

## CHAPTER 10

### IN THE MARKHAM AND RAMU VALLEYS

THE 2/4th Field Ambulance, under Lieut-Colonel Hobson, had been assigned the task of supplying medical care to the 7th Division in its advance to meet the 9th Division at Lae. Before the operation began the headquarters of this unit, with the addition of a surgical team, had set up an M.D.S. at Nadzab, to which casualties were for a time admitted direct. As the forces advanced on Lae the lengthening of the line of communications made A.D.Ss. necessary. As the fall of Lae became imminent the Japanese escaped through the mountains northward to the coast, and by swinging out towards the west eluded pursuit.

It was evident that the 7th Division would assume the inland role in the coming operations, which were designed to dispossess the Japanese of the vital coastal areas. This formation had the task of pursuing the enemy up the alluvial valleys which lay to the west of the Finisterre Range, and cooperating with the Fifth United States Air Force in exploiting and expanding all valuable airfields. To the east, the 9th Division was once more committed to further sea landings, and coastwise drives, with the object of expelling the enemy from the Huon Peninsula. Once his important strongholds were taken, the desirable sea-land bases of the north coast would fall into Allied hands and make possible further conquests of other island territories then held by the Japanese.

Between the 7th Division's route of advance and the coast stretched central mountain ranges, in particular the Finisterre Range, which rose to a height of 13,000 feet. This range joined the mountain spines of the Huon Peninsula, and ran up to meet the Adelbert Mountains west of Madang. Separating these systems and other ranges farther inland were the flat narrow valleys of the Markham and Ramu Rivers, flowing in opposite directions to the sea. Along these valleys lay the route to be taken by the 7th Division, with little communication on either flank, save by native tracks. Roughly in the centre of the line running from Nadzab to the coast at Bogadjim was Marawasa, for a short time the site of the divisional headquarters, and fore and aft of this central area were placed a number of strategic points. These were of great importance, as they were airstrips capable of being expanded into valuable airfields. These were Kaiapit, Gusap and Dumpu. As we shall see, however, when the route sheered off from the Ramu Valley and headed for the deep indentation made in the coast by the Bismarck Sea, there were obstacles such as attacking troops in New Guinea knew only too well, precipitous ridges capable of strong defence and needing great tenacity and force to capture.

The 7th Division also had the task of preventing the Japanese from sending a force down the Ramu and Markham Valleys towards Lae. Thus the flank of the coast forces of the 9th Division was protected, and

the development of coastal bases was facilitated. Patrolling from Nadzab had not revealed any substantial enemy forces to the north until the day before Lae was entered, when a strong Japanese force was encountered. That day the 21st Brigade arrived by air at Nadzab, and began preparations for the forthcoming advance. Meanwhile, the enemy troops were found to be retiring beyond some of the flooded streams.

Two brigades of the 7th Division, the 21st and 25th, were now concentrated in the lower Markham area; there was no intention of bringing up another brigade as this would intensify problems of supply. The same applied to some extent to the medical cover, which was to be supplied by two field ambulances, Hobson's 2/4th and the 2/6th commanded by Lieut-Colonel R. J. Humphery, with the addition of surgical teams if required, and of course with the routine services of the R.M.Os. The 2/4th Ambulance had been brought up to strength several days before the fall of Lae by the arrival of its remaining staff by air at Nadzab. Posts were established at Boana and Yalu, and Majors E. H. Goulston and E. S. Stuckey were detached as a surgical team to the 2/6th Field Ambulance from the 111th C.C.S. Already there were shortages at Nadzab. There were not enough stretchers for all the patients who were evacuated by air to Dobodura and some were sent on palliasses until supplies arrived by returning planes from Dobodura. The M.D.S. was set up in the Gabmatzung Mission area, chiefly using tents and native huts: one large mission hut was very suitable for an admission and resuscitation centre. An A.D.S. was established on the No. 1 strip. Some of the blood arriving from Moresby was not fit for use, and on 28th September Brigadier Furnell, D.D.M.S. New Guinea Force, visited the unit and discussed blood bank arrangements.

After Lae fell the incidence of endemic disease was noted to be increasing; the 2/4th Ambulance was kept busy with sick from the 25th Brigade, chiefly owing to dysentery and pyrexia of unknown origin. This was not unexpected, as the river valleys and lower slopes of the higher ground were known to be malarious, both by reputation and by local surveys. A week after the entry into Lae the admissions to the M.D.S. at Nadzab for the previous fortnight numbered twelve officers and 277 O.Rs.; of these 87 had proven malaria, six being of the M.T type. More patients with the original diagnosis of P.U.O. were being proved to have malaria; 150 men with proven malaria were admitted to hospital from 9th to 27th September, and the proportion of M.T. was increasing. More cases of typhus also were emerging from the indeterminate class of P.U.O.

#### ADVANCE ON KAIAPIT

The next move was an advance on Kaiapit. As a preliminary, on 17th September the 2/6th Australian Cavalry (Commando) Squadron<sup>1</sup> was flown to an emergency landing ground west of the Leron River, a tributary of the Markham, and joining with a company of the Papuan Infantry

<sup>1</sup> The name of the Independent Companies was changed in September 1943 to Commando Squadrons. The headquarters units became known as Cavalry (Commando) Regiments.

Battalion, moved on to reach Kaiapit on the 19th. Vigorous attacks thrust a hostile enemy force back from one village, and on the next day from other villages also. On the 20th Kaiapit was in Australian hands in spite of a heavy Japanese attack, and men of the 21st Brigade were landing from transport aircraft on the airstrip. Further troops arrived from Nadzab and the position was soon secure. Next day battle casualties were flown from Kaiapit by a transport plane of the Fifth American Air Force; the same day the headquarters of the 2/6th Field Ambulance arrived at Nadzab by air. With the addition of a surgical team this party was sent to establish an M.D.S. in a coconut plantation near Kaiapit, while only a small ambulance detachment moved with the 21st Brigade. The 2/16th Battalion of this formation came into sharp conflict with a Japanese force, and crossed the Umi River, a tributary of the Markham, with difficulty on 24th September. Sagerak was captured, but as the objective, Marawasa, was still some distance ahead, Brigadier I. N. Dougherty waited for the 25th Brigade to arrive before moving on. Therefore the force recrossed the swift Umi River while the 25th Brigade flew from Nadzab in three days and took up the defence of Kaiapit. The 21st Brigade then crossed the Umi on a chain of rubber boats, such as was used to cross the Markham River, ferried over two 25-pounder guns, and by the 30th had reached Marawasa.

#### MOVEMENT TO GUSAP

An advance party explored up the Gusap River without sighting the enemy. Medical care of so mobile a force presented some difficulties, but was successfully carried out with small detachments. After conference between Dougherty and Humphery it was decided to call forward another surgeon to deal with urgent casualties. Goulston with a small party set up a post at Wankon on 30th September, and next day went on to Gusap. This provided for the holding of patients should the casualty rate increase, and should the weather prove bad for flying.

Meanwhile the 2/6th Commando Squadron guarded the brigade's right flank. The leading battalion patrolled the river while the rest of the brigade cleared the tall kunai and prepared an airstrip, so that the divisional commander, Major-General Vasey, was able to land at Gusap on 1st October in the first transport plane, and established his headquarters. By the 3rd the 21st Brigade was forward at Gusap River, and was evacuating patients by air. Goulston's section sent out 136 casualties in five days in spite of meagre facilities. The arrival of the 2/2nd Pioneer Battalion with part of the 2/4th Field Regiment freed the 25th Brigade of its defensive role, and enabled it to come forward and deal with enemy stragglers, while the 21st Brigade went on towards the next objective, another airfield at Dumpu.

The movement of a large body of troops from Kaiapit enabled the 2/6th M.D.S. to evacuate its patients to the 2/4th Ambulance's M.D.S. at Nadzab. Hobson received warning that 120 patients would be sent back from Kaiapit and this accomplished, the 2/6th quickly packed in prepara-

tion for its move up the Ramu Valley, and was flown to Gusap shortly after the airstrip was ready for traffic.

The 2/6th Ambulance still lacked some of its men, but now that further medical help was needed by the two brigades, two of the ambulance's bearer companies were sent from Moresby, to arrive at Nadzab just in time for each plane load to be sent on to Gusap on 5th October. This unit was now complete and assembled in the Gusap area, but, as was characteristic of this type of warfare, detachments were sent on various missions. The detachment assigned to the 21st Brigade moved with it down the Ramu Valley, and posts were established on the Ramu River near the landing strip. The level of work at the Kaiapit M.D.S. remained fairly constant at this time: on 3rd October there were 118 patients there; ten others were sent back by air from Gusap River, and twenty-seven from Gusap. The A.D.M.S., Colonel F. H. Beare, wished to evacuate the Gusap post, but the steady influx of patients prevented this.

#### *ADVANCE INTO THE RAMU VALLEY*

Full advantage was taken of the lack of opposition by the Japanese, and the speed of the Australian movement continued. At Bena Bena, to the west of the Ramu River, a protective force with Captain McCracken as R.M.O. was stationed, and was engaged in active patrolling in the upper Ramu Valley. No sign had been seen of the enemy between Kaiapit and Bumbum since 24th September, and a week later the 21st Brigade had advanced from Kaiapit into the Ramu Valley. Captain N. B. Wilmer accompanied the 21st Brigade headquarters to Dumpu and established a post there; Major T. E. G. Robertson also had a staging post working at Kaigulin. At Gusap Captains A. L. Hellestrand and F. D. Smith were still very busy, and the number of patients held was increasing, largely owing to the very heavy rain which flooded the Gusap River and washed away a bridge.

#### *Dumpu Base Established*

On the 5th, Humphery's headquarters arrived at Gusap and brigade headquarters reached Dumpu. The ambulance headquarters was unable to locate the brigade in the gathering darkness, and had to return to the Surinam River until the next morning. Already there were some severe casualties and the team under Major J. Loewenthal was brought up to save them the trying trip back to Gusap. Troops of the 2/16th Battalion had difficulty in fording the swiftly-flowing Gusap River, but were able to cross with the aid of a life-line at the junction with the Ramu River, while the engineers built a log bridge. At Wampun there was firm resistance by the enemy; the 2/14th Battalion had a sharp struggle in which Lieut-Colonel R. Honner was wounded, but Dumpu was taken. Dumpu was an important centre with a large airstrip, and its capture facilitated air evacuation and lessened difficulties of land movement over flooded streams. By 5th October the 21st Brigade had a sound defence achieved at Dumpu, and the 25th Brigade was moving forward.

*MEDICAL ARRANGEMENTS*

The 2/6th Field Ambulance was able to move on from Gusap by jeep and on foot, the headquarters established an M.D.S. at Dumpu, and surgical teams were attached to the posts at Gusap and Dumpu. From the 9th onwards the divisional headquarters and troops moved into the Dumpu area. The post at Kaigulin 1, a little south of Dumpu on the Ramu River, was used by the reserve brigade for evacuations of a few sick and wounded, but the majority were sent to the M.D.S. at Dumpu. Here landing strips were cleared and work carried out on a road to Kumbarum. Within the next few days patients were arriving faster than shelters could be provided for them. The M.D.S. at Dumpu was holding 245 patients; all but minor casualties were returned from Dumpu No. 2 strip by air to Nadzab. By this time the line from Dumpu to Kumbarum along the Uria River was firmly held by the 21st Brigade. From the river crossing a track led to Bogadjim on the coast. Bena Force, consisting of the 2/2nd and 2/7th Commando Squadrons, had been brought up, and engaged in extensive patrolling. A battalion of the 21st Brigade was also placed a few miles farther on across the Bogadjim track. The divisional headquarters was established at Dumpu, and the 25th Brigade was concentrated in the Ramu Valley some miles to the north-west.

The 2/4th Field Ambulance was still running the M.D.S. at Nadzab, and awaiting relief so that the unit could move forward. On the 7th problems of hygiene were causing some difficulties, and native labour was scarce, but two days later more anxiety was caused when the first patient with cerebral malaria died. The 2/4th M.D.S. was then holding 368 patients. Meanwhile the 2/6th Ambulance was busy at Dumpu, where a grass hut had been constructed to house surgical patients and on the 9th an operating theatre was complete and working well. On the 11th an advance party of the 111th C.C.S. with Major J. F. Coble, arrived to take over the M.D.S. site at Nadzab from the 2/4th Field Ambulance. Two days later the commander, Lieut-Colonel W. E. E. Langford, and the rest of the C.C.S. arrived and immediately began work, formally taking over at Nadzab on the 18th.

By the next day "A" and "B" Companies of the 2/4th Field Ambulance had arrived at Dumpu strip and a detachment was sent from "A" Company to go with the 2/33rd Infantry Battalion to form a post in the foothills under Wilmer, while Captain J. C. Church took another party of ten men to Guy's post, supporting the 2/27th Battalion.

A number of defensive posts were established on the ridges; these were important not only for purposes of defence and observation over the coastal area, but were also valuable for the purposes of the medical services. Guy's post, to which Church had taken his detachment, was favourably sited on a plateau overlooking the Faria River. It developed into an efficient medical staging post two and a quarter hours from brigade headquarters, where the R.M.O. of the 2/14th Battalion, Captain H. M. Stevenson, had established his R.A.P. The 2/27th Battalion R.A.P. run by Captain W. Gove was close to Church's post and the R.M.O.

of the 2/16th Battalion, Captain H. R. Hodgkinson, had his R.A.P. on top of a 2,500 foot ridge about two hours farther up the Faria Valley.

On the day when the Guy's post party arrived seventy-one patients were in the M.D.S.: an order was received that the unit would if necessary hold up to 500 patients. All equipment and supplies were scanty, particularly tents and cooking gear. On the 13th patients had doubled in number and battle casualties kept the surgical team working all night. The next day 245 patients were held and thirty natives were clearing scrub and erecting wards and shelters as fast as possible. Tents and flies had to be used separately: they were rotten and could not keep out the rain. Grass huts, made after the Papuan fashion, with folded grass were more satisfactory, and were put up with all speed. The diarist of the 2/6th Ambulance remarked that in the 7th Division there were at least six senior medical officers who had had a similar experience in having to accommodate numbers of patients far beyond the capacity of a field ambulance, but without equipment adequate in type or amount. The evacuation of 110 patients on the 15th reduced the numbers in the M.D.S. to 174, but next day they rose again to 238.

At this time, with numbers beginning to mount in the M.D.S. and seasonal endemic disease increasing in impact, the unit commander pointed out that a breakdown might have occurred earlier but for the outstanding work of two officers in charge of small sections. From the time the 21st and 25th Brigades left Kaiapit till their arrival at Kaigulin 1, the forward medical support depended entirely upon these two officers, Wilmer with a light section of ten men, and Goulston with a light section of nine men. They evacuated some 400 sick and wounded efficiently over a long and rough line of communication, in spite of the difficulties imposed by the speed of the force's movement. However, the military position was favourable, and permitted the necessary airfields to be constructed for the Fifth United States Air Force, and the remaining brigade of the 7th Division, the 18th, which had not been needed, had been kept in reserve in Moresby. Early in October the Fifth Air Force was operating from the airfields at Nadzab, Kaiapit, Gusap and Dumpu. The protection of these airfields and installations was one of the important functions of the 7th Division.

More intensive campaigning lay ahead. The Japanese were exploiting the natural defences of the mountainous country linking the Finisterre and Adelbert Ranges. From Dumpu and Kumbarum on the Uria River the only available trail to the coast was difficult: after crossing the Faria River, a tributary of the Ramu, it climbed up over precipitous ridges of which Shaggy Ridge was to become the most famous. On this mountainous area the Japanese had constructed four miles of defences along this steep spur which ran parallel with the Faria River. From the coastal side they were making a rough road capable of carrying motor traffic up to a point where the track crossed a high division of two watersheds, with the Faria on one side and the Mindjim River on the other. The Mindjim entered the sea near Bogadjim between the seawards slopes of

the Finisterre and Adelbert Ranges. The divide of the two rivers was the highest point on the route leading from Dumpu to Bogadjim, and was known as the Kankiryo Saddle. In this steep and rugged country lay the scene of the next encounters with the Japanese. Once more assaults would be made on precipitous peaks, as so often before in these campaigns, and again would the medical services be called on to work in the small detachments which had proved so successful.

During the remainder of October the medical work centred round Dumpu. The C.C.S. had some initial troubles with rations for the sick. Hobson's field ambulance had an arrangement with the 7th Divisional command which gave them some priority in the supply of fresh food, but the C.C.S. was not under divisional command and was not so favoured, and had difficulties with the dietary until matters were adjusted by the D.D.M.S. of New Guinea Force on visiting the area. The attachment of a catering officer was also of great assistance to the unit. On the 17th a malarial control unit arrived, rather belatedly, as its presence would have been valuable at a considerably earlier date.

The next evening was one of intense discomfort in the M.D.S. Heavy rain flooded the wards and as most of the patients were lying on the ground, they were soaked by muddy water which could not be successfully diverted. Humphery wished for American light "camp cots" for the men, reflecting that they were lighter and better than stretchers, which in any event were seldom available in sufficient numbers. Medical stores were being used at double the normal rate; on the night of 19th, 385 men were in the M.D.S., on the following nights 458 and 499.

Patients continued to arrive in such increasing numbers, that Majors E. J. C. Molesworth and Love and Captain W. P. Ryan were sent to assist. The A.D.M.S. ruled that "temporary" tented wards were to be erected, but little grass was available for huts and no tents arrived. Finally, just sufficient shelter was provided in grass huts before darkness fell, and at the cost of crowding, all the 637 patients in the M.D.S. were under shelter.

Most of the admissions were men with malaria: there could be no doubt that the epidemic had arrived, though its full extent among the febrile patients could not be ascertained, as there were only restricted facilities for malarial diagnosis at that time. Several officers of the unit had malaria, and others though not clinically ill had parasites in their blood. Cooking presented a colossal problem. Pioneers helped to construct more wards, but on the 26th there were 737 patients. On the 28th, Humphery had 805 patients in the M.D.S., this meant feeding over 1,000 men for breakfast: he claimed, no doubt with justice, that this constituted a record for patients held in any field ambulance in this war.

This peak of admissions was reached at Dumpu, in the 2/6th Field Ambulance, and as evacuation was better organised with control of the airfields, the patients were sent farther back if possible or returned to their units. However, a high proportion of M.T. malaria was noted among the admissions and it became evident that in spite of the use of atebirin as

a superior suppressive, the possession of a non-irritant and effective repellent in dimethyl phthalate, and all the force of official mosquito control, education and propaganda, the division was faced with an increasing problem in an epidemic of malaria. In the middle of October surveys were carried out by Major English, malariologist. Captain R. N. McCulloch also made surveys of mites in the area, and gave demonstrations of the correct method of using "Betty" or di-butyl phthalate, the mite repellent. The A.D.M.S. arranged for the 2/6th Field Ambulance to close down, leaving the 2/4th to take all patients from the brigades. The 2/4th on the 22nd was holding 300 patients, a number which rose to 445 by the end of the month, though over 100 patients had been sent back, and a transit camp had been established near the end of strip No. 2, which was nearing completion on the Dumpu airfield. This camp gave convalescents opportunity to rest and to be re-equipped before returning to their units, and eased the demands on hospital beds. The position was made more difficult by bad weather, which made flying dangerous or impossible. Beare instructed that the 2/6th M.D.S. should take no more patients for the present, as it was shortly being transferred to a new site near the Mene River. Some discussion took place over this change, particularly with regard to the questions of dispersal and security, should the enemy attack one of the airstrips; the movement was not completed until 6th December. An arbitrary limit of 500 admissions had been imposed on the field units, and this was not passed by the end of October; the 2/4th M.D.S. was then reduced to 150 and the 2/6th to 50 patients. At the end of October reinforcements arrived for the two brigades which were in the foothills making good some of the losses caused by illness, and patrolling was actively pursued in the Faria-Uria sector.

There was a more static disposition of the forces in the Ramu Valley; this permitted detachments to man some of the advanced medical staging posts, such as Guy's post. This covered the 2/27th Battalion's position, and was distant some three and a half hours of steep climbing from Shaggy Ridge. The enemy made no attempt to advance, but exploited the suitability of the terrain for defence, probably because he was heavily committed in the coastal area.

Nevertheless all due care was observed in the siting and layout of the medical units. At the beginning of November the second airstrip had been completed at Dumpu and was used for air movement of all sick and wounded, as it was only half a mile from the 2/4th M.D.S. Occasional bombing attacks occurred in the Dumpu area; one bomb thought to be a 250-pounder fell 400 yards away, but no damage was caused. Divisional command did not approve of red cross ground signs, and asked that slit trenches be prepared. Incidentally the dispersal which was necessary to some degree in areas threatened by air attack added appreciably to the strain on the staff, as had been evident during the Middle East campaigns.

The 7th Division came under direct command of New Guinea Force on 6th November, and II Corps was freed of responsibility in the Ramu

Valley. The 25th Brigade relieved the 21st in the Faria-Uria area, and the 21st took over the Mene area. Arrangements were confirmed for the 2/4th Field Ambulance to take over the medical posts previously manned by the staff of the 2/6th.

#### *New Atebrin Instruction*

A highly significant medical instruction was promulgated from Land Headquarters on 29th November. This laid down that all troops of the 7th Division should take two tablets of atebrin for six days a week. This was at once a clear declaration of the importance of controlling the epidemic of malaria and of lessening of the wastage of men through illness which still beset the division.

Meanwhile, active patrolling was maintained in the forward areas, but the military position remained static for some weeks, though contact was made with the enemy throughout the period. From the post on the high ground of the Finisterres observation could be constantly maintained over Madang Harbour and the Japanese activities up to Bogadjim, while the air force maintained pressure over the enemy lines of communication. At the end of November the 21st Brigade took over the role of the 25th again, and though enemy attacks were made from time to time, nothing on a large scale occurred. It was evident, however, that a major action was likely to take place before long.

Early in December, Australian commandos were protecting the air installations in the Ramu Valley and keeping the enemy under observation, while patrols were actively moving to the west of the Faria and Uria Rivers in the Kesawai area. This activity flared up into a sharp encounter on the night of the 7th-8th in which the Japanese lost heavily, though the 2/6th Cavalry (Commando) Squadron was forced to withdraw. The medical post of the 2/4th Field Ambulance at Evapia evacuated to the eastern bank of the Mene River, and as there was a threat of a Japanese push down the valley, 192 of the M.D.Ss.' 327 patients were sent to Nadzab by air on the following day. Captain R. Row, R.M.O. of the 2/6th Cavalry Squadron, was re-equipped from the M.D.S. as his R.A.P. gear had been captured. This unit was strenuously engaged during this period and exposed to conditions of great physical and mental strain. Kesawai, surrounded by a number of old native villages, was a very bad area, and produced a large number of malarial casualties. It was also infested with the mite vectors of scrub typhus. Two companies of the 2/25th Battalion with artillery moved into the area, and were soon engaged in action, with the 2/4th Ambulance medical post at Evapia again in support. On the 13th the Japanese made a determined attack, but though the Australian forces were seriously reduced in strength by casualties from wounds or infectious diseases, they repelled the Japanese force, which withdrew from the position. Air attacks also helped to reduce the enemy strength; the position forward along the valley was now consolidated, and with larger operations threatening, the Japanese strong raiding parties retreated to their base areas.

THE ISLAND CAMPAIGNS  
*ACTION AT SHAGGY RIDGE*

The time had come to bring matters to a head at Shaggy Ridge, where the enemy had concentrated and had set up strong defences on this formidable razor-back. Three steep elevations arose from this ridge, known as "Pimples" to the Australians; they were called, serially the Pimple, Intermediate Sniper's Pimple and Green Sniper's Pimple. These had the strength of their natural conformation enhanced by fortified posts and foxholes. In preparation for the attack on the southern end of Shaggy Ridge, Captain W. P. Ryan set up an operating theatre at the 2/4th Ambulance Lakes A.D.S.; Captain J. B. F. Tucker proceeded to the 21st Brigade for onward movement to form a medical staging post for the 2/16th Battalion. This battalion began the main attack on the Pimple on the 27th December after intensive fire by the 2/4th Field Regiment's 25-pounders, and dive-bombing and strafing by Allied aircraft. The infantry tackled the arduous frontal assault, struggling up the steep track with sheer rocky drops on each side. After great difficulty they established a position on the Pimple, and held this against stout resistance. On this precipitous terrain supplies were taken in and casualties taken out from forward positions with great effort; the bearers scarcely had room to negotiate their burden on the narrow way between the steep rock faces. Ten wounded were evacuated with an average time of four and a half hours from the ridge to the Lakes A.D.S.

The preliminary battle was but the beginning of a series of actions which were bitterly contested on both sides on the narrow Kumbarum-Shaggy Ridge front. There were still further elaborate preparations to be made, roads constructed, tracks made and reserves of supplies stored. The third brigade of the 7th Division, the 18th, which had been in Moresby, was flown forward to take over from the 21st Brigade in the Shaggy Ridge area. The 15th Brigade was also flown into the Ramu Valley to relieve the 25th Brigade in the Kesawai area to the west. Extensive planning lay ahead so as to prepare for encircling movements to capture the strongholds on the left flank and on the north-western side of the ridge.

The 2/5th and 15th Field Ambulances were brought up in medical support of these formations. The 2/5th Ambulance, which had been held in reserve in Moresby during the previous activities of the 7th Division in the Markham and Ramu Valleys, arrived by air at Dumpu on 4th January under Lieut-Colonel A. M. Macintosh, in readiness to service the 18th Brigade, which flew in on the following day. Parties from this ambulance took over the A.D.S. near the brigade position, the medical post of the Kumbarum convalescent camp, the A.D.S. at Guy's post, and other posts such as Geyton's and Beveridge's. Bearer sections were stationed near Grassy Patch and also at the R.A.P. of the 2/2nd Pioneer Battalion.

On 5th January the 15th Brigade took over from the 25th Brigade at Kesawai, and on the 8th, Lieut-Colonel Refshauge and the 15th Field Ambulance arrived by plane at Dumpu. Here this ambulance took over



(Australian War Memorial)  
A forward surgical post in the Orgoruna area, Ramu Valley.

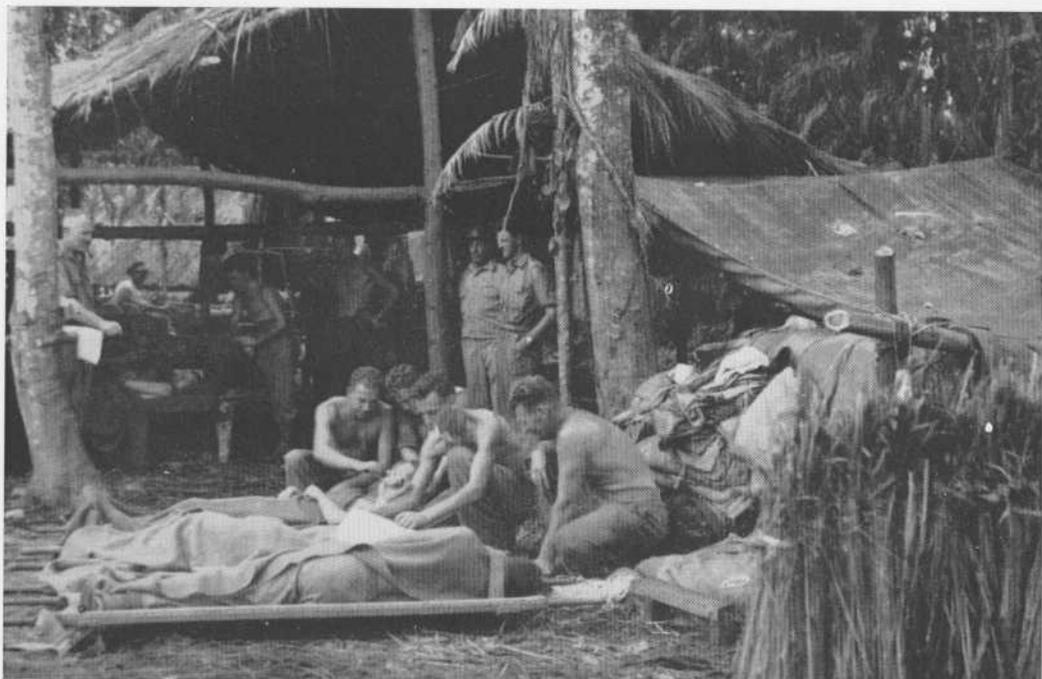


(Australian War Memorial)  
At a mobile surgical team's headquarters, Kumbarum.



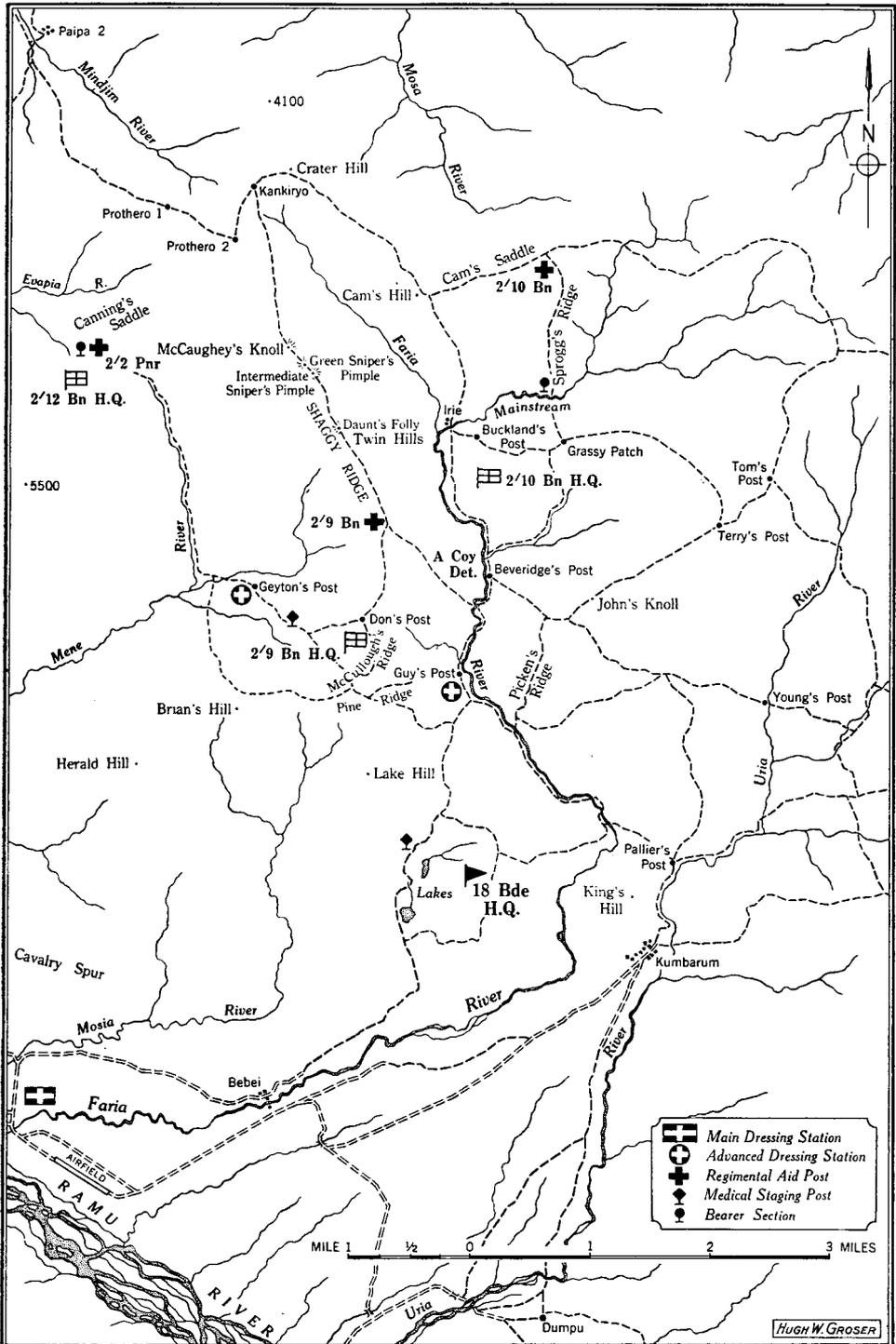
*(Australian War Memorial)*

Evacuation by plane from Nadzab.



*(Australian War Memorial)*

Preparation of patients for air evacuation from Nadzab.



Shaggy Ridge

HUGH W. GROSER

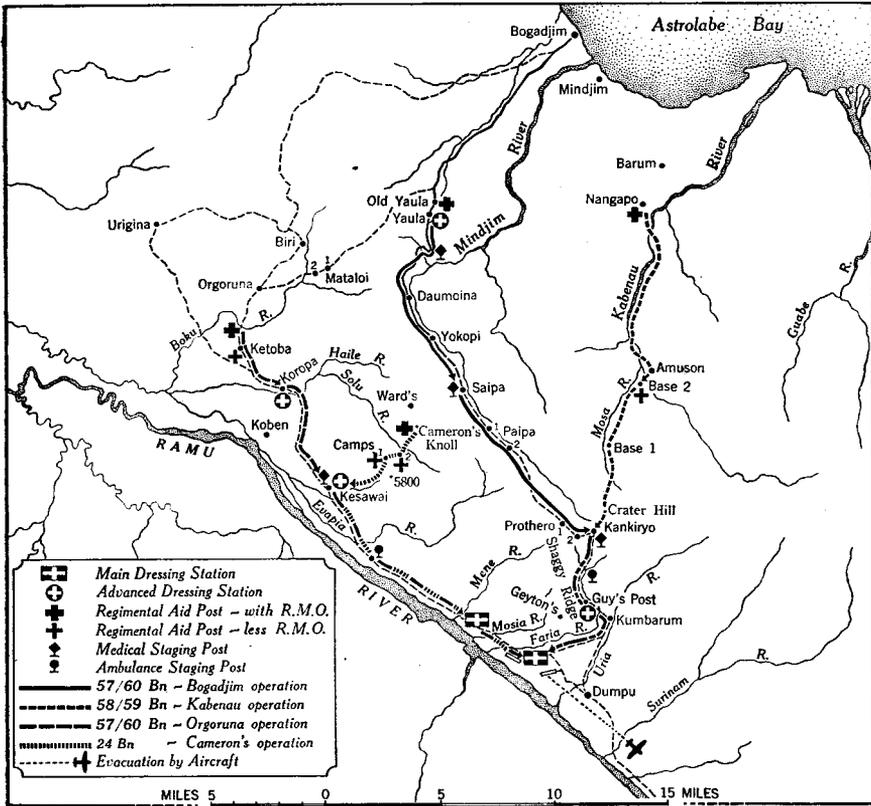
the M.D.S. at the Mene River which had been run by the 2/6th Field Ambulance. The pending Australian attack was to be delivered by the 18th Brigade. As in many other engagements the battle was for the heights. Shaggy Ridge, and in particular the Kankiryō Saddle, were the objectives, as they commanded the track which led to Bogadjim on the coast, a vital link in the chain of supply. Three high features on the ridges Prothero 1, Prothero 2 and Kankiryō were of tactical importance. The 18th Brigade's object was to expel the Japanese from their strongholds on this higher ground, and to command the track to the coast. In token of the recognition of the true significance of this action, the code name given to this operation was "Cutthroat". The first phase was one of patrolling to the north, and of raiding and harassing the enemy, the second that of capturing Kankiryō Saddle using surprise as a necessary part of the manoeuvre.

#### *MEDICAL ARRANGEMENTS*

The brigade commander, Brigadier F. O. Chilton gave details of the military plan to Macintosh for a medical appreciation, which was submitted also to Beare. The medical plan for this action was based on a three-battalion front, as the brigade was to be committed without reserve. It provided for evacuation by ambulance bearers from the R.A.P. and native bearers to the jeephead, where wheeled transport was available. Arrangements were made so that wounded could be operated on within six to eight hours, and held for two to three days if necessary. A surgical team of two surgeons was ready and could be sub-divided if circumstances demanded. The A.D.M.S. did not agree with all details of these recommendations, but the general plan was adopted. A surgical team was placed at Geyton's post; an A.D.S. was retained at the Saddle, and the bearer section moved with the 2/10th Battalion. It was recognised that heavy rain might at any time make the road impassable between Guy's post, the Saddle post and the M.D.S. at Mene River. Captain Ryan of the surgical team was at the Guy's post A.D.S., where the first patient was operated on for acute appendicitis. Edelman went to Guy's post, and Leggett to Geyton's post. Geyton's A.D.S. was set upon a broad ledge above the Mene River, with adequate cover from air observation and a good water supply. The surgical ward was built from half tents on a framework erected by natives. A small medical ward was built and roofed with a half tarpaulin. Captain J. Rutherford was in charge of the section with Leggett running the surgical team.

The troops in the 15th Brigade area were not involved in the first attack, but had some opportunity for enlarging their experience of the type of country. The R.M.O. of the 57th/60th Battalion, Captain M. G. Gratton, noted considerable numbers of cases of dengue fever after leaving Dumpu and at Ketoba saw men with unconfirmed malaria. At Orgoruna and the forward areas there had been a good deal of fouling of the ground by the Japanese, and in spite of instructions to the contrary, some of the men used unsterilised water for drinking and other purposes, thus pre-

cipitating an outbreak of clinical dysentery. Many men suffered from abraded feet, made worse by lack of daily inspections by platoon commanders. The R.M.O. found it convenient to use his medical companion mainly as a container: his essential stores included two Thomas splints, the usual dressings and drugs, with a 10 c.cm. syringe and ampoules of



“Pentothal”. Sulphaguanidine tablets were available in the aid posts. To ensure that the post would be freely mobile the R.A.P. staff carried a one-man tent, and could set up without delay. Native bearer teams were ready to carry from Boku River to the A.D.S. at Koropa and to the M.D.S. at Kesawai. The medical officer found the unit to be very malaria-minded: nets were used except by one company during an attack, but no destruction of mosquito adults or larvae was carried out forward of Koropa. Only nine confirmed cases of malaria were recognised; other fevers were observed and were thought to be due to dengue, but health was good on the whole.

Meanwhile, the 18th Brigade began its action. The plan employed three columns, the 2/9th Battalion along Shaggy Ridge, the 2/10th

on the right and the 2/12th on the left flank, where the main attack was to be delivered. A wide encirclement was planned on the left which would sweep round the Mene River area and the feature known as Canning's Saddle. Preparatory work was secretly carried out on new tracks, and artillery fire and air strikes were used to cover the movements of concentrating battalions. Some of this preparatory work emphasised the problems facing the medical services; for example the 2/12th Battalion, travelling over ravines and cliffs with the help of ropes and vines, took three days to cover nine miles.

Final medical arrangements included additional help at Grassy Patch; the distance from battle headquarters was a three hours' carry, and therefore some wounded would need to be kept overnight. Further assistance was available from the 15th Field Ambulance. Throughout the night of 19th January, planned for the beginning of the attack, torrential rain fell, washing away six out of seven bridges between Guy's and Beveridge's posts, and the main bridge between Guy's and the M.D.S.

#### *CONTINUED ACTION ON THE RIDGE*

At 9 a.m. on the 20th the artillery opened fire as a prelude to the infantry attack. Macintosh managed to reach the combined post of the ambulance and the 2/10th Battalion at Grassy Patch, found the track greatly damaged, and the river crossings very difficult. In these areas the recovery of wounded involved clambering up slippery slopes and walking through streams. The morning of the 21st was spent completing the fitting of the wards at Guy's post. Two huts had been constructed, one for use as an operating theatre, the other as a surgical ward. The first casualties were received during the afternoon, and came in a continuous stream from then on. The team worked throughout the night; Refshauge sent another medical officer to help at Guy's post, and also an N.C.O. and eight O.Rs. to "Damour" bridge to ferry patients across the flooded Faria River, where the bridge had been washed away. Two days later another section went to the Evapia River on ferry service.

Casualties were reported from the 2/12th Battalion, but owing to prevailing conditions in the forward areas not all of these reached Geyton A.D.S. but were kept at the forward R.A.P. and M.S.P. run by Captain I. H. Chenoweth of the 2/2nd Pioneer Battalion. Some patients arrived at Geyton's as long as thirty-six hours after wounding and showed evidence of exposure and strain of travelling. Difficulties were also encountered in moving wounded back to Guy's from Geyton's post. Evacuation of lying cases from A.D.S. Geyton's to A.D.S. Guy's was by native bearers, the carry varying from three to four and a half hours. Walking casualties, taking with them one meal for the trip, reached A.D.S. Guy's in five to six hours after departure from Geyton's. The advance of the 2/12th Battalion up the feature Prothero 1 presumably surprised the enemy, who had been firing on the 2/9th Battalion on Shaggy Ridge. The forward elements of the 2/12th Battalion, when almost at the top were exposed to point-blank fire. Here Lieut-Colonel C. C. F. Bourne, their commander

was wounded with many of his men. Nevertheless the 2/12th succeeded in driving off the Japanese from Prothero 1.

On the right flank the 2/10th Battalion dislodged the enemy from his defences on the western end of Cam's Saddle. It was expected that Captain W. J. Pullen's ambulance section would be required to join with Captain H. G. Royle in holding casualties. By nightfall the 2/9th Battalion had secured Green Sniper's Pimple and they established contact with the 2/12th next morning. The Japanese were cleared from Shaggy Ridge, but Macintosh considered that the route over the ridge with its precipitous fall on both sides was not fit for carrying casualties.

The next day the action to capture the high feature "4,100" was begun, the prize being command of the Kankiryō Saddle. Captain C. R. Copland, R.M.O. of the 2/9th Battalion, moved up towards Kankiryō Saddle along Shaggy Ridge on the 25th. During this afternoon a steady stream of casualties arrived at Guy's post from both the 2/9th and 2/12th Battalions, and a medical post from the 2/5th Ambulance was established by Captain W. Arrowsmith near the junction of Mainstream and Faria Rivers. While returning from visiting the forward R.A.Ps. of the 2/9th and 2/10th Battalions his party was fired on, but without damage. During the next few days heavy and persistent fighting continued against an enemy strongly entrenched in formidable defences. Progress was made on the Faria Spur, but was held up on the 4,100 feature, where resistance was still strong. However, fighting continued on the battalion front, helped by artillery, and Japanese counter-attacks failed to prevent the Australians from capturing the Kankiryō Saddle, though the enemy was still concentrated on the same feature overlooking the divide. It was, of course, most important that this high point should also be captured, for not only did it look out over the Mindjim watershed, but in fair weather a good view could be obtained of the coastline and the shipping that congregated in the harbours.

Native carriers did very good work during these actions, and members of fighting units too had to help with transport. In places the ground was steep and slippery, to such an extent that members of the 2/5th Ambulance detachments sometimes had to pull themselves up with ropes tied to trees. These ropes were also found useful in carrying loaded stretchers over this type of country. During the struggle for the Kankiryō Saddle a few casualties had to be taken from the bottom of a steep declivity at the base of the ridge. This was too precipitous even for a native carrier team, and was sometimes under fire. Some seventy men of a company of the 2/12th Battalion under directions of their R.M.O., Captain J. M. McDonald, took the stretchers up the hill by passing them up a chain of two rows of men to Shaggy Ridge, where ambulance bearers and finally native carriers took over at the aid post. Many of the stretchers were improvised, and to make them and to keep patients warm, half blankets and ground-sheets were fastened together with twine and Japanese signal cable. In spite of fatigue, members of the ambulance detachments were often too cold and wet to sleep.

Colonel Littlejohn, Consulting Surgeon, visited Guy's post on the 29th January and stayed overnight in order to make some experiments with penicillin in the field. By 1st February many sick were reporting from the battalions, mostly suffering from undetermined fever and diarrhoea. Some of these men had been working under conditions which gave them no facilities for washing either themselves or their food containers for periods up to a fortnight.

While the main attack on Kankiryu was being prepared and delivered, a diversionary movement was made on Cameron's Knoll by the 24th Battalion. Further medical aid was arranged by the 15th Field Ambulance when Captain D. C. G. Bracken set up an A.D.S. in the Kesawai area and Major J. J. Ryan arrived to work as surgeon. During a brief lull the 18th Brigade regrouped its elements in preparation for a final attack. On the 31st the Japanese showed signs of weakening, and by the next day the last objective, known as Crater Hill, was taken with guns and useful equipment. Aggressive patrols of the 2/9th Battalion followed the enemy in his retreat down the Mindjim Valley as far as Paipa. After attacking the forward areas at Orgoruna and Mateloi the 57th/60th Battalion withdrew to Kesawai. The A.D.S. was moved from Kesawai, leaving a medical staging post there, and was set up at Koropa.

Though there was still much to be done to stabilise the position, the object of the operations was achieved. Shaggy Ridge and Kankiryu Saddle were wrested from the Japanese, and the way lay open to the coast at Bogadjim. Supplies were still a difficult problem, and there was great need of improved roads forward of Dumpu to Kesawai.

The casualties of the 18th Brigade were 46 killed and 147 wounded, but the Japanese had lost many more; 244 of their men were buried by the Australians. After this action the enemy made no concerted stand, and abandoned quantities of stores, but in some areas he still put up resistance. Early in February active patrolling was carried out, and the divisional commander ordered the 15th Brigade to relieve the 18th. The arrangements were made mutually by the two brigades, the headquarters completing the exchange on 18th February. Defences and tracks were strengthened and improved, and long-range patrols were begun. In these activities the 58th/59th and 57th/60th Battalions gained valuable experience and built up a better topographical knowledge of the area which comprised Mindjim Valley and Kabenau River and led to Bogadjim and Madang.

Sickness rates were low at this time, and malaria control measures were being successfully carried out according to orderly methods. The 15th Brigade showed a satisfactory incidence rate, considering the conditions, and profited by the routine adoption of special precautions, and by the insistence of the commander in their implementation. The 15th Field Ambulance took over forward medical posts from the 2/5th Ambulance: the 15th Brigade posts were now in the hilly country, and the 18th in the valleys. At the end of February the 2/5th Ambulance was admitting patients from the 15th Brigade in accordance with the general

administrative changes taking place throughout the division. The 15th Field Ambulance towards the end of February took over the A.D.S. at Guy's post, and the M.S.P. at the junction of the Faria and Mainstream Rivers. Many of the tracks were very bad, and at times impassable. The work of these two ambulances was divided in order to supply medical cover for two planned attacks; that of the 2/12th Battalion on Ward's village on 12th March, was allotted to the 2/5th Ambulance, and that on Saipa by the 57th/60th Battalion to the 15th. Rutherford with a detachment of the 2/5th Ambulance took over the running of the medical staging posts at Kesawai and Evapia River. No resistance was encountered in either Ward's village or Saipa, and the 57th/60th Battalion moved on to Yokopi. The 58th/59th Battalion moved north of the Kankiryo Saddle, and began to follow the course of the Kabenau to the coast. On the 18th Barum was occupied, and patrols made contact with American troops patrolling from Saidor.

The 15th Field Ambulance had established an A.D.S. at Saipa on 23rd March equipped with eighteen beds, a theatre and resuscitation ward, and at Yaula a new A.D.S. and theatre were planned. Most of the larger posts were by this time reduced to staging post level. Yet even at the beginning of April there was still need for some surgical care; Major Ryan and a surgical team were expected at Saipa, where five battle casualties were received on 1st April after the ordeal of a nine hours' journey. A rear R.A.P. of the 57th/60th Battalion was set up at Scott's Creek, and nursing orderlies were sent forward there to help. After a sharp encounter with the Japanese the 57th/60th Battalion occupied Yaula on 6th April, and found a quantity of useful stores. Pursuing the advance, the battalion occupied Bogadjim on 13th April. By this time the long and vigorous patrols had probed the country to the coast, and further concerted action from the enemy was prevented.<sup>2</sup>

The 11th Division now had control of all units in the Ramu Valley, as from 8th April, and Colonel N. D. Barton, its A.D.M.S., relieved Refshauge, who had been acting as A.D.M.S. to the 7th Division. The Scott's Creek post was receiving patients in its twelve beds by the middle of April: some of these suffered from typhus fever, for it was considered that unless such patients could be evacuated early, they were better to remain under local care. On the 17th Yaula opened twenty-five beds and A.D.S. Saipa became a staging post. The M.D.S. held less than 90 patients, and on the 19th ceased to admit more. On the 21st the 15th Field Ambulance was directed to concentrate in the Bogadjim area with the 15th Brigade.

#### *ADVANCE UP THE COAST*

Patrols of the 57th/60th Battalion of the 15th Brigade took the track from Bogadjim to Madang along the coast, but met the difficult obstacle of the Gogol River. Several attempts to cross this deep fast-flowing stream

<sup>2</sup> Australian casualties in the Markham and Ramu Valleys 18th Sept 43-8th April 44: killed in action 19 officers, 186 other ranks; wounded in action 29 officers, 435 other ranks.

failed; it was wide and flanked with mud flats and infested with crocodiles. Help of the American boats was enlisted, and the patrol was landed at Bili Bili to the north, and soon arrived at Madang. They routed a Japanese rearguard and occupied Madang on 24th April. The work of the 15th Ambulance in the inland area was by this time coming to a close. On 26th April its heavy gear was waiting at Dumpu airstrip, and two days later the unit moved on to Saidor.

By the 29th the A.D.S. Yaula was already evacuating patients to Bogadjim. The 2/5th Ambulance took over the ambulance staging post at Guy's and the M.S.P. at Kankiryu where there was a jeep post. This line of communication was practically closed by May, when there were only twenty-five patients in the M.D.S., and the total number was rapidly dwindling. On 15th May the last few patients were passing through Kankiryu; part of the ambulance unit left by air, and the remainder travelled by ship to Australia.

In the middle of April the 8th Brigade under command of 5th Division moved to Saidor, and on the 23rd, part of this brigade landed at Bogadjim in small coastal craft. On the following day after patrols of the 15th Brigade had entered Madang, battalions of the 8th Brigade joined them and occupied the area. Medical cover was provided by "A" Company of the 2/15th Field Ambulance. The occupation of Madang offered little military difficulty, but marked an important stage in these campaigns. The clearing of the Huon Peninsula, which had begun in September with the capture of Lae had been followed by the taking of Finschhafen and of the Markham and Ramu Valleys. Now the coastal harbours came under control, and the American force at Saidor made a long sea hop to Aitape and Hollandia, landing there successfully on 22nd April.

The 30th Battalion on 26th April went on to Alexishafen, and the following day a detachment of the 2/15th Field Ambulance reached Alexishafen and opened as soon as shelter could be improvised. Two days later there was considerable movement by medical units: the light section of the 111th C.C.S. left Saidor for Madang; the 15th Field Ambulance arrived at Saidor by air from Dumpu, to take over the 2/15th posts, and the 4th Field Ambulance went to Madang, and a few days later sent a detachment to Nadzab to set up a plane evacuating post.<sup>3</sup>

Meanwhile "A" Company of the 2/15th Ambulance had been able to cope easily with the evacuation arrangements. Most of the casualties had been taken direct to Finschhafen on H.M.A.S. *Vendetta* and H.M.A.S. *Bundaberg*. This unit was also responsible for a beach post, an airstrip post, and evacuation at Saidor, pending the arrival of the 15th Field Ambulance. Patients requiring treatment were handled by the 23rd American Field Hospital.

Fortunately there was little illness, but the A.D.M.S. regarded the early medical arrangements as sketchy. The G.O.C. had attempted to have a complete casualty clearing station sent up instead of a light section only,

<sup>3</sup> Australian casualties for Bogadjim to Madang and Alexishafen 8th-26th April: killed in action no officers, 5 other ranks; wounded in action 1 officer, 1 other rank.

but without success, for the heavy section of the 111th C.C.S. did not arrive at Madang till 28th May. The field ambulances were also hampered by delays in movement of their heavy equipment, and were deficient in tentage. One factor in keeping illness in the area at a low level was the early arrival of the 11th Malaria Control Unit and control work was quickly under way, in spite of difficulty in transport, for there were no useful roads in the area. On reaching the Madang area all troops were given twelve tablets of atebirin a week. The malarial rate among troops in the area steadily fell until a satisfactory figure of 0.9 per 1,000 per week was reached.

During the second week in May, the 15th Ambulance proceeded to Bogadjim, and some continued on to Madang. The 8th Brigade continued the advance, and on 16th June occupied Hansa Bay. The brigade was accompanied by a detachment of the 2/15th Ambulance, which incidentally, arrived at Hansa Bay before the infantry. An alarming number of cases of scrub typhus occurred during this advance, some forty to fifty were seen in this unit within a short time. These men were sent back to the M.D.S. at Alexishafen by the *AM 1567*, a journey of some six hours over an often choppy sea. At first the less severely ill were sent farther on to the C.C.S. at Madang, but although this only imposed an extra hour's travel over calm harbour waters, experience showed that the typhus patients did not tolerate any extra exertion well. To deal with this situation a request for nurses was made by the A.D.M.S., and a building of the old mission at Alexishafen was repaired and converted into wards. A physician, Lieut-Colonel K. B. Noad, and members of the A.A.N.S. were then sent up and attached to the M.D.S. where they were of great value. Later a C.C.S. was established at Madang, and still later the 2/11th A.G.H. was brought up into the area. Then, with the help of occasional evacuation by hospital ship and air transport the medical position was much improved.