues for the next twelve months.

We gradually moved round the bay, Syd holding his court at one end of the rest house verandah while I established my consulting room at the other. Syd was frequently faced with a peculiar problem. Papuan people have a habit of nonchalantly taking a new name when they get tired of the old one, and the result was that when the taxpayers' roll was called there would be silence at name after name, and at the end there would be a crowd unaccounted for. Sorting out who was who last year must have been an exasperating business and Syd was not liking it. Suddenly, he bellowed "If this goes on much longer I shall lose my sense of humour!" There was a shocked silence. The police, having no idea what a sense of humour was, were horrified to hear of *Taubada*'s impending loss and looked in all directions for the culprit. I am afraid I spoiled it all by my irreverent guffaw.

As we moved down the bay Syd became increasingly concerned at the obvious decline in the birth rate. When we reached Maivara, at the head of the bay, the census revealed that no children had been born during the year. I had my own ideas as to the reason, Nedi having made a few discreet enquiries. However, Syd, whose strong point certainly was not finesse, paraded all the women in front of him and demanded to know why they were not bearing

children. Needless to say there was dead silence. Rising to his feet he told them categorically that he would return next year, and by then he would expect every woman to have a child. Perhaps fortunately for all concerned, by the following year the Japanese invasion was under way and Syd had other duties. It was unfortunate that the war could not have been postponed: it would have been an interesting confrontation.

Sometimes we had to go on patrol unexpectedly, and occasionally it happened that I was unable to go myself. One night my wife, Freda, and I were staying at Bisimaka, one of our stations in the Milne Bay area, when we saw a light flashing from the direction of Duabo, our hill station at the head of the bay. The message, in morse code, told us that someone was seriously ill, and that help was urgently needed. I was unable to leave Bisimaka, so Freda decided to go in my place. She knew that ahead of her lay a journey of several miles up the coast in a dug-out canoe, followed by a two-hour climb through the jungle, all in total darkness apart from the light of a kerosene lamp. Three Kwato men offered to act as guides and escort.

As the canoe set out in the darkness, Freda was feeling far from comfortable. These frail vessels have only a few inches of freeboard and are easily capsized. Moreover, the waters were shark-infested, and crocodiles haunted the near-by creeks. In the darkness the canoe ran aground on a sandbank, but it was soon floated off and the trip continued, while Freda wondered anxiously what next would happen to them. However, they completed that stage of the journey uneventfully. When they finally landed and were walking along the jungle track, they became aware of the ominous sound of beating drums. As they got nearer to a village, one of the men warned her that a dance was in progress, and that she should on no account speak or make herself conspicuous. To add to her discomfort they found, on entering the village, that the path to the log bridge she had to cross was blocked by a long line of swaying bodies. She hurried past with her

guides, drums beating in her ears. But she need not have worried. An old man clad only in a leaf loincloth stepped forward. He held the lawyer-cane hand-line tight with one hand and with the other, giving her a bow which would have done honour to a queen, assisted her on to the bridge. Freda might well have agreed with the man who said, "Sir, I perceive we are among gentle folk."

There were no barriers of race at Kwato. Papuans and Europeans worked together on equal terms, and each group of people was able to learn a great deal from the other. I myself have gained a feeling of comradeship with the Papuan people which still exists after thirty years.

It has always been incomprehensible to me that allegedly intelligent people can regard the presence or absence of a few extra pigment cells in the dermis as a reason for separating one person from another. For me, this distinction is so insignificant that the only time I ever thought of it was when our cricket team took the field: in their immaculate white shirts and trousers our men, with their darker skins, stood out more strikingly. My young daughter was mystified by the difference in colour, but believed hopefully that, in time, everybody would look the same. "Daddy," she said to me one day, "when will I be brown and be a Papuan and wear a grass skirt?" Michael, my eldest boy, was even more definite in his views. Once, as a treat, he was taken by his Papuan nurse to visit the more cosmopolitan island town of Samarai. But the numbers of Europeans seemed strange to him, and he clung to the nurse in fright, crying, "Too many *dimdims*, too many *dimdims*!"

There is a story often told about Charles Abel in the early days of the mission. As he was walking along a forest track one afternoon, he took a number of village women by surprise. They fled immediately, but one of Abel's carriers called out after them, "It's not a white man, it's only a missionary!" Straight away the women turned and came back, apologising in embarrassment, "Oh, *Taubada*, we thought you were a white man!"

C. T. Studd, the veteran African missionary and former Cambridge cricket blue, used to say: "Keep the African off your verandah, and you will keep yourself out of his heart." We had no intention of letting that happen at Kwato.

Papuans were often a challenge to me because of their uncanny ability to see clearly the essence of a situation instead of being distracted, as we so often were, by extraneous matters. In 1938, Mahuru Mark, who was one of our best boat captains, and who is now a councillor in the District of Milne Bay, went down to Sydney to do a course in marine navigation. I stayed with him while my family and I were on leave, and I was intrigued to hear him being interviewed on the radio regarding his impressions of Sydney. As we listened, we wondered whether he would rhapsodise on the Sydney Harbour Bridge, or the big ocean liners, or the stately buildings. But when the interviewer asked him, "What impresses you most about Sydney?" he replied without hesitation: "To see white men working!"

Incidentally, not all of our boats' crewmen were as good as Mahuru. One in particular, an engineer, was not at all keen on long voyages away from the comforts of home, and invariably used to discover some ailment just before the boat was due to leave. Cecil Abel finally sent him down to me, and asked me to check him over and see if there really was anything wrong with him. I gave him a careful examination but found that he was quite definitely malingering. I sent him back to Cecil with a note saying that he was suffering from *oscillans plumborum*. The man read the note on the way back, as I was sure he would, and by the time he had reached his destination he was firmly convinced that his life was in grave danger from this terrible affliction. Cecil, too, read the note and was very concerned; but he was puzzled by my footnote that I left the treatment to him. Then suddenly his memory of Latin came back to him and all was made clear. The awful diagnosis, in its English translation, was simply "lead swinging." If that engineer had been equipped with a

rocket-assisted take-off mechanism, he would not have reached the boat any quicker.

For me the problem of "distinction" did not arise at all, except for one thing—and this was nothing to do with colour. The fact was that, due to my position, my Papuan nurses were inclined to put me on a pedestal. This situation, naturally, was not of my own choosing. I had a perfect chance to show them that I was a mere mortal when I developed a large tropical abscess. I appointed one of the nurses to give me a general anaesthetic, and then, happy to leave myself in Rali's hands, I went peacefully to sleep. When I woke up, I found that the abscess had been drained by a small incision. I asked Rali why he had not, as he had always been taught, made a large cut instead of a small one, which would soon close over and stop drainage. "I would have, if it had been anyone else but you," was his rather injured reply. I roundly ticked him off for making distinctions, and told him that if the incision became blocked he would, of course, have to repeat the operation. It did block, and when Rali found that he did have to do the job a second time, he determinedly made no distinction.

I used to have the same trouble in the villages. I sometimes gave advice or directions which the villagers from practical experience knew to be faulty, but they would follow them diligently without correcting me. At the village of Maivara, for example, there was a sanitation problem. Because there were no latrines and the village was a dirty one, fly-borne enteric epidemics were common.

To help solve the problem, I designed two latrines; one on the east side of the village over a deep-bored hole, the other on the west, over a fast-flowing creek which opened on to the sea. Everyone set to without further comment and built the necessary shelters and staging. Some time later, when I inspected the village, I found that the inland latrine was obviously well-used, but the one over the creek (about which I had been particularly pleased) had clearly never been touched. I asked the reason for this, and got all sorts of fanciful answers. Eventually I insisted on the truth. "*Taubada*," I was told, "just

where you built that stage is where the crocodiles come up." They had known this all the time, but because of their wish to show politeness and respect, they had never told me.

This was not the only time I was made to look foolish at Maivara. Everyone was keen on a cricket pitch for the village, so we cleared a space without any trouble until we came to a tall coconut tree in the centre. The villagers were about to dig out the roots until I told them not to bother; we would pull it over. A lad was sent up the tree and he attached a heavy rope to the top of the trunk. The whole village got on to the rope and pulled but the roots remained firm, as the people had known they would. The top of the tree went down until the palm fronds touched the ground, but it was obvious that the attempt to pull it over would have to be abandoned. I shouted out that when I dropped my hand everybody was to let go the rope and stand clear. Did everybody understand? Yes, they all did. Down went my hand, and everybody let go—that is, all except one. This unfortunate man held on, and as the tree sprang back he soared up in a giant parabola to land in a clump of bushes several hundred feet away. Luckily, apart from fright, and sundry thorn and twig scratches, he was none the worse. To the villagers, it was the highlight of the year's entertainment.

Admittedly, these people found easy entertainment often in what might seem to us to be the simplest of pleasures. At one stage, a kind supporter presented us at Kwato with a 35-mm cinema projector. I should imagine it was a superseded model from some cinema, but it worked well. Unfortunately, 35-mm films were beyond our financial resources and only one reel came with the gift projector, an old Charlie Chaplin silent movie showing Charlie at his favourite occupation of rescuing damsels in distress. In the film, Charlie had secreted himself in the branches of a tree under which the villain must pass. As the "baddie" reached the spot, the hero leaned over and dealt him a resounding wallop on the head, with most satisfying results.

This was probably the first time our Papuans had seen a motion picture film and they were entranced with it. When it came to the moment of Charlie's courageous feat, there was an audible gasp; no one knew whether to be pleased or sorry. Next month, when it was shown again, everyone was waiting on tip-toe for the great moment. The following month, the full house attendance would have gladdened the heart of any cinema magnate. This time, shouts rent the air as the gleeful audience warned the victim to be careful, and when he blundered on to meet his fate cheers and recriminations were hurled at him. I am sure that if Mr Chaplin had witnessed the appreciation of his fans at Kwato, no Oscar could have seemed a greater tribute to his genius.

This simple, friendly rapport between Papuan and European did not, of course, always exist. In his biography, *Charles Abel of Kwato*,* Russell Abel records that seven Europeans were murdered by Papuans during the first years of his father's residence in the district. Charles Abel's close companion, James Chalmers (Tamate), was killed and eaten by cannibals, and Abel himself, on more than one occasion, narrowly escaped being slaughtered by hostile tribesmen. It was some time before Abel managed to gain the trust of the Papuan. But danger was still to come to him from another direction.

The discovery of gold in Papua (then British New Guinea) brought prospectors and miners to the ranges and valleys as yet beyond control of the infant administration. Substantiated reports of murder and rape in the villages brought Abel into conflict with men of his own race as he sought to defend the way of life of the local inhabitants and to protect them from abuses and intimidation. This became known in official circles, and when Abel went to Australia in April 1904 he was asked by the Federal Minister for External Affairs to give information on what he knew of recent happenings in the country. Accordingly, he sent a submission to Mr Atlee Hunt, then Secretary of the Department of External Affairs.

* Russell Abel, *Charles Abel of Kwato*, New York, 1934.

Reports of misconduct among Government Officers had already reached Australia prior to Abel's visit. Such reports culminated in news of the so-called Goaribari massacre. A Royal Commission was set up to enquire into the truth of the allegations. During this time feeling among undisciplined miners and some Government Officers ran high against Abel, and some of the local men, of their own volition, formed a bodyguard which never left him. He was not, however, without any European friends; Hancock, the Medical Officer stationed at Samarai, watched over the safety of Mrs Abel and her cousin who remained at Kwato while Abel was away.

There is still an inscription in the main street of Samarai which recalls the bitterness of those days.

Such times were long past when we came to Kwato. By then, law and order were firmly upheld, and Kwato had become a household word in Papua. The only people of questionable background to visit our peaceful island were those wandering souls known as beachcombers. Before the first World War, Papua was an ideal refuge for many who had reason to bury themselves away in remote places—the black sheep of aristocratic families, supported by remittances; those who had tangled with the law in Australia or England; and those who simply sought an easy life in the sun. A few acres of land cost little, fish were plentiful, the climate was warm and sunny, and there was always a willing Papuan mistress at hand. Who could want for more? Many appreciated such advantages, and settled down happily to their new existence. Some of these were highly-educated men; a few had even been known to quote passages from the Greek classics when they were in their cups; and one was a scion of one of the oldest aristocratic families in Europe. Most never mentioned their past, and it was not considered polite or tactful to ask for details.

Nearly all of these beachcombers were on good terms with their Papuan neighbours, but I remember one, a prospector living in a remote area of Milne Bay, who was not. One evening, as this man was relaxing with his

customary drink, he found the first sip tasted so unusual that he flung the rest out of the window on to a lawn, where it promptly killed the grass. The police dug up the sod and brought it to me for analysis. My knowledge of analytical chemistry was very elementary but I reckoned that poison of this strength must be either a cyanide or arsenic, the only two industrial chemicals which could have been stolen from the gold-mines. Cyanide would have been fatal, so it was probably arsenic. I rigged up equipment for March's test and, to my great gratification, got a heavy deposit of arsenic. I described my findings in court where the culprit, a Papuan, was on trial for attempted murder. It was the first and last occasion on which I functioned as an analytical chemist.

Eccentrics flourished in this strange country, and we were constantly chuckling at the stories which drifted about on the grapevine. There was the motor launch captain, sailing up the north-east coast, who decided one day to drop in on his friend the Assistant Resident Magistrate at one of the government stations on the coast. It was afternoon, and not finding his friend either in his office or home, he tried the court-house. Sure enough, there he was up on the bench. No one else was in the place. He looked up when the captain entered but said nothing. The captain sat down and waited. Punctually at four o'clock the Magistrate rose to his feet and said in a loud voice, "The Court of Petty Sessions is now ended. Good afternoon, Fred, how are you?"

This same Magistrate was renowned for his sartorial perfection. On one occasion he pursued a murderer for three months, then, with the criminal in tow, emerged from the steamy jungle immaculately clad in white shirt and long trousers. My only contact with him was when we met on the wharf where I was seeing off some patients. One of them had a wound covered with a dressing which was held in place by a bandage across his chest supported by two shoulder straps. The Magistrate was not very fond of missionaries. He thought they "mollycoddled the natives," and this spectacle confirmed his views. He

looked at the man with disgust, and said in a loud voice, "Now I've seen everything. They even dress the men in brassières." (Incidentally, I may state here that we never favoured the "Mother Hubbard" dresses worn by the girls in some missions. Our girls dressed in simple cotton skirts, and the older women wore European dresses unless they preferred a grass skirt for some special occasion. Grass skirts may look attractive but, in village life, they are worn with the new skirt on top of the old and they are apt to get a bit ragged.)

One Sunday morning, a group of Government Officers were sitting chatting in a house at the end of the main street of Samarai. During the course of their conversation, some question came up which could only be answered by reference to specific documents. One of the officers called up his "boy." "Go down to my office," he said, "and bring back the papers in the safe." The man disappeared down the road. The Government Officers continued their talk for some time, and then they became aware of the sound of shouting. Away in the distance they could see a crowd of Papuans moving slowly towards them. When the group came nearer they saw that four men were carrying the office safe, slung between two poles. To get the safe out, these zealous workers had had to dismantle one entire wall of the building.

One of our staff was a marvellous worker with people, but not always so clever over practical matters. She will, I hope, forgive me if I tell this story. As she was going over to Samarai one day, one of the engineers gave her a shopping list for the ironmongery store. The lady came up to the counter with her order, and the first item she read out was "half-a-dozen post holes." The salesman looked at her and saw she was in earnest, so he joined in the joke.

"Do you want them with sky hooks or without?" he asked.

"I've no idea," replied the baffled customer. "They didn't tell me which."

Practical joking on a grand scale went on among the miners of the New Guinea goldfields. Here, once, a

visiting Australian dentist extracted all the teeth from a number of people, took impressions, and promised to send up dentures from Sydney. The little boxes duly arrived, and one prankster kindly offered to deliver them to the various recipients. Instead, he took them home and mixed up the various sets. For weeks afterwards, the wretched toothless people were reduced to accosting each other in the street, removing their dentures, and offering them around, saying, "Try this and see if it fits."

One north-east coast mission was run by a very enthusiastic Anglican priest, who was sorely grieved that the children of the neighbouring village did not attend school. In an attempt to remedy matters, he complained to the Magistrate. The latter was sympathetic, but said that regulations were regulations, and since the village was further than the statutory mile from the school the children could not be compelled to attend. The priest promptly denied this. The distance, he said, was clearly less than a mile. The argument continued for days, neither party convincing the other.

Then the Magistrate laid down a judgement of Solomon. "The reasonable man," he said, invoking that mythical creature so beloved of jurists and A. P. Herbert, "walks at an average speed of four miles per hour. If you can walk from the village to the school in fifteen minutes I will compel the children to attend."

"Right," said the priest.

A date was duly set. The priest made sure the road was clear of obstacles, and then, clad in suitable garb, he stood poised on the starting-line. He did not own a watch, so his "boy" stood beside him, carrying an alarm clock. Down went the starting signal, and the priest strode along the track like a true Olympian. He entered the village in a state bordering on apoplexy, but with just enough breath to gasp to his faithful retainer, "What's the time?"

Unfortunately, the clock had stopped.

Chapter Thirteen

THE YEAR 1939 CAME AND WENT. As we had already visualised the war-clouds gathering in Europe and the apparently inexorable progression towards conflict, the actual declaration came as no surprise. In fact I think it was almost a relief to us that we now knew where we stood. Newspapers, in batches, arrived only every three weeks on the steamer service from Australia, but a homemade short-wave receiver gave us the B.B.C. news every night.

Many local people left to enter the armed forces. I wondered whether I should enlist as well, but felt that my job in Papua was not yet finished and that in terms of human life I would, for the time being, be more useful at Kwato. The even tenor of our life flowed on. Steamers arrived as they had in peace-time, and goods came as usual from Australia. Perhaps the only new feature was the increasing number of Japanese fishing boats. These were well-equipped with depth sounders and crewed by large numbers of men who appeared keen on photography, so that the "fishing" pretext seemed to be rather unconvincing. Our suspicions were further borne out by the realisation that large Japanese merchant ships seemed to

be able to travel by routes marked on our charts as being blocked by impenetrable reefs; clearly, they had different charts from ours. Of course the reason was, even then, fairly obvious. There were two possible sea routes to Australia from the north. One was via Thursday Island, and was well-documented; the other was via Samarai, and was not.

The year went by. It was now 1940. Training and development of the medical work at Kwato went on. The organisation was running smoothly by this time, and the whole of our area was regularly covered by medical patrols. Then one day, during my morning quiet time, I had an impelling thought: "Develop local substitutes for European materials." This was not wholly a new idea—I had been interested for quite a while in some of the local herbal remedies. One, I remember, had an ergot-like action on uterine muscle, making it contract to stop haemorrhages; and another was effective in curing asthma. There were many others. I had long wished to find out more about them, but had been busy with other matters. Now, however, I was clearly guided to make a major effort to devise substitutes for all those materials most commonly used in medical practice. So my staff and I set to work, making soap from coconut oil and wood ash, and cotton wool from wild cotton. We crushed nuts and seeds for oil, and made a substitute gauze from tree-fibre, softened by soaking in water. The fibrous lining of a coconut husk made a sterile suture which was non-absorbent and had a springy tension.

Some of our friends in Samarai were highly amused by all this seemingly aimless activity. They began to query my sanity—after all, why should we spend hours making up all these crude materials when we could easily buy better articles over the counter? I did not know the answer either, but I was sure I was doing the right thing.

Suddenly, I knew why. The war in Europe and the submarine struggle in the Atlantic had cut off shipping. We were to receive no more supplies from overseas; and Australia needed all it had. Hospitals all over Papua

New Guinea found their supplies dwindling, and there were no replacements. However crude our materials were, we at Kwato were able to carry on, and we did so right throughout the war.

By 1941 all of us now had relatives or friends in danger. My brother in the Royal Navy had seen action on a destroyer; after the war I found out that he had been on the Malta and the Russian convoys. It was clear that the Japanese would soon come in. I realised that my time at Kwato was drawing to a close, and so I rehearsed with my nurses all the things they would need to know if they were left on their own. I had the utmost confidence in them. They were trained to be self-reliant and if necessary to take risks in treatment when they could not get skilled medical help.

I went on what turned out to be my last patrol in Milne Bay. Calling in at the Ahioma Desiccated Coconut Factory, I was just in time to hear, on the manager's radio, the B.B.C. news. In measured tones, the newsreader announced that both H.M.S. *Prince of Wales* and H.M.S. *Repulse* had been sunk off Singapore. I looked at my host and he looked at me. We just could not believe our ears. We knew that Corregidor in the Philippines had fallen, but after all that was American. We had been certain that it would be a different story when the Japanese came up against the might of Britain and her impregnable fortress of Singapore. We waited to hear the announcement again on a later news bulletin, and only then were we able to believe that it was true. The last Allied defence of any consequence between Japan and Australia had fallen.

Everyone else seemed to wake up too. The regular steamer service to Papua stopped, and the R.A.A.F. came to the rescue. My wife was already in Australia, having medical treatment, and I made arrangements to have the children evacuated. I watched with anxiety as the big Empire flying boat taxied in to the Samarai anchorage and boat after boat laden with women and children disappeared into it. The numbers seemed never-ending, and indeed the passengers were sitting on each other's

laps and on the floor. The takeoff seemed interminable but eventually the plane staggered into the air and started to climb, disappearing behind Kwato.

I found Samarai transformed when I went over there next day. Men who would normally work in immaculate white shirts and trousers appeared now, in the absence of their wives, in old shorts, pyjamas, and even bathers. There was an almost festive air about the place. The New Guinea Volunteer Rifles, of which I was a member, turned out for their twice-weekly parade, and I dutifully went through my bayonet drill knowing thankfully that, as a doctor, I would never have to put it into practice. Our brave attitude was somewhat dampened by the news that a Japanese aircraft carrier escorted by two cruisers was bearing down on us. We were armed only with rifles and hand grenades, and so the order that Samarai was to be held seemed a trifle unrealistic. We were all relieved when this was countermanded and we were ordered instead to report to Port Moresby. Civilian work stopped and people began to leave for Australia.

I concluded my work at Kwato and went over to Samarai to arrange my departure, only to find that the place was in chaos. The gaoler had already left for Australia leaving the gaol full of prisoners, and the medical officer had done the same thing, leaving a European medical assistant to cope with a hospital full of patients. I asked God's direction and the answer was that I should stay on and help. The medical assistant worked like a beaver, arranging the discharge of patients to their homes, making up supplies of drugs and other treatment items to go with them, and giving instructions on how to contact our nurses if they were in the Milne Bay area, and so forth. The Resident Magistrate and his officers worked hard too, making arrangements for the stranded prisoners and organising the evacuation of the area.

Meanwhile, the war was upon us, and survivors from Rabaul and further north were trickling in, some of them wounded. R.A.A.F. Catalinas, landing at Samarai to refuel, would disappear and return hours later looking

very much the worse for wear. One of these, coming in after it had completed a mission, was so battered that its wings were flapping like those of a giant duck. I asked the pilot, Squadron Leader Cohen, what on earth he had been doing. "Dive-bombing Rabaul," was his nonchalant reply. A more unlikely plane for dive-bombing would have been hard to find; to the anti-aircraft gunners it must have looked like a flying elephant. No wonder the wings were flapping.

Later, as I was chatting to Cohen at breakfast in the hotel, I remarked upon the recent case of a rather notorious murderer who had managed on some pretext to persuade his Papuan warder to let him tie him up, and then cut the warder's throat from ear to ear. "I wonder what happened to him?" I said. "Oh," remarked my neighbour, "he is the waiter who has just served you!"

Time marched on. The last passenger ship had gone, the radio station had closed down, and we seemed to be forgotten. But we were not forgotten. Every day I got my instructions from God clearly and concisely. Never before or since have I received messages with such clarity. Each day I hoped I would be given my marching orders to join my wife and family, but instead I would be told just what to do that day. Many of these thoughts which came to me concerned preparations for possible emergencies which were really the province of the administrative branch, so I would suggest to the Resident Magistrate what I had been told. Again and again an apparently unlikely idea would prove to be a solution to an unforeseen problem.

Some weeks later I was talking to a friend of mine, an R.A.A.F. Squadron Leader, who had just escaped from Singapore. He, too, had the same experience of receiving clear thoughts from God, amid the turmoil there. He had passed on some of these thoughts to his superior officers, and in this way had directly contributed to the safety of a considerable number of R.A.A.F. personnel. We both agreed on the clarity of the guidance we were given at this time, and on the accompanying sense of confidence and inward peace.

We at Samarai did what we could in all possible practical ways. At one time, we saw a Japanese reconnaissance plane come over, flying low, and we guessed that photographs were being taken of Samarai. A large number of fuel drums for the Catalinas were stacked on the wharf, and it was clear that if these were bombed the whole place would go up. There was no time to waste; they were rolled into the sea and after dark they were towed across to the mainland. Piles of empty drums were stacked on the wharf in their place, and sure enough these were bombed soon after. The Japanese must have been disappointed at the results.

Preparations were being made to adopt a scorched earth policy, but the sight of the big stores stacked with food and essential commodities, soon to be burnt down, while our people would be forced to live off the land, was too much for me. I could do little, but I got in touch with the last of our European staff on Kwato and asked him to come over to Samarai with the biggest launch he could find. We both began to salvage as much as possible, loading the vessel down with food, soap, and other necessities. While we were busy with our work we heard faint noises from behind a partition at the end of the store. When we investigated, we found the Bishop and the Archdeacon doing exactly the same thing.

One morning, an extraordinarily vivid thought came to me: "Your work here is over. You may go." I left Samarai that day, and crossed over to Kwato. Later, I heard that half an hour after my departure a radio message had come through, ordering the total evacuation of Samarai.

Final arrangements still had to be made at Kwato. Then, accompanied by Geoffrey Baskett, who was the last of our staff to remain, and a small party of nurses, I departed. Our only way out was to cross the mountains to Milne Bay and from there go down the Bohutu Valley to Siasiada, where we thought there would be a launch.

As we set out on our climb across the mountains, I felt the first shivers of an approaching attack of malaria.

What happened after that is hazy in my memory. I can remember shivering and feeling cold, and I recall that the sole came off one of my shoes, and that I had to stumble on with my foot wrapped in strips of bark. The climb seemed never-ending. Eventually, on the far side of the range, we came to a dried-up river-bed, and I called a halt, telling my nurses that I was going to lie down for ten minutes. Some time later, I awoke to find Nedi kneeling beside me, holding an umbrella over me to keep off the rain. She had been kneeling like that on the stones of the river-bed for the best part of an hour.

We descended the slope to the bay, and came across a collection of villagers huddled together under a makeshift shelter. They looked miserable, for it was cold and wet and they had very little food. They said that they had heard that "Japan man" was coming and would kill them all, so they had fled from their homes on the coast. I told them not to be afraid, that this war was between the "Japan man" and the *dimdims*, not with them, and that they should go back and do what they were told if the Japanese came. We repeated the same thing several times to other groups. I am glad we went by this route. If no one had been able to help these people many might have died from the pneumonia to which they are so prone under adverse conditions.

When I was well doped with quinine and atebrin my fever subsided, and the rest of the long walk to Siasiada was not too bad. We found that the launch was in good order, and were able to set off immediately for Port Moresby. While we were passing Mailu, I felt a strong urge to call in. I found a lone missionary there. He was dying from blackwater fever, and there was little I could do for him beyond giving him the companionship of his own kind in his last conscious moments. His wife, who had been sent on to Australia, took the news bravely. She was, I think, somewhat comforted to know that someone had been with him in his last moments.

From Mailu, we went on to Abau, and from there we walked the eight miles to our station at Amau. Here we

found a great stack of vegetables waiting to be shipped to Port Moresby, for all the newly-arrived troops. They were already short of food there, but unfortunately the lorry at Amau had broken down and there was no other means of getting the produce to the coast.

We hopefully investigated the engine of the lorry and found the cause: the spring contact on the distributor rotor had broken. It seemed impossible to repair it, and there were no spares. We were nonplussed by this new predicament, but we decided to put the challenge to God. This we did; and almost immediately I saw an old torch battery. This gave me an idea. I used the brass spring as a contact and soldered it on to the rotor, using the sal ammoniac as a flux. The makeshift job worked well enough to get the lorry with its load of vegetables down to the coast.

I went in to the military H.Q. at Port Moresby to report, and was told to report to H.Q. Melbourne. Here was another problem: the last ship had just left. Then someone mentioned that an R.A.A.F. DC3 was due in. I rushed out to the airport, and found it preparing to return to the mainland. Permission was given to travel and in a few minutes we were climbing up into the sky, leaving the lovely blue water and white beaches of Papua behind. I thought of that morning nearly seven years before, when I had first seen this fascinating land in which I had then hoped to spend the rest of my life. That was not to be, but I could only marvel at the way in which God had led me, step by step, giving me a reward in the love of my Papuan friends, which has lasted ever since.

Down below us the beautiful colours of the Great Barrier Reef came into view. I was on the doorstep of Australia, and, though I did not know it then, I was coming to my second home.

In this witty and appealing autobiography, Dr Vaughan (a Dubliner, though educated in England) recalls his experiences as medical student in London, hospital intern (shades of *Doctor in the House*!), general practitioner and medical missionary.

Arriving in Kwato Island, off the wild coast of Papua, with his young family, he commences the work set him by God, which resulted in the establishment of the Kwato mission, a work full of action medical and spiritual—and success, despite intimidating odds. He recounts the story of how Christianity came to Papua, and how he was able to build on the foundation laid by Russell Abel in the infamous Kunika tribe.

He now works at Maharashtra, India, in his very active retirement

Cover design John McWilliam

THE SAINT ANDREW PRESS, EDINBURGH

Grosvenor Books
95P

ISBN 0 7152 0419 X