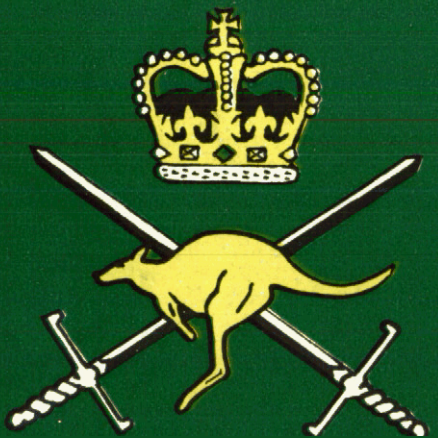
AUSTRALIAN ARMY JOURNAL



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Number 197 October, 1965

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(Imperial War Museum)

El Alamein, 9.40 p.m., 23rd October, 1942. The artillery barrage from almost a thousand guns which signalled the opening of the Eighth Army's offensive and heralded the turning-point of the war in North Africa.

EL ALAMEIN

A BATTALION COMMANDER'S PRE BATTLE ADDRESS TO HIS MEN

In the three or four days before the opening of the Battle of El Alamein on 23rd October, 1942, the Staffs, battalion commanders, officers and men of the Eighth Army were progressively informed of the objects of the battle, of the high hopes that were held for the outcome, and of the individual units' roles within the battle. The Army Commander directed that the briefings were to be made the occasion for lifting the troops' spirits to the highest pitch. The excellent address reproduced below from the history of the 2/24th Battalion was given at a battalion parade by the C.O., Lieutenant-Colonel C. G. Weir, just after dusk on 21st October.—EDITOR.

In 48 hours this battalion will take part in the greatest battle that has yet been fought in this war, a battle which indeed is expected to be the turning point of the war. It is possible that this battle, the Battle of El Alamein, will be known in history as one of the decisive battles of the world, such as Saratoga, the defeat of the Spanish Armada and Waterloo. Before I begin to speak of our part in it, I want to tell you the whole plan.

At 9.40 p.m. on 23rd October, a little over 48 hours from now, Eighth Army will launch a co-ordinated attack on the whole of the German front — a distance of approximately ten miles.

At exactly that moment, every available gun in the Eighth Army will open fire as a prelude to the battle. We, in common with every other battalion taking part in that attack, will be within 200 yards of the enemy positions when the concentration lifts.

Simultaneously, the Air Force will "pattern bomb" known enemy strongholds and gun positions, whilst the Navy will shell the enemy lines of communications in the rear. This attack will be without precedent in the history of the war and has been planned to the last detail.

When I attended General Montgomery's conference, his opening words were these: "Gentlemen, battles are won before they are fought and this battle is already won."

He went on to say that on reaching its first line of objectives the whole of the Eighth Army will swing clockwise, pivoting on the

right flank and thus closing a great arc from the south to the sea in which it is hoped the greatest part of the enemy's strength will be trapped.

He added that he had chosen the 9th Australian Division for the vital task of securing and holding the right flank on which the army will pivot. He chose the Australians for two reasons — firstly, because they were battle-seasoned and experienced in desert fighting and, secondly, because he knew that they will never yield one yard of ground to the enemy.

Now I come to our part. We, of all the battalions in the division, have been selected to open the attack on the right flank. We will literally be "the right of the line". The whole manoeuvre depends on our success. Our job is perhaps more complicated because there will be no frontal attack on the coastal sector we know so well, that is, the sector from the sea to just south of the railway line.

We all have grim recollections of what happened when we attacked this sector on 22nd July, and it is known that the enemy have since substantially reinforced this area. Instead of a direct attack on this sector the 2/28th Battalion will carry out a "Chinese attack", that is, a diversionary plan in which dummy figures attached to pull wires will be raised and lowered close to the enemy, accompanied by a great deal of noise. Gas projectors will hurl great quantities of H.E. bombs, and we have been able to arrange that some eight hundred Italian 81-mm mortar bombs which we have borrowed from them from time to time will be returned with suitable expressions of good-will, by the medium of their own mortars, also on special loan for the occasion.

Whilst all this is in progress, we will be advancing with our right flank exposed to some extent. However, our good friend Lieut.-Colonel Macarthur-Onslow, of the 9th Australian Division Cavalry, will have a composite force under his command and will occupy a series of posts on our flank as we advance to discourage any untoward adventures of the enemy in this direction.

When we reach our objective, and the 2/48th Battalion has passed through our positions to their objective, we will manoeuvre ourselves into a position facing the enemy flank and link up with the 2/48th Battalion right flank. Thus both battalions will be in position to resist enemy attempts to turn the flank, whilst the rest of the army swings towards the sea. The 24th Brigade will hold the coastal sector against a break-out frontally, and all in all we have every reason to believe that the enemy will find themselves in an extremely embarrassing situation.

Tomorrow night we move from here to occupy a lying-up area in camouflaged diggings which have been prepared by units of the 24th Brigade. This area is sited sufficiently far forward so that we will be involved in the least possible movement to our

start-line for the attack. I warn you all that after occupation of these diggings tomorrow night there must be no movement whatsoever during the following day. The last thing we want to do at this stage is attract the curiosity of the enemy.

I have no doubt, nor I am sure have you, that we will be equal to the task required of us. This is the day for which we have trained so hard in recent weeks; this is the opportunity for which we have all waited for so long. We have the strength, we have the support, we have the experience, and, *above all,* we have the determination to succeed and the knowledge and confidence engendered in us by our Army Commander in his assurance that this battle is already won.

Each of you will receive a personal message from General Montgomery which he has asked me to give you. In it he asks that every man will fight till he can no longer fire a rifle. This will be a great and bloody battle. Let each of us ask God to give us strength and courage to play our part in what will certainly be the decisive and perhaps final battle of the Middle East, in the knowledge that our success will open the road to victory in this war.

Finally, I say this. If there is a man among you who hasn't the guts to fight shoulder to shoulder with us, and who hopes in some way to dodge his share of the job, let him go and let no one stop him. We will take no one into this fight who is not dedicated to the task.

God bless you all — may He give us stout hearts for the battle that lies ahead and the knowledge that what we do is done in the cause of Freedom and the downfall of tyranny.

AWARD OF ANNUAL AAJ PRIZES

The Board of Review has awarded the annual prizes of £30 and £10 for the best and second best contributions to the AAJ in the year ended June, 1965, to:

Major H. L. Bell, "Boldness or Rashness? Security or Timidity?" (February issue) — 1st prize.

Major J. K. Leggett, "The Human Factor in Warfare." August, 1964, issue) — 2nd prize.

FUSTEST WITH THE MOSTEST

1965

Major B. H. Bradbrook,
Royal Corps of Transport

GENERAL Nathan Bedford Forrest proved his much-quoted rule — that the way to win battles was to "git thar fustest with the mostest" — by his adroit use of his Confederate cavalry.

His dictum remains true a hundred years later, but today the modern soldier achieves his mobility by the skilful employment of air transport.

Of course this is not entirely new. Almost 50 years ago the British carried out the first successful air supply operation; it is nearly 30 years since the Russians first demonstrated their parachute troops; and twenty years have passed since the end of the Second World War, in which the movement and maintenance by air of divisions, corps, and even armies, came to be accepted as commonplace.

In the postwar years military air transport has been used almost every day in one part of the world or another: for example, the Berlin Airlift, which moved thousands of tons of fuel and food every day for over a year; the Korean War, which saw not only limited airborne and air supply operations, but also the first use of the military transport helicopter on the battlefield; the Malayan Emergency, with the daily movement and maintenance of troops by helicopter and fixed-wing aircraft, and which saw the first military application of short take-off and landing (STOL) at the jungle fort airstrips; the Radfan operations; the Borneo confrontation; and, most spectacular of all, the United States' military assistance in South Vietnam.

The author was commissioned in the British Army in 1944. He has served in airborne forces, army aviation and air supply units in Europe, the Middle East and Far East. Before coming to Australia in 1963 he was GSO 2 in the Air Transport Support Section of the Joint Warfare Establishment. For the past two years he has been on exchange duty, raising and commanding 1 AASO, RAASC. He returned to a staff appointment in the Ministry of Defence in August, 1965.

Yes, air transport is quite "old hat", yet in 1965 it sometimes seems to be almost a lost art.

What has happened to all the wartime air transport expertise?

Today's professional soldier appears to fall into one of three categories — the true believers; the uninitiated; and the sceptics, with whom are included those who once knew something about it but who in 1965 still try to apply their 1945 techniques, apparently unaware of the radical changes air transport has undergone since the war.

What are these changes? Taken in their probable order of importance — though not chronologically — they are, firstly, the advent of vertical take-off and landing (VTOL) transport aircraft, which are generally — though not exclusively — helicopters; secondly, the introduction of rear-loading cargo aircraft; and thirdly, the development of STOL capability for transport aircraft.

While aircraft with these characteristics are common enough sights in themselves, their significance appears to have escaped general notice.

How, then, do they affect the soldier?

First of all, the helicopter. Its most important characteristic is of course its ability to take-off and land vertically, hover, and fly in any direction. This means that, whereas formerly air transport required a 2,000-foot airstrip, it can now be employed virtually anywhere on the battlefield where a 50-yard clearing is to be found.

Thus for the infantryman the helicopter becomes a 100-miles-an-hour personnel carrier, able to carry him to a point near his objective, or insert or recover his patrols, withdraw his rear-guards, lift out close bridge garrisons, or move up his reserves; used logistically, it can deliver his supplies and ammunition into positions inaccessible to towed or self-propelled artillery.

For the sapper it can operate as a flying crane in the building of bridges, or help him in laying minefields or in the construction and maintenance of pipelines. Moreover, because the helicopter itself becomes a transport vehicle the requirement for road-building and maintenance is much reduced.

The signaller can use it to place his radio-relay stations on high ground and carry his maintenance crews from site to site.

The helicopter can be used as a recovery vehicle to lift out damaged vehicles, guns or small aircraft, or to fly in repair crews and spare parts to vehicles or aircraft broken down in inaccessible places.

In amphibious operations it can take the place of amphibious vehicles or lighters for ship-to-shore movement of men and supplies, or in emergency can tow small craft.

In highly mobile operations the cargo helicopter can be fitted with fabric fuel tanks to enable it to refuel small reconnaissance helicopters at for-

ward rendezvous, thus extending their range and endurance on patrol.

Finally, in the straightforward cargo-carrying role the helicopter can perform the tasks otherwise carried out by the unit B and A echelon vehicles, and, to a limited extent, the formation second-line transport.

Next, what of the rear-loading aircraft? This now ma es it possible not only to carry oops and light vehicles but also arge trucks and wheeled and tracked equipments, and to load and unload these rapidly without ground facilities. The handling of other cargo can be speeded up by the use of pallets.

In the air-drop role vehicles and equipments up to 15 tons in weight can be delivered on platforms, or stores can be dropped in a variety of containers to large or small dropping zones.

The rear-loading capability, coupled with the technological advances in aeronautical design and engineering, now makes it practicable to transport large and heavy loads over long distances at high speeds.

Thus complete units can be flown to potential trouble-spots in a matter of hours and, once there, can be redeployed and supported logistically entirely by air if need be.

These aircraft may therefore be said to replace or supplement sea and land communications.

Now, STOL. Fixed-wing aircraft are faster, have bigger payloads and are more economical to operate than helicopters, but suffer from the drawback of needing airstrips. The STOL characteristic minimizes this disadvantage and enables such aircraft to operate into comparatively small areas. They are thus able to fill the gap between the larger tactical transport aircraft and the helicopter.

In a sense, then, the STOL aircraft may be likened to the second-line transport operating between the forward areas of the communication zone and the rearward area of the combat zone.

Taken as a whole air transport may be seen to provide the soldier with both a magic carpet and seven-league boots. Certainly he has here the wherewithal to "git thar fustest", providing he uses these munificent gifts of mobility aright.

What is the key to this?

It is considered that there are three prerequisites to the successful exploitation of this air mobility. These are the "Three R's":

(*a*) Right attitude of mind;

(*b*) Right organization; and

(*c*) Right training.

Right Attitude of Mind

This is the first and most important prerequisite as it embraces every aspect of air transport operations where thought and decisions are required, and thus influences all other matters. It covers the mental approach of commanders and staff at all levels, both in the army and the air force, to air transport problems and plans.

The right attitude of mind calls for imagination, flexibility

A Caribou aircraft in a tactical role delivering paratroops.

of thought, open-mindedness and determination. It requires, too, a joint outlook with a sound knowledge of the other Service, a professional approach and a sense of urgency.

While it is not intended to analyse all these qualities the last three deserve further mention.

Firstly, the joint outlook. This applies equally to the army and the air force. The airman should understand how the army is organized and equipped, how it goes about its various tasks in the different phases of war, why it is important for it to move in certain groupings, and how it lives in the field.

The soldier needs to know how the air force is organized and the technical and administrative support it needs to operate in the field, and he must understand the capabilities and limitations of the aircraft. This will then enable him both to differentiate between convenience and necessity in his requests for air transport, and to arrive at the correct proportion of "wheels" and "wings" in his force. For make no mistake about it, aircraft cannot be substituted for trucks without paying a high price in their logistic support.

For example, in terms of money, the initial cost of a transport helicopter is approximately 100 times that of a truck; in maintenance support it requires more than 100 times the man-hours; in terms of fuel its bill is 20 times greater per ton mile than that of a

truck — economics which are even worse than those of a mule!

It is also as well to remember that at present severe limitations are imposed on helicopter operations by darkness or conditions of bad visibility — conditions generally much favoured by the enemy. Technological development may overcome these restrictions in the comparatively near future but at the present day there will be many occasions when movement by wheels or tracks is practicable while helicopters are grounded, as has been amply illustrated recently in South Vietnam.

Thus it may be seen that neither the helicopter nor the fixed-wing aircraft provides the panacea for all movement problems so fondly imagined by the dilettante air logistician.

It may be argued that the United States Army now has an airmobile cavalry division which is almost entirely helicopter-borne in some 430 aircraft. This is perfectly true. It is also true that this division's bill for aviation fuel alone is over 400 tons a day, and that to keep it in the air 1,750 ground vehicles are required. Can this kind of logistic price be paid, and is this sort of division the answer to mobility in, say, South-East Asia, where trees are more plentiful than open spaces, and where every tree could hide a potential enemy?

Now, the professional approach. This too affects airman and soldier alike and implies a pride in doing any job in a thoroughly proficient manner. For the soldier it means a mastery of the planning and execution of all air transport operations, with meticulous care being paid to the weighing and preparation of cargo, its documentation, loading and lashing, and emplaning and deplaning drills.

For the airman it means adopting a responsible attitude to such things as living in the field, local security and operating under realistic conditions on exercises or unit training. It means, too, punctuality of "P" hour for air drop or landing tasks, for unless this is practised in peacetime training the other fellow may "git thar fustest" when timing really matters. The standard to strive for here is that of the Berlin airlift, where aircraft movements were 90 seconds apart day in, day out, and a missed approach meant a lost "slot" on the ground with a return to base with the load still aboard.

Lastly, the sense of urgency. In these days technological advances are so rapid that it is difficult to keep the air transport techniques abreast of them, and of course the further the state of training is behind the state of the art, the more pressing the problem becomes.

The only way of trying to make up the leeway is to accept the experience of others and to use all the available resources in accordance with carefully thought out and rigorously applied priorities. It is obviously unprofitable to devote time and effort to investigating, testing or proving something when the

results of someone else's investigations, tests or trials are to be had for the asking.

Air transport techniques, like infantry tactics or gunnery, are pretty international and much is to be gained by an exchange of ideas, experience and technical data.

There is little doubt that in the field of large-scale operations, the employment of armed helicopters, and military free-falling, the Americans have most experience.

On the other hand the British are probably ahead in techniques such as air-transported operations based on standard loads and standard tie-down schemes; the use of computers to plan various combinations of men, vehicles and equipments to suit a whole range of payloads; the application of mechanical documentation to aircraft manifests; unit "light scales" for air movement; jungle operations involving helicopters, STOL tactical transport aircraft and air supply; the employment of commando ships in support of internal security operations; clandestine missions; and air maintenance.

The French gained considerable experience in the use of helicopters in their operations in Algeria, and in the controversial field of missile-armed-helicopter versus the tank they have probably undertaken more research and evaluation than any other nation.

The Belgians and Germans have developed new parachute assault techniques and airborne equipment, and the Swedes have some very efficient homing beacons. And so on.

Anyway, enough of the need for a sense of urgency.

Right Organization

The prime requirement here must be a clear concept based on sound principles, for the right organization and equipment must derive from it. The most important of these principles are considered briefly below.

First, Conservation of Effort: Airlift must not be wasted on tasks which can be carried out better or more economically by other means. Even if there is sufficient air transport available the accumulation of a reserve of air transport capability will always be most desirable. (In this connection it should be noted that air effort is normally "rationed" by the total flying hours available. The United States Army achieves this by imposing a fuel budget on each aviation unit, and unused fuel is looked upon as "money in the bank" available to be drawn upon when required.)

Second, Control: The best and most economical use of air transport resources is achieved by centralizing control at the highest level which can effectively exercise this control.

Third, Correct Use of the Force: Aircraft should be used on tasks and over distances for which their characteristics suit them.

Fourth, Economy: In air maintenance operations the

maximum economy should be achieved in the use of manpower, equipment and air effort. This can be effected by employing air landing in preference to air dropping, and by keeping the number of trans-shipment points to the minimum. (The reason for the former is that the economics of air landing are much better than those of air dropping [in which the costs of aerial delivery equipment alone may approach £400 per ton of stores], while the need to have as few trans-shipment points as possible is to avoid the considerable administrative overheads in the manning, maintenance and not least the defence of airfields or airstrips which are not absolutely essential. Furthermore it should be realized that an unnecessary trans-shipment point means that aircraft spend a higher proportion of their time on the ground being loaded or unloaded — and an aircraft justifies its great expense only when flying.)

It is important that the concept be based on principles rather than on a particular piece of ground or a particular plan. This then provides the flexibility to permit its application to any set of circumstances.

Moreover, for an air maintenance concept, care should be taken to avoid a rigid substitution of aircraft on an "aerial L of C" for trucks or trains on roads or railways, as at times big aircraft may replace small trucks, and vice versa.

In considering an air maintenance system it is necessary to think, not in terms of "lines", but of "circles", drawn about the airfields or landing sites, representing the radius of action of each type of aircraft. Troops can then be maintained by air anywhere within these circles. General Wingate proved this on his first Chindit operation in 1943, of which it was written: "Its greatest achievement was the final proof that airpower in the form of air supply could give back to the ground forces mobility and freedom to manoeuvre without being tied to ground communications."

Now, as regards the organization, it is important to avoid any unnecessary changes or specialization. There is no "black-magic" about the proficient use of air transport, so, provided the troops concerned have had sufficient training, there is little need to alter existing unit establishments or structure.

What is involved and where?

Firstly consider where and how the aircraft are to be employed. The medium-range tactical transport aircraft of the Beverley, Argosy or Hercules type (hereafter referred to as MRT) will normally fly from the theatre base airfields to an advanced landing field which then becomes the airhead. An Airhead Maintenance Area (AMA) would as a rule be established to hold four or five days' operating stocks and reserves. Studies of all likely cold war or limited war areas indicate that this airhead may be as much as 200 miles from the positions to be secured by the forward troops. As the eco-

nomical radius of action of helicopters is limited to about 50 miles some other aircraft is required to fill the remaining 150 miles of this 200 mile gap. This then gives rise to the need for a STOL short-range tactical transport aircraft of the Andover or Caribou type (hereafter referred to as SRT Fixed-Wing) which will operate from the airhead where the MRT terminates, forward to a short airstrip in the combat zone within 50 miles of the forward troops, where two or three days' stocks would normally be held in a Forward Airhead Maintenance Area (FAMA). Here the transport helicopters of the Wessex or Iroquois type (hereafter referred to as SRT helicopters) operate forward to unit landing sites.

An alternative is of course to use air drops from MRT or SRT Fixed-Wing operating from the airhead.

Disregarding the purely routine strategic operations it can now be seen that within the theatre there will normally be four points at which the army requires some form of organization to load or unload aircraft. These are, firstly, the base airfields where the MRT are loaded; secondly, the airhead, where the MRT are unloaded and SRT Fixed-Wing loaded; thirdly, the combat zone airstrip where the SRT Fixed-Wing are unloaded and the SRT helicopters loaded; and fourthly, the unit landing site to which the helicopters deliver. Return loads may of course be carried in the reverse direction.

The base airfield is likely to be in the vicinity of the port of entry to the theatre or area, probably 500 miles or more from the airhead. The logical choice for the army organization here is a detachment of the Army Air Supply Organization (AASO) which exists for just such tasks. This would be capable of handling the emplanement of troops as well as the loading of cargo, as has been well demonstrated on operations and exercises.

Next, the airhead. This, as already mentioned, may be 200 miles from the forward troops and therefore will be in the communication zone. Here again a detachment of the AASO is the obvious organization to unload the MRT, load the SRT Fixed-Wing and, when necessary, to pick and rig cargo for airdrop and provide air despatch crews.

The forward airstrips into which the SRT Fixed-Wing are to operate are likely to be in the brigade (c.f. task force) areas — in fact the deployment of the brigades or task forces will be influenced by the location of the airstrips, for these must be secure — and are therefore in the combat zone. The task here is quite straightforward, being the unloading of the SRT Fixed-Wing and the loading of the helicopters, and the formation ST companies can undertake this after their MT drivers have been trained as aircraft loaders. If the normal MT company organization is retained the personnel can be employed either on driving or aircraft loading as the situation

dictates — bearing in mind the principle of Conservation of Effort mentioned earlier.

Lastly, the unit landing sites. The unloading and backloading of helicopters is a job for the units themselves, and apart from training in helicopter handling, no special organization is necessary.

So the sole requirement for any specialist army unit is the AASO. This organization is entirely flexible, enabling it to operate at rear or forward airfields (whereas its predecessors — the Rear Airfield Supply Organization [RASO] and Forward Airfield Supply Organization [FASO] were established and organized for one situation only); it is manned by specialist aerial delivery tradesmen, and is equipped with air portable cargo handling equipment. Moreover the proof of the pudding is in its eating, and the AASO has proved itself to be a thoroughly sound concept and an organization proficient in any air transport activity — be it strategic or tactical, air landing or air drop, and involving men or material. There is surely, then, neither need nor valid argument for any change here.

In considering the army organization for air transport operations it is important to guard against the tendency to view these air operations from a parochial standpoint. Air transport offers speed, mobility and flexibility when other lines of communication are restricted or non-existent, and transport aircraft can perform a number of different roles at comparatively short notice and move their operating base rapidly from place to place. It follows that the army organization to execute the army's responsibilities in air transport operations must be as equally flexible as the air units with which it operates. Just as the best and most economical use of air transport resources is achieved by centralizing control at the highest level which can effectively exercise this control, so too with the army's air organization. Thus it should come under the highest tactical (as opposed to logistic) headquarters in the theatre or area, and its deployment should be related to the deployment of the air transport resources rather than to geographical, command or formation boundaries.

It is important, too, to appreciate that with an air maintenance system the saving in administrative personnel is effected by obviating the need for a surface line of communication. This point was clearly made a few years ago by the then Quartermaster-General of the British Army who stated that, in the context of small limited wars of the future, the aim was "to cut out the land L. of C. and rely on air for all maintenance, thereby saving on manpower which has hitherto been used for the land L. of C.".

The saving of course is not just the conglomeration of administrative units, depots, port detachments and transportation found in and around maintenance areas, but all the units and detachments needed

to keep the actual L. of C. operating — for example, engineers to repair roads and bridges and operate ferries; armoured cars and infantry to escort convoys and protect the road, staging posts, refuelling facilities, breakdown crews and workshops, and literally hundreds of trucks and drivers.

The saving, then, comes from cutting out the L. of C. and not by reducing the administrative units engaged on airfield duties. Planning and control are vital to efficient air transport operations and these functions require officers, senior NCOs and clerks. Furthermore, as airfields and airhead maintenance areas are quite large places with the various activities frequently dispersed it follows that adequate transport is also essential. Moreover, air maintenance operations normally involve activities continuing throughout the 24 hour period (for even if flying is restricted to daylight hours load preparation will be carried out during the night) and provision must be made in establishments for two shifts with, in the case of fork-lift tractors, three operators per vehicle. Any reduction in administrative personnel here will inevitably result in a loss of efficiency and a waste of air effort and in the long run will prove to be anything but an economy.

To illustrate this, consider the forward airstrip at which the SRT Fixed-Wing aircraft land and from which the helicopters operate. To land, say, 100 tons a day and send forward 75 tons could result in roughly 35 SRT Fixed-Wing loads to be rapidly off-loaded and transported to the FAMA; 100 helicopter loads to be assembled, prepared, weighed, documented, positioned by vehicle and loaded or hooked-up; probably 30-odd helicopters bringing back some form of return load and perhaps 10 of the SRT Fixed Wing to be backloaded, involving the preparation of the loads, weighing, documentation and the actual loading and lashing. All told, about 175 aircraft handling operations involving the co-ordination of loads, loading crews, vehicles and aircraft. Now if, because of poor organization or inadequate control, each helicopter is delayed only 60 seconds at each loading or unloading point the accumulated loss of flying hours would amount to the best part of a day's effort for one helicopter—wasted effort representing 2,000 passenger-miles or 300 cargo ton-miles.

A few words about equipment. Firstly, aircraft. The characteristics required of military transport aircraft have been well established and clearly defined in the *Manual of Joint Warfare*. Of those aircraft mentioned above the Beverley and Argosy suffer certain limitations in payload when used over the longer ranges; but the Hercules, Andover, Caribou and Wessex fully meet the requirements. Unfortunately the B-model Iroquois suffers from the serious disadvantage of being unable to lift a complete infantry section, a vehicle or a 105-mm howitzer in one load, and it is considered that the

An Iroquois helicopter employing the under-slung load technique.

advantages of VTOL cannot be fully exploited without this capability.

Secondly, vehicles. Conventional trucks and trailers make bad air portable loads as they almost always fill the aircraft's cargo space before all the payload has been utilized by weight. Moreover their weight : payload ratio is unsatisfactory; for example, a ¼-ton truck and ½-ton trailer weigh empty nearly three times as much as they can lift, which represents rather a poor return for the airlift required to move them. The ¾-ton truck is no better.

The requirement, then, is for a cargo-passenger carrying vehicle of low cost, low volume, low weight and comparatively high payload, and it is considered that a new approach is needed to find something better than the Land Rover-trailer combinations for use by air transportable units.

The Massey-Ferguson tractor can tow two 3-ton trailers which can be stacked one on top of the other for air movement. The weight : payload ratio is extremely good, being something better than 1:1. If the tractor is fitted with a fork-lift device, such as the Horn-draulic or Cameron-Gardner Foreloda, the combination provides a self-contained cargo handling and transport facility. However, it is good only for logistic loads and is not suitable for troop-carrying or towing guns.

An alternative approach is the mini-moke or mechanical-mule type of vehicle which is cheap, light, carries a reasonable cargo or personnel payload and which can be stacked one on top of another for transit and man-lifted off at the destination. These offer a weight-payload ratio of 1:1, and because of their short length they can be placed sideways in a Hercules, giving up to sixteen vehicles to an aircraft load — far better economics than three Land Rover - trailer combinations. Moreover, these vehicles would offer a further advantage of being airportable by the Iroquois UH-1B.

One further vitally important point concerning vehicles is the need for adequate fork-lift tractors at each trans-shipment point. Past experience has proved that the number of fork-lifts is the critical factor in air maintenance operations, and if these are insufficient the results are delays, longer turnarounds of aircraft, and lost flying effort. They must therefore be provided in adequate numbers, they must be airportable in the SRT Fixed-Wing aircraft, and, as mentioned earlier, sufficient operators must be provided to enable them to be used continuously if need be.

Before leaving the subject of organization it is important to consider the priorities to be accorded to the deployment of the army's air transport organization. Operational experience has shown that the greatest number of "bayonets" can be deployed in the shortest time not by filling every aircraft with infantry, but by including a small AASO detachment in the first aircraft. For the price of a few seats and a handful of cargo given to the AASO specialists, quicker aircraft turnarounds can be achieved and a more rapid build-up of the force obtained. So the lesson here is for a little "tail" before the "teeth".

Right Training

For the right training programme to be drawn up and given the necessary impetus it is necessary for the indoctrination to start at the top.

If the commanders, commanding officers and staff officers are sufficiently "sold" on air transport there is little doubt that their units and formations will be properly trained. It is considered that this can be achieved by even a one-day presentation on the essential aspects by an experienced Air Transport team, able to put

across the principles and help establish the right attitude of mind. Time should not be wasted on demonstrations of "gimmicks" but skilled troops can be used to demonstrate various techniques in general use in air transport operations.

This should be consolidated by making it mandatory for all major units to have at least one officer of field rank trained on an air transport course. Minor units having an air transportable role should also have an officer trained if at all possible.

The more practical aspects of training should be tackled by a junior officer from each unit attending a Unit Emplaning Officers' course, with a number of NCOs and men qualifying as aircraft loaders.

For helicopter training each unit should have at least one junior officer or senior NCO qualified as a Helicopter Handler Instructor, who in turn would train unit helicopter handlers.

Much unit training can be undertaken without the use of aircraft. Drills and procedures can be practised on mock-ups or with readily-available equipment, to culminate in training with "live" aircraft.

All training should be conducted under realistic conditions. This will apply particularly to unit and formation exercises where steps should be taken to ensure that the size and nature of dropping zones, landing sites and airstrips are related to the conditions likely to be encountered in actual operations, and peace-time accounting requirements should not be permitted to impose unrealistic restrictions on the use of air supply.

The air maintenance organization can be tested only under actual conditions of having to handle real tonnages in real aircraft flying over realistic distances. Any form of exercise "cheating", such as prepositioning of aviation fuel, considering tonnage as just "dead weight" and not as different commodities, or "simulation", is fraught with danger as it is too easy to draw the wrong conclusions and learn the wrong lessons.

One important aspect of training apt to be overlooked is the continuation training and maintenance of proficiency of all soldiers carrying out any task involving aircraft. The more specialist the tradesmen the more important it is for them to be regularly tested before their "licence" is renewed, for these men discharge the army's final responsibility to the air force. Any failure in this regard affects aircraft safety and cannot be accepted. Because of the difficulty of maintaining skills which are not, frequently practised it is important that appointments are not "over-rated" by establishing a tradesman of a skill higher than is required for the job.

All units having a role of moving by air should include the preparation of staff tables as part of unit training. These are normally required for different scales of equipment and

different types of aircraft to suit any eventuality, and unless they are frequently reviewed, kept up-to-date and practised, the reaction-time is unlikely to be sufficiently short.

The purpose of a fire brigade is, after all, to get to the scene of the fire before the blaze gets out of control. The psychological effect of swift reaction will be considerable and a company on the spot in a matter of hours may avoid the sending of a brigade a week later or a division in a month.

If a potential enemy knows that his opponent has this ability to land a viable force at the drop of a hat the possession of an air transport capability will be a real deterrent to aggression.

The aim must be to "git thar fustest" — not "second-fustest". The soldier of today can achieve this by his proper use of air transport, but the extent of his success will be directly proportional to the effort and resources he is prepared to devote to it, and the degree to which he observes the golden rules.

While the amateur may have has head in the clouds the truly professional "air-minded" soldier paradoxically "keeps his feet firmly on the ground" and never loses sight of the fact that air transport is only a means to an end and not an end in itself.

Since this article was written, certain changes in nomenclature have occurred as a result of the reorganization of the Royal Army Service Corps into the Royal Corps of Transport. Thus AASOs are now Air Despatch Regiments, and Brigade Group Companies RASC have become Brigade Group Squadrons RCT. Air transport terminology has also undergone several changes. "Air Maintenance" is now embraced by the term "air logistic support"; MRT and SRT Fixed-Wing have become Tactical Transport (Tac T) aircraft, suffixed where necessary by (MR) or (SR), e.g. Tac T (MR); and SRT helicopters are now support helicopters.

However the older terminology and nomenclature have been retained in this article to emphasize similarities rather than suggest differences between the British and Australian operational requirements and organizations.

AMBUSHES

Extensive use was made of ambushes and troops became adept at inflicting casualties on enemy fighting patrols or parties moving on the L. of C. Generally steep portions of the track were selected and the ambush set with troops on the high ground flanking the track. The enemy, who invariably bunched when moving along the track, were allowed to come right into the ambush. The ambush commander fired the first shot, killing the leading Jap. This was the signal for opening fire. Any enemy who attempted to leave the track by bolting down hill usually fell a victim to booby traps which had been set (time permitting) for this purpose. Rifles were usually kept at half cock, enabling them to be cocked silently on the approach of the enemy.

— Report on Operations, 3 Aust Div in Salamaua area, 22 April to 25 August, 1943.

WAR DIARY

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NO. 1 INDEPENDENT COMPANY A.I.F. AT KAVIENG

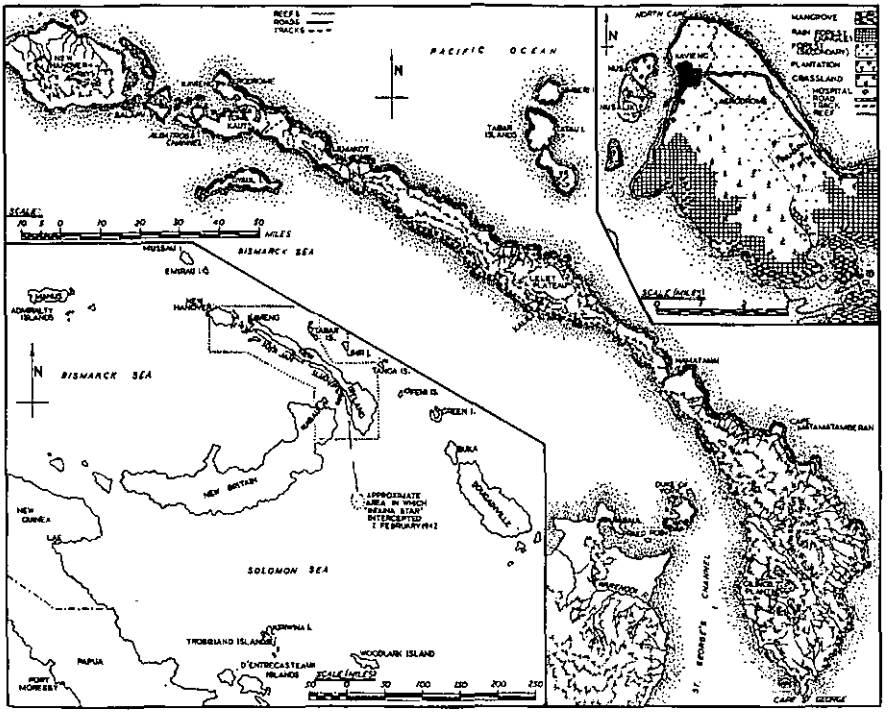
Major J. Edmonds-Wilson

In July, 1941, the No. 1 Independent Company A.I.F. arrived at Kavieng, New Ireland, to protect the seaplane alighting base and to act as a link in a chain of observation posts which the Chiefs of Staff were establishing across Australia's northern frontier.

On 20th and 22nd January, 1942, Japanese aircraft heavily attacked Rabaul, garrisoned by the 2/22nd Battalion. On the 21st they switched the full weight of their air attacks to Kavieng, Madang, Lae and Salamaua. Early on the morning of 23rd January, the Japanese simultaneously invaded Rabaul and Kavieng. This account of the Japanese attack on Kavieng was written at Manila in September, 1945, from notes covering the period 21st January to 2nd February, 1942, by the O.C. No. 1 Independent Company.—EDITOR.

AT approximately 0710 hours on 21st January, 1942, planes were reported coming in from the north. All personnel were at or in the vicinity of their action stations. The planes were recognized as being Nipponese, about 60 in number, mostly bombers, dive-bombers and some Zeros. Their presence was immediately reported to HQ Rabaul. The attack commenced at 0718 hours by dive-bombing of buildings and gun positions on the aerodrome and low-level attacks on the ridge running laterally with the western beach, where we had concealed gun positions. These attacks were simultaneous. They were met by brisk fire from all guns and one enemy plane left formation badly hit and made off in a north-westerly direction but crashed into the sea beyond Nusa Island.

The writer of this report was commissioned in the 9th Light Horse in 1931. He joined the 8th Cavalry Regiment AIF (later to become the 9th Regiment) in July, 1940, and transferred to the 1st Indep Coy as a major and officer commanding in May of the following year. After capture he was transported fom Rabaul to Japan where he spent most of the years of captivity at Zentsuji. He died in January, 1951.



After the first few minutes the Japanese formation broke up in smaller groups and in some cases singly, attacking by machine-gun fire and bombing the hospital, dwellings, etc. indiscriminately.

The motor vessel *Induna Star*,* which had arrived in harbour immediately prior to the attack and was tied up at the main wharf, cast her moorings and endeavoured to make for the comparative safety of the Albatross Channel and its adjacent islands. She was immediately singled out for attack by six planes and although the gun team under Sergeant Reed put up a heroic resistance the *Induna Star* was soon riddled with bullets and, her steering gear out of control, ran on a reef close to the beach about two miles south of Kavieng. A short account of the foregoing action is necessary here.

Induna Star cast her moorings at 0725 hours and headed south-west. The attack on her commenced at 0730 hours and continued until 0800. During this time she was exposed to the continuous fire of six planes. She was manned by the usual crew: Skipper Julius Lundin, a Chinese engineer and nine native boys. Of these one was killed outright and two others

* A vessel of 81 tons gross register, purchased for the use of the Independent Company soon after its arrival at Kavieng.

wounded. The gun crew comprised Trooper Anderson firing the gun, Trooper Gulliford No. 2 on the gun; other personnel were Trooper Tole, Signalmen Munro and Harrison, Privates Moffat and Carter and Corporal Noonan. The gun was a Bren in an exposed position on the roof to the rear of the wheelhouse (the only position suitable for anti-aircraft). Anderson was first wounded by a bullet through his right elbow. He continued to fire and was again severely wounded in the abdomen, but continued at his post until the *Induna Star* ran on the reef. Signalman Munro and Trooper Anderson both died as a result of wounds and all other members of the crew, with the exception of Moffat and Carter, were also wounded.

When the *Induna Star* ran on the reef the skipper and native crew abandoned her, and while swimming to a near-by island, one of the crew was taken by a shark.

During the first few minutes of the bombing the QM store at the aerodrome was wrecked, but not much other damage was done, except that one hut suffered a direct hit by a bomb and fire broke out. The first attack eased off for a few minutes. At 0755 hours the military hospital was hit by a bomb — fortunately with no loss of life as all patients and personnel were out in slit trenches. The worst cases of sickness were at the civilian hospital (under the care of Sister D. Maye) which fortunately was not hit.

At 0800 hours smoke was coming from the copra shed and as I had a small group of signallers there with a 108 set for communication with an outpost on Salapu Island I dispatched Captain Fraser to make a reconnaissance of that area. I was also temporarily out of communication with the aerodrome as the telephone wires had been cut by a bomb, so I despatched Sergeant-Major Ross Harvey by motor-cycle to see if all was going well with Captain Goode's platoon in defence there. At 0823 hours Sergeant-Major Harvey returned, closely followed and being fired on by a Japanese plane. He reported all well and no casualties at the 'drome.

At 0820 hours the attack eased off and by this time we had accounted for two more planes, one crashing into the swampy area, south-west of the aerodrome, and one into the sea some distance out from the north beach, east of the north-west point of the island. The telephone systems had broken at 0825 hours; Captain Fraser not having returned, I left Lieutenant Dixon in charge of HQ and moved out on a tour of the positions. I found both copra sheds burning and the signals station destroyed and no sign of Captain Fraser or the signallers, nor was the *Induna Star* visible from this point. I next visited the military hospital and while crossing from the copra shed to the hospital area was machine-gunned without effect by Japanese planes. I found all well at the military hospital, the only casualty being

one from Captain Millican's platoon suffering from concussion.

I next visited Captain Millican's platoon positions. Everything was going well and there were no more casualties. I then visited Sister Maye at the civilian hospital and discussed the possibility of shifting any badly wounded men down to the Catholic Mission at Lemakot. Permission to do this was obtained from the Roman Catholic fathers residing in Kavieng.

The time was now 0845 hours and the attack, which had increased in tempo between 0830 and 0845 hours, now began to ease off. All Nip planes had flown off by 0850 hours. By this time we had definitely accounted for one more plane which crashed into the sea out towards Salapu Island, and many others were seen to be badly hit. The attack had all been low level and dive-bombing, their planes offering good targets and the gun teams in all positions had kept up a constant fire at each attack.

At 0855 hours one float-plane returned, flying at a low level along the water front. One of Captain Millican's gun teams, situated on the ridge, got in a good burst of machine-gun fire; the plane was plainly hit and immediately fled in a north-westerly direction. This was the end of the attack. Some bombs had been dropped in Chinatown but damage was slight. Captain Goode, while crossing the aerodrome, had been hit by a piece of flying limestone, sustaining a badly bruised hip; the remainder of the casualties had been sustained in the *Induna Star* incident.

Captain Fraser, on reaching the signals station at the wharf, had found it demolished and the signallers taking shelter some distance away. They reported the *Induna Star* incident and Captain Fraser went along the beach to render assistance if possible to the personnel on board. He was enabled to assist them ashore and take the wounded to the Platoon Aid Post and later to the civil hospital.

In the meantime the skipper of the *Induna Star* had got a canoe and reported to me at HQ by 0915 hours, stating that the *Induna Star* was wrecked. I ordered him to go back and endeavour to get the ship going and bring her up to the wharf. I then had all possible details wirelessed to HQ Rabaul, including the supposed loss of the *Induna Star* and claiming four planes. (This claim was later confirmed when the Japanese landed at Kavieng; they were looking for the crews of six planes and stated that we had accounted for seven planes.) I went out to the aerodrome where salvaging operations from the wrecked Q store were under way and Captain Goode was having things put in order. By 0945 I was back at the civil hospital where the wounded had just arrived and Captain Bristowe, the medical officer, ably assisted by Sister Maye, was commencing to operate. After consultation with them it

was decided to send the seriously wounded down to the Lemakot Mission with Sister Maye in charge. This was accomplished by 1500 hours by car and truck. The attitude and actions of Sister Maye were at all times heroic and highly commendable.

I decided that in the case of an enemy landing our positions in Kavieng would be untenable and that should a landing take place at Panapai Beach simultaneously with landings at the western beaches our positions would be a death trap. I decided to evacuate all but portion of Captain Goode's platoon and certain essential personnel that day. By 1100 hours the skipper had managed to bring the *Induna Star* up to the Police wharf. She was in a badly leaking condition and the skipper did not consider her seaworthy. However, I had a month's supply of rations loaded into her and ordered the skipper to take her round to Kaut Harbour, patch the holes and await my orders. The Chinese engineer had deserted and could not be found. I ordered Captain Fraser to take all superfluous HQ personnel by track and whale boat out to an established camp on the Suk River adjacent to the camp set up by the civil administration. I sent Captain Millican and his platoon, with the exception of some detailed to Panapai Beach, overland to an established camp overlooking Kaut Harbour. In these camps there was a month's supply of food. Also two sections from the aerodrome under Lieutenant Gibson were sent to Suk via Tomi. The above people with their gear and equipment had moved out of Kavieng by 1830 hours on 21st January.

I instructed Lieutenant Page, my signals officer, to shift our main wireless set to a position of relative safety, about half a mile south-west of the aerodrome. This was to be my future HQ. This was accomplished during the afternoon of the 21st, after having first notified our outposts at Buka and Manus of the day's happenings. All personnel possible were put on to carting drinking water and supplies out to the aerodrome area.

Between 1900 and 2000 hours a message was received from HQ Rabaul stating that an enemy force of one aircraft carrier and six cruisers was in the vicinity of and in the waters north-west of Rabaul. Europeans were evacuating Kavieng and some Chinese, but many Chinese were remaining and I did not feel justified in firing any portion of the town at this stage.

By 0800 hours on the morning of the 22nd, the signallers had contacted Rabaul asking for further information. Rabaul replied that there was no information, but that they would contact us later. They did not contact us, and from that hour all communication with them ceased. All the 22nd was spent in preparing for enemy attack and getting supplies out on the tracks to our final rendezvous at Suk and Kaut should evacuation become necessary. Company medical aid posts were also set up at Cockle Creek, south-west corner of Panapai Plantation,

and those wounded and able to travel were sent there. At 2230 hours, Mr. Doyle, plantation manager at Selapui, reported in by motor boat that there was no visible sign of enemy naval or aircraft. At this time it was very dark and raining. I asked him to return to the outpost and, as we were now out of WT contact with them, that should they see Kavieng being attacked to make their way by boat to our camp at Kaut, which they later did. Lieutenant Dixon, Driver Sibrai and two engineers and myself were now the only army personnel left in Kavieng proper. Mr. Philip Levy, Harry Miller [Murray], Bill Attwood, Mr. Livingstone and the Roman Catholic fathers were the only European civilians left. I decided to stay the night with Mr. Levy. Lieutenant Dixon and party stayed at the Town Club (both close to the waterfront) with the intention of commencing demolitions on wharves, etc. at 0400 on the 23rd. Mr. Dixon set a watch and went to bed at 2300 hours.

At 0305 hours on Wednesday, 23rd January, I was awakened by noise at Saunder's Wharf. Visibility was very poor and it was raining lightly. Mr. Levy switched on the house lights but immediately switched them off. Mr Dixon's party saw the lights switched on and off and knew we were warned. It was the commencement of an enemy landing, made in darkness and without noise. Landing barges were reaching all western beaches at 0310 hours. Very lights were being fired, followed by much shouting and shooting. By 0312 hours Mr. Levy's house was surrounded, but we left it by car unmolested except for a few stray and ineffective shots. I picked up Mr. Harry Murray on the way out to the aerodrome. The enemy were by this time surging towards the aerodrome from the lower western beaches. I was met by Lieutenant Burns, whose duty it was to blow the drome and supply dumps. I told him to do this immediately and then retire if possible. I drove to the end of the drome, waited 30 seconds and the drome and dumps were blown up at 0318 hours. Some of the enemy troops had actually penetrated on to the drome by this time. Unfortunately Captain Goode received severe concussion when the drome was blown up, but he, with all remaining members of his platoon, retired in good order towards Cockle Creek and sustained no further casualties.

I arrived at HQ at 0325 hours. The WT equipment was then smashed as it was too heavy to carry, as was everything else of use to the enemy, and we retired to the Cockle Creek rendezvous. Reports showed that the landing at Panapai Beach had not been simultaneous with landings at the western beaches and this discrepancy in time had allowed our almost unimpeded retirement. The enemy had landed in force between 3,000 and 4,000 strong. Resistance at this stage was useless. At 0545 hours, as Lieutenant Dixon and party had not arrived, I concluded that they had been either killed or taken prisoner, or had escaped down

the coast road with Mr. Livingstone who was known to have followed that route. I decided to move out towards Suk; jungle travel was slow and the wounded impeded progress, but by 1300 hours we had reached the edge of the more open country and as aircraft were constantly overhead I decided to camp until night. I sent back scouts who returned by 1800 hours stating that the enemy had reached Cockle Creek. We moved that night to the edge of the kunai plains, camped until 1200 hours on the 24th, then worked our way along the edge of the kunai plains until evening, when we crossed them and entered the dense jungle between it and Harker's Hut. It now became impossible to carry the wounded so they walked, which was very gallant on the part of Corporal Noonan as he had bullet wounds through both legs. By 2330 hours we had arrived at a small clear knoll overlooking the river at Harker's Hut. It was very wet and dark and everyone was utterly weary. I sent Sergeant Roberts to reconnoitre Harker's Hut. He did not return, so fearing an ambush I decided to camp.

At 0400 on the 25th sounds were heard from the direction of the river at Harker's Hut. Everyone stood to, but it was Sergeant Roberts returning, having been unable to find us on the previous night. He reported all clear. We then pushed on and were met at Harker's Hut by a party sent out by Captain Fraser from Suk. The journey from Harker's Hut to Suk had to be done in relays, part of the way by canoe. I went with the first party and arrived at Suk by 1600 hours. The rear party did not arrive until next day. Many were in a state of exhaustion as the hardships of the trail had been severe.

I immediately reported to Port Moresby that myself and company, except for slight casualties, were all OK, and asked if relief would be possible. I received congratulations from Major-General Morris and instructions to observe and report. I believed at this time that the *Induna Star* was unseaworthy and that we would not be able to make our withdrawal in her as previously planned, reference my appreciation and operation orders.

All day on the 26th we remained resting at Suk. A native police boy reported that Lieutenant Dixon and party had left by the coast road.

On 27th January Captain Fraser and Sergeant-Major Harvey, while reconnoitring down the Suk River, met a party of natives with the Tomi luluai (an untrustworthy character) and were informed by them that Lieutenant Dixon and party were POWs at Kavieng. This was subsequently found to be correct. On the evening of the 27th Lieutenant Dennis and Mr. Morell arrived from Kaut with the news that an enemy aircraft carrier was standing in the anchorage at Dyaul Island, and an enemy submarine was patrolling up the mouth of the Albatross Channel. The enemy

obviously thought that we would head for Dyaul Island (it was later confirmed that their Intelligence Corps were of this opinion). They also said that the enemy were patrolling along a track from the north coast road to the southern shore of the island east of Kaut, thereby endeavouring to cut us off from the eastern end of the island; they reported that the skipper and crew of the *Induna Star* had deserted, and that the *Induna Star* was on a mudbank in Kaut Harbour, but that in their opinion she could be made seaworthy. They also said that malaria and diarrhoea were bad in their camp. As this was also the case with us and also as some of the civilians were complaining that our proximity was a danger to them, I decided to move everyone to Kaut, try and refloat the *Induna Star* and make for New Britain, where reports said our troops were still resisting the enemy.

Failing this, we would blow up the *Induna Star* and make our way down to the Lelet Plateau where conditions would be healthier. As unquestionably our positions at Suk and Kaut would be discovered by the enemy in a few days I decided to move everyone to Kaut on the following day. I called Captain Fraser and Captain Goode apart and communicated this decision to them. They made no comment.

Captain Fraser and Sergeant-Major Harvey volunteered to take a party to try and rescue Lieutenant Dixon's party. As the information regarding Mr. Dixon's party was contradictory and also because, even if they were POWs, the time taken to rescue them and return to Kaut would jeopardize the safety of the company, I refused the request.

I visited the civilan camp and communicated my decision to Mr. McDonald and Mr. Levy, asking Mr. McDonald not to take any action or destroy the wireless set for three full days unless they were pressed by the enemy.

On the 28th we moved to Kaut, after destroying equipment too heavy to carry. The *Induna Star* had to be pumped out by hand as her small engine was under water, and it took our engineers until the evening of the 30th to get her main engine going satisfactorily. Meanwhile, volunteers were working under water in the shark and crocodile infested waters patching the holes in her hull.

On the morning of the 30th I dispatched Lieutenant Sleeman back to the civilian camp at Suk with dispatches for HQ Moresby re our proposed move back to New Britain, casualty list, etc. Lieutenant Sleeman returned at 1700 hours and stated that Mr. McDonald had destroyed the wireless, thus cutting off our communication completely. He handed me a message from AHQ Melbourne, which read as follows: "Your role to remain and report also do as much damage as possible to the enemy." I had a conference with Captain Bristowe, AAMC, at once re the health of the men. They had mostly been struggling through jungle and

swamp for nine days; prior to that they had been constantly on duty for many months and were now suffering from fatigue, malaria and dysentery and skin diseases. Furthermore there was only two months' supply of food left, including that on the *Induna Star*. In addition our only main and effective role — that of observation — was now impossible. Added to this, our only chance of leaving the island was to go at once before the enemy discovered the whereabouts of the *Induna Star*, which AHQ still believed to have been destroyed. As she was now ready to sail I decided to embark the troops and sail down the coast by night, lying in harbour by day and hoping to make the east coast of New Britain somewhere below the Warengoi River. Mr. Morell acted as pilot, Sergeants Philpott and Patterson as engineers. By 1930 hours of the 30th we were moving out of Kaut Harbour and reached Kalili Harbour by daylight of the 31st without incident. Mr. Lee Lightbody of Kalili had a bullock killed, and the troops were disembarked and fed. Here we learned that fighting had ceased on New Britain, and our only chance was now to make for Port Moresby. Mr. Lightbody reported the natives on New Ireland were becoming increasingly hostile and looting of plantations had started. Here also I had hoped to contact or get news of the company's Namatani detachment under Corporal Rogers. None was available, except that he was supposed to be somewhere in the mountainous country south-east of Namatanai, with representatives of the civilian administration, equipped with a teleradio set, and therefore in a reasonable position.

By 1930 hours on the 31st we were again moving. We sailed down the coast without incident until early dawn of the 1st February when an enemy destroyer was sighted lying inshore about three-quarters of a mile astern. We were then within ten minutes sailing of the harbour at Gilingil Plantation. Almost immediately the destroyer was observed to swing out from the shore and sail off to the west. This was presumed to be the destroyer which later on that day shelled our vacated postitions and carried out landing operations in the Kaut Harbour area. The *Induna Star* was tied up close inshore in a well-hidden position all day, and although enemy ships were passing up and down St. George's Channel and enemy planes were flying overhead, we were apparently unobserved. Inquiries were also made here regarding Corporal Rogers and party without result.

The night of 1st February fell dark and stormy and I decided to run straight for Woodlark Islands. Under a favourable wind and a heavy following sea the *Induna Star* made good time and dawn found us out of sight of land approximately some 70 miles south-east of Rabaul. By 0930 hours when we were about 90 miles south-east of Rabaul an enemy recce plane was sighted

travelling north-west. She appeared not to see us, but unfortunately the day was bright and clear and after a minute or two the plane changed direction and circled round us several times. It then opened fire with machine-guns, without causing any serious casualties, but causing further leakage in an already very leaky ship which needed constant pumping. At 0950 the enemy plane dived and bombed, one bomb hitting the *Induna Star* amidships on the starboard side. This bomb destroyed the life-boat and caused considerable casualties; the *Induna Star* was now taking in a dangerous amount of water and I considered further resistance useless and had the ship stopped.

We then received instructions from the enemy to proceed towards Rabaul, which we did slowly, accompanied by enemy planes, all available hands taking shifts on the pumps. At 1813 hours an enemy destroyer came up to within 500 yards, then sent a boat which took the wounded and officers aboard the destroyer. A line was passed to the *Induna Star* which was towed. Next morning we were lying off the eastern end of New Ireland when all but six of the personnel were transferred to the destroyer from the *Induna Star* and we proceeded to Rabaul and captivity.

Three men had been killed during the action and these had been buried at sea from the *Induna Star;* one of the wounded died on the enemy destroyer during the night and was buried immediately, honours being paid by the enemy and I myself giving what I remembered of the burial service.

During the action on 2nd February Captain Bristowe behaved remarkably well, tending the wounded in a very efficient and quiet manner in spite of very adverse conditions. In previous actions on New Ireland as well as on the 2nd all the officers under my command acted bravely, coolly and efficiently, showing an excellent example to the ranks and carrying out their various tasks with efficiency and dispatch. All NCOs behaved in a like manner.

Lieutenant Dixon and party had been captured before noon on 23rd January. Lieutenant Dixon had been threatened with death if he would not divulge the company's whereabouts. He naturally refused and actually faced a firing squad on the morning of 26th January, but was reprieved and left Kavieng on an enemy ship for Rabaul POW camp on the 27th.

THE DISTRICT ADVISER

Captain James F. Ray,
United States Army

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District Adviser

ANY ATTEMPT to discuss the position of the adviser to a district chief in Vietnam must perforce take account of the variety of the job as among the heterogeneous collection of districts which comprise the nation. Perhaps no other advisory role is so conditioned by the local situation which, indeed, together with the personality of the district chief himself, determines the limits within which the adviser functions.

Thus, in those areas where Viet Cong control is extensive and government suzerainty limited, one is strictly (as the terms of reference imply) a sub-sector adviser, a military adviser. But in others, where the military situation is more under control and the sphere of governmental involvement is accordingly broader, the scope of advisory activity opens to embrace not only security in the strict sense, but also the entire spectrum of public welfare and administration.

This paper, which attempts no more than a synthesis of my own experiences, is, therefore, a reflection only of conditions in Nha Be District, and may afford slim basis for generalization.

In late 1964, Captain James F. Ray, United States Army, Sub-sector Adviser, Nha Be District in Gia Dinh Province, South Vietnam, prepared a report which was a distillate of his five months' experience and of his approach to solving the key problems which he had encountered in his particular area.

On 12th January, 1965, Major-General Richard G. Stilwell, United States Army, then Chief of Staff, United States Military Assistance Command, Vietnam, circulated Captain Ray's report throughout U.S. elements in South Vietnam. In a covering letter, General Stilwell pointed out that while some of Captain Ray's conclusions and methods were transferable, others were not. General Stilwell wrote: "The real value of this brief report lies in its perceptiveness — as witness the final paragraph. For Captain Ray was a singularly perceptive and dedicated soldier. His successive superb records — at the Military Academy, at Oxford as a Rhodes Scholar, and in initial troop assignments — were those of one headed for the very top of the profession of arms."

Just three days before, on 9th January, 1965, Captain Ray had been killed in action while accompanying his counterpart on a night reconnaissance patrol.

Agrarian District

Nha Be is one of the six districts of Gia Dinh, and lies at the hub of the Hop Tac area. It has a population of some 55,000 in an area of roughly 100 square kilometres of paddy land. Although contiguous with Saigon on its northern border, it is almost entirely agrarian. Over 90 per cent. of its work force is engaged in growing rice (of which, for water reasons, it gets but one crop annually). Roughly one-quarter of the district's 34 hamlets are completely pacified, and the government is in effective military control of the remainder.

One Regional Force company is under the operational control of the sub-sector commander, who also directs the activities of over 400 Popular Forces. These troops establish ambushes each night and conduct small (two or three-platoon) operations virtually every day. Thus, the entire district is covered once every two or three weeks, and in consequence, there are no permanent Viet Cong bases within our limits.

Viet Cong activity is confined to terrorism by indigenous guerillas and raids, typically of squad size, by units based near the district's borders. Roads are, in general, not safe at night; during daylight one can, with a small bodyguard, enjoy freedom of the district.

Security Problem

The major security problem derives from the presence in the district of a tank farm in which is stored petroleum, oils and lubricant stock. A critical sector, Yeu Khu Nha Be, has been created which includes parts of Nha Be and Nhan Trac (Bien Hoa) Districts, and three Regional Force companies are under the operational control of the critical sector commander for the defense of the installation.

The Nha Be district adviser is aditionally charged with overseeing the tank farm defenses. I, therefore, work with two counterparts. Since the problems of securing the tank farm can neither logistically nor pragmatically be separated from those of defending the district, co-ordination of efforts between these two counterparts is a major focus of advisory effort.

Perhaps the nature of the job can best be described through an investigation of how the adviser's time is spent. I have averaged nearly three hours daily with the district chief. In one sense, this is inadequate — it would have been far better if the two of us could have spent more time together outside the office, visiting hamlets and supervising the activities of pacification cadre, as well as conducting operations.

But the fact is that this district chief tied himself to his desk, in spite of strong advisory pressure to do some field supervision and under such circumstances, he had a limited capacity for absorbing advice. Of the many hours so spent, perhaps a fourth were concerned with matters of military security; the bulk of the remainder was addressed pri-

marily to pacification problems and the administration of United States Operations Mission (USOM) projects.

De Facto Agent

In this regard, I have in my dealings with the district chief, served as a de facto agent of USOM, alike in the drafting of projects, follow-up on the approval process, and supervision of their execution. Indeed such matters have, in terms of time, formed by far the largest part of my job.

Additionally, my assistant and I have averaged two to three hours daily with subordinate district officials. Most military matters have been co-ordinated through the commander of the sub-sector's Regional Force company, who acts as the deputy for security (although this position has not been formalized). One or more members of the advisory team accompany him on military operations whenever practicable. The subjects of advisory effort with him are essentially identical with the area of interest to advisers of any tactical unit.

Second, we have spent a great deal of time working with the aspirant who directs the Hamlet Pacification Service. In his case, advice has amounted virtually to complete training in the responsibilities and techniques of his job. It has been through him, rather than the district chief, that the critical problem of translating reports, submitted by pacification cadre, into goods and services for the people has been directed.

Third, we have worked in some detail with the district police chief — mainly in an attempt to influence his allocation of the manpower resources at his disposal, especially in the direction of increased emphasis on a programme of population and resources control measures.

Finally, we have stayed in close contact with the sub-sector staff. Here, we have experienced some success in improving the functioning of the operations centre, regularizing logistical procedures, and perhaps most important, infusing the notion of staff co-ordination (even, on occasion, co-operation).

Staff Functions

Indeed, I have taken as a major objective of this team's efforts the initiation of proper staff functioning with mission-type orders, intra-staff liaison, and the presentation of co-ordinated plans — the over-ambitiousness of which goal may be only too obvious to those having experience with the Vietnamese system of personal rule. Nonetheless, the degree of inexperience of subordinate district and sub-sector officials is the greatest obstacle in the path toward a viable, properly functioning arm of government at this echelon (with, perhaps, the exception of the obstacle posed by those who have too much experience). It may well be that over the long run the greatest contribution that our advisory effort makes at the district level will be in terms of the training of this new generation of officials.

Advisory work with the district chief and his staff has been accomplished almost exclusively by the team's two officers. I have not carved out special areas of interest reserved exclusively for one or the other of us — rather, we have shared participation in all facets of the work.

The one specialized member of the team is the medical adviser, the extent of whose activities merits consideration in detail. Essentially, he has served as adviser to the District Health chief who has proved to be an exceptionally receptive counterpart. The medical adviser has averaged more than six hours a day with this man. Jointly, they have firmed hamlet sick call hours, corrected medical supply procedures, improved treatment records, and generally raised the standard of treatment and the number of patients seen daily.

Also, the medical adviser has worked quite closely with USOM Public Health Division officials, most of whom have expressed surprise and pleasure at finding someone with his technical credentials permanently based in the district. Through them he has been able to obtain substantial material benefits for the district's medical programme.

Refute Doubts

The medical adviser would seem to have refuted the doubts which USOM is alleged to have voiced concerning his position. He also has worked as a military medic — for example, medical teams have, for the first time, begun visiting para-military dependent housing. He has organized training in the elements of first aid for selected Popular Force members, and has caused to be initiated supply procedures to obtain basic essential first aid supplies for each separate Popular Force unit.

Independently of his counterpart, the medical adviser has also performed treatment using US medical supplies, although certainly not on a routine basis. First, he has performed routine first aid for personnel living in the same compound with our team. Second, he has consistently been the first medic to arrive and administer emergency treatment when friendly forces have been wounded. He has probably done more than any other member of our team, both to create good will among the people for the United States and to enhance among the people the notion that their government is, indeed, for the people.

Some Success

The Team's operations sergeant, initially, was able to do little advisory work, most of his time being involved in the administrative and logistical support of our team, but he is now becoming quite active as a training adviser. Recently, we have enjoyed some success with the notion of training as a continuing requirement. Many of the operational weaknesses of the Regional and Popular Forces — most notably, the deplorable standard of marksmanship proficiency — can be corrected by training at the unit

level. However, their most serious deficiency, the weakness of subordinate leaders, is rather beyond our capability for formal training. We are working out a modified Army Training Programme built largely around individual and squad proficiencies for gradual presentation to these units.

The Regional Force companies defending the tank farm began training in December. The operations sergeant has been given the mission of acting as a kind of training sergeant to oversee the implementation of plans worked out between the commander and the senior adviser and, where appropriate, to assist in obtaining training aids or in presenting classes. Finally, he typically accompanies one of the manoeuvre elements on as many operations as practicable.

Having considered the nature of our work as it has evolved over a period of some four months, it is appropriate to examine some of the difficulties we have encountered.

The first of these is the language problem, although in this regard we have been particularly fortunate. I am able to communicate with both my counterparts in (a kind of) French; we have for some time had an interpreter which enables us to split our advisory effort; and the District Health Chief speaks a rudimentary English that suffices for routine purposes; therefore, we are able simultaneously to function in three separate directions.

Language Training

This is largely fortuitous. Probably a greater percentage of people at the district level do not speak English than at any other echelon in which we have advisers. The raw fact is that there can be no more advisers than there are people able to communicate. More than this, a district advisory team is constantly thrown into contact with "the common man" — hamlet chiefs, patients on sick call, policemen at checkpoints — with whom even a basic Vietnamese capability counts for a great deal. I consider it almost imperative to the success of the district advisory effort that as many district team members as possible get three months of language training, and that persons having this background receive priority in assignment to district teams. All our team members are currently studying the language, but in terms of available time it is decidedly a second-best solution.

Second, there is an inexorable urge to try to command through US advisory channels — a tendency noticeable at virtually all US echelons, however sincere their desire to resist it. It arises from a very proper desire to correct a myriad of deficiencies, and is nurtured by our system of inspections and reports. However laudable the motives which sustain it, it has to be resisted; whatever advantages it might yield in the short run would be more than offset by the more permanent harmful effects. We must be prepared to tolerate a certain level of

inefficiency in the name of a larger goal: training the new generation to run the nation.

The third problem is one familiar to all advisers in whatever capacity, and follows from a tradition of centralized powers and personal rule. These have resulted in a lack of staff initiative and both introduce totally unnecessary delays and unresponsiveness into the system. They also have most unfortunate consequences whenever there is a power vacuum. I have unhappily experienced the replacement of a district chief — regrettable, essentially, because the manner of its execution left the district without an effectively functioning leader for nearly a month, a month characterized chiefly by marking time, if not actual regression.

Logistical Role

A fourth difficulty is a tendency on the part of some Vietnamese — although, fortunately, neither of the two commanders — to consider the adviser as a combination genie and supply officer. This we have had some success in countering, largely through a stubborn insistence on making the Vietnamese system work. Some officials are still wont to think that requisitions are to be submitted to the adviser; we, therefore, have been at some pains to stress that our logistical role begins when someone in their system either delays or says "No".

From discussions with other district advisers one gathers that many have experienced difficulties with their own house-keeping, although most of these appear to be the one-time function of initially getting organized. Since ours was, I believe, the first to be fully manned and equipped in the field, these transitional problems have by now been resolved, and our propinquity to Saigon makes it easy to solve such problems as arise. It would be most advantageous to have a second jeep, and we are less than convinced that a GRC-87 is the answer to the district team's communication problems, although one can appreciate why teams are currently equipped as they are.

We have distilled certain conclusions from our experiences thus far which I would like to posit in the form of suggestions to be considered. The first concerns specialized training to be given district advisory personnel. Language training seems the single most important prerequisite for success; the foundation in the language given in a 12-week course would be indispensable. Most of the other background material needs could be woven into the fabric of the language course, and would ideally be presented using the case study method almost exclusively.

Second, I feel that the medical adviser should be accorded greater latitude — by which I mean extending him supplies of medicine commensurate with his state of training for his own use in treating Vietnamese, not as a competitor with their own supply system. He should also be given a freer hand to participate,

along with the District Health Chief, in providing proper outpatient medical care to the rural population. This, I think, would have a significant impact on what district teams can do to win support for the United States among the people of Vietnam.

In conclusion, I think there could be no finer job in Vietnam in terms of the background one acquires in what President Johnson has called "the stubborn realities of the pursuit of Peace." The district advisory team is directly involved in three of our most pressing international problems: the delicacies of dealing with allies who desire our support while resenting any hint of interference; the grassroots administration of foreign aid (in terms of ensuring that our aid gets to the people who need it); and the military confrontation of Communist revolutionary warfare.

GENERAL PERSHING

It may be said that he omitted but one factor from his calculations — German machine-guns, and was right in all his calculations but one — their effect. It was the abrupt discovery by his troops of this omission which shook their initial trust in him and led to some of the sweeping unjust post-war criticisms. This change of *attitude was typified in a story* which was widely told: In a column of American troops on the march a voice was heard saying, "Pershing says he'll take Metz if it costs a hundred thousand lives." Silence for a moment. Then another voice. "Ain't he a damned generous guy."

Yet even this remark has an undercurrent of chastened yet *grudging admiration which is a tribute both to the driving* force of Pershing and the fortitude of his men. He lacked the personal magnetism which can make men lay down their lives gladly . . . But he had the character which compelled men not only to die but to work, cursing him perhaps, but respecting him. He was hard, but life had tried him hardly, and if he gave affection to few it was *generous when given — to* those who had shown themselves men by his high standard. When he visited the battlefields after the war, he stood silent awhile before the monument on the mound at Montdidier dedicated to the First American Division. At length, in a voice husky with emotion, he said, "That was the best damned division in any army." — It was a tribute from the heart.

— Liddell Hart, Reputations (London, 1928)

POINT NEPEAN PORTSEA

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THE COMMONWEALTH HEALTH DEPARTMENT AND THE DEFENCE FORCES — FROM THE FIRST SETTLEMENT TO THE PRESENT DAY.

Major J. H. Welch,
Royal Australian Infantry

Officer Cadet School

DURING THE PERIOD 1945-49 the production of young Australian regular army officers was a constant and growing problem. The wartime army was "running down", yet many war terminal tasks remained. The British Commonwealth Occupation Forces had been in existence for four years, the permanent forces were expanding, the Citizen Military Forces were being reconstituted, and a national service scheme was under consideration. All this called for a greatly increased number of young officers. The capacity of the Royal Military College at the time was such that it could not meet the demand. The position was alleviated to a degree by the temporary retention of some wartime officers, and by granting short and long service regular commissions to officers and other ranks who attended special short qualifying courses.

In time, however, it was thought that these "emergency" measures would produce a state where many army officers would be comparatively old for their rank, leaving gaps in the ranks of the younger officers, on retirement. Accordingly, in 1950, after a close study of systems abroad, it was decided in principle to form another establishment, complementary to the Royal Military College, but greatly restricted in scope.

An early problem facing the planners was the future location of the new school. It had been

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The author enlisted in March, 1946, and served with the 66 Infantry Battalion in Japan between October 1946 and September 1947. After his return to Australia in 1947 he was a member of the ARA cadre of the 8/7 and 12/40 Battalions. He was an assistant instructor at RMC from April 1950 to December 1951, and was then posted to 1 RAR, serving with that battalion in Korea in 1952-53 as a CSM and rifle platoon sergeant.

He was commissioned in April 1953 and was for two years attached to the Apprentices School. He served with the Pacific Islands Regiment (1955-57), the School of Infantry (1957-59), 3 RAR (1959-62) and 2 RVR (1962-64). In the latter appointment as GSO 2 he assisted in the formation of the 3rd Division Officer Training School. His present appointment is Major in charge of Administration at OCS.

earlier appreciated that it should be sited in south-eastern Australia. This was advisable as it was a central area, and one where most other army schools were located. For this reason Rottnest Island, available at the time, was rejected, and Eastern, Southern and Central Commands, in New South Wales, Victoria and South Australia were requested by Army Headquarters to examine existing army properties, and possible sites for purchase thereof. In Central and Eastern Commands no practicable or economical projects were offered. As a result the search was confined to Victoria. Here camps or properties at Queenscliff, Point Lonsdale, Seymour, Bonegilla, Murchison, Healesville, Maroondah, Mildura and Portsea (Franklin Barracks) were examined. In most of these either the buildings, facilities, or training areas were unsuitable. An earlier inspection of the Quarantine Station, Portsea, had been made by the Ministers of Defence, Army, and Health, accompanied by the Secretary for the Army, Director-General of Health, Deputy Chief of the General Staff, and Director of Military Training. Although the site was the most suitable so far inspected, it appeared unlikely that the Department of Health would relinquish the site for army training.

It was therefore decided that Franklin Barracks, Portsea, should be used. However, the property had been leased to the Lord Mayor of Melbourne as a holiday camp for children. On being served notice to vacate the property, the Children's Camp authorities made representation to the Federal Government to retain occupancy of the site. At the same time the Commonwealth Minister for Health was asked to reconsider the question of allowing the army to occupy the Quarantine Station.

As a result, early in October, 1951, agreement was reached that the army should have temporary use of part of the Quarantine Station. The search for alternative sites was to continue, and the army was, if at all possible, to vacate the Quarantine Station by the end of 1952. In the event of the station being suddenly required for quarantine purposes, the first-class accommodation was to be vacated at two hours' notice, and the remainder if necessary, at 24 hours' notice. The technical portion of the station, one accommodation block, and staff quarters were to be retained by the Department of Health.

In the event of the station having to be evacuated completely, the school was to move into Franklin Barracks if it was not in use by children. If occupied (i.e. during summer months) the Officer Cadet School, as it was now known, was to move to Mildura. This location was known to be unsuitable for tropical warfare tactical training, but no alternative was available.

A detailed reconnaissance of the Quarantine Station was undertaken on 21st October, 1952, by the Commandant desig-

nate of the Officer Cadet School, Colonel J. W. Harrison, and a representative of the Directorate of Fortifications and Works.

The advance party of two officers, Captain D. A. Danson, (Officer Commanding) and Captain R. Wilson, with 25 other ranks, moved to Portsea on 20th November. The main body comprising remaining administrative and instructional staff under command of the Senior Instructor, Major R. S. Garland, moved to Portsea early in December, and were finally assembled by 16th December. The Adjutant, Captain M. B. McCrackan, remained in Melbourne for liaison duties with Army Headquarters. He also maintained a link with the Commandant who began a selection tour of all States on 29th November, 1951, accompanied by Lieutenant-Colonel N. L. Currie, Lieutenant-Colonel Campbell (Directorate of Psychology) and Captain Beauchamp (Secretary to the Selection Board).

The first 71 officer cadets to enter the new school arrived on 5th January, 1952. Of these 10 failed to graduate, and 61 were commissioned as second lieutenants on 6th June, 1952.

First Military Settlement

Australian history usually highlights our nation's early settlement by convicts or colonists with accompanying soldiers who enforced discipline. The history of Point Nepean, Victoria, emphasizes the military requirement of Great

GENERAL AFTER ORDERS.

THE Settlers and Convicts will aſſemble tomorrow morning in front of the Marine Encampment, at 11 o'Clock, for the purpoſe of attending Divine Service, to return thanks for our proſperous voyage, and ſafe arrival in this Harbour.

The Convicts will attend as clean as their preſent ſituation will admit.

Sullivan Bay, Port Phillip,
October 22, 1803.

DAVID COLLINS,
LIEUTENANT GOVERNOR.

Britain to protect her possessions in Australia against foreign encroachment by means of military outposts around its coasts. The nucleus of British soldiers so employed eventually formed the basis of State Militia forces, which in turn resulted in the Australian Military Forces of today.

The first military personnel to arrive in the State of Victoria were approximately 51 all ranks of the Royal Marines under command of Lieutenant-Colonel David Collins, the Lieutenant-Governor of the settlement. It was established at Sullivan's Cove, a mile or so east of Sorrento, on about 14th October, 1803, although parties had gone ashore to clear timber two days earlier. This settlement and many others set up on the Australian coastline were military colonies. They were established as outposts forming part of the defences of the Empire.

The settlement was short-lived, however, as Collins was not impressed with the potential of the area. The last members departed on 20th May, 1804. Some years were to pass before Point Nepean again was visited by settlers.

Edward Hobson

Hobson is of interest in the story of Point Nepean because he was the first recorded permanent settler in the district. In 1837 he held a cattle run from Boneo to Point Nepean. He arrived in the area from Parramatta, N.S.W. in 1837. He held the land under licence as a "squatter". Squatting was legalized in 1836, and by payment of a fee of £10 per year Hobson received the right to graze stock over a specified area laid down by the Crown Lands Commission. This gave no tenure, but merely granted the grazing rights. It is of interest to note at this time that topographical descriptions of the Point Nepean area speak of open plains, wild flowers, and a not heavy covering of She-oaks (casuarina), Banksias and Swamp gums. The ti-tree and melaleuca that cover the area today were present only as small isolated clumps, mostly on the foreshores.

James Sandle Ford

Ford comes into any story about Point Nepean as he settled permanently in Portsea in 1840. He grazed land as far as Point Nepean, but did not live there. His original residence was built about three-quarters of a mile from the Portsea pier on high ground adjacent to what is now known as the Portsea back beach road. One of his less important claims to fame is that he planted a number of the cypress pines now growing in front of the Nepean Hotel, of which he was the original owner. As these are of similar type, size and possible age to those in the Quarantine Station, he could well have provided some to be planted there as well.

Dennis Sullivan

In 1843 Sullivan brought his family to Portsea from Melbourne by sea. They landed at Shelly Beach and immediately took up a property under licence inside the present Quarantine

Station grounds extending from what is now No. 1 Officer Cadet billet, to the "cutting" which gives access to Portsea beach about a quarter of a mile west of Portsea pier. The family consisted of Sullivan, his wife Honora, John (26), Patrick (17), Timothy (15), and several daughters. By 1845 the Sullivans were well established. They had erected a hut 60 feet long by 12 feet wide divided into several compartments close to the foreshore at the head of the present Quarantine Station jetty. The floor was of consolidated limestone screenings. The outer walls were 12 inches thick with the roof constructed of split palings overlaid like shingles, and the windows were small wooden casements. It is highly likely that the building at the head of the jetty now known as Pier Hut and used as office accommodation by the Officer Cadet School, stands on the original foundations of Sullivan's Hut.

It was probably in 1845 also that two emigrants who are believed to have been interested in scientific research, erected the small limestone two-storey building now used as the Regimental Sergeant Major's office at OCS.

Some agreement was apparently reached whereby the Sullivans had partial use of the building. The lower storey or basement is now not visible. Sand has been heaped up around the lower walls up to the level of the top room. In 1941 the then Foreman Assistant in charge of the Quarantine Station, Mr. Kendall, had this basement prepared as an air raid shelter. The Sullivans, like others in the district, raised cattle and grew potatoes and other crops in a cultivation paddock of about 10 acres located in the middle of the Quarantine area. This could well be near the location of the OCS sports ovals.

The Sullivans also constructed a lime kiln which was built into the cliff face above the beach between the present No. 1 and No. 2 Officer Cadet billets. The kiln was soon to fall into disuse as the limestone around the Quarantine Station was found to be too flinty to burn properly.

During the early period of their residence the Sullivans had a neighbour called Cannon, a lime burner. He constructed a lime kiln on the foreshore about a mile west of the jetty. There are no obvious signs of this currently visible, but odd piles of sandstone indicate the possible location of his house.

An old two-room ruin near a new OCS explosives magazine could well have been the home of Sullivan's son John, his wife Hannah and small daughter Ann, born 1st December, 1843, but this has not been confirmed.

About the end of 1851 news that gold had been discovered reached Portsea. The Sullivans left for the fields with a bullock team and dray. However they soon returned and resumed their agricultural pursuits.

Establishment of the Quarantine Station

Together with the discovery of gold in Victoria and the

corresponding increase in shipping, the Health Department's inspection of passengers at the Heads showed increasing numbers of infected passengers. This was due in part to overcrowding and unsanitary conditions on board ship. On 6th November, 1852, the sailing ship *Ticonderoga* of 1,089 tons commanded by Captain Boyle arrived off Portsea. Between 90 and 100 passengers had died during its journey from Liverpool, mostly from typhoid fever. There were scores of stricken passengers on board, and the death roll was increasing. Those who could be moved were put ashore and housed under tents made from ships' sails and spars.

The Sullivans were turned out of their several buildings, as was also Mr. Cannon, the lime burner. These buildings and the adjoining property were immediately purchased by the State Government and a quarantine station established. To this place were brought all those who could be moved. The worst cases, however, were put on board the *Lysander,* a ship previously fitted up as a quarantine hospital, and equipped with three months' stores and supplies.

Some 82 further people died during this period. Deaths were so numerous and sudden, that coffins were unobtainable, and burials had to take place without them. Labour to dig graves was also unprocurable, so bodies were placed into recesses in the sandy bank on the foreshore, which was then broken away, burying them. Today this large burial ground is adjacent to the private car park used by newly joined officer cadets. As the years passed the sea eroded the burying place and some of the remains were disturbed. These were re-interred in the old Point Nepean cemetery of which more will be said later. Only a few names of the dead are still recorded in the area. Still visible are the epitaphs of Adam Moffat, steward of the ship, and William Henry Boyle, Third Officer and brother of the Captain. The bay in which the ship was anchored is now known as Weeroona Bay.

In 1855 the Government prepared a sketch survey plan which showed the Nepean Peninsula from No. 1 officer cadets' billet, which would then have been under construction or just completed, through to Cameron's Bight. On the west side of Weeroona Bay were shown the police quarters set up in 1852 in conjunction with the Quarantine Station. High on the cliff is marked "Waits Store", comprising two huts and an enclosed garden. There was also a lime kiln and a garden in the name of the Sullivans in the middle of Weeroona Bay cliff. The kiln is still in evidence, and can readily be identified from Portsea pier. It appears as a tunnel-shaped hole underneath the house now occupied by the Commandant of the Officer Cadet School.

The "Sanitary" station was gazetted as such in 1854. The name was changed some time afterwards to "Quarantine Station". Building work commenced in that year, and what

are now OCS No. 1 and No. 2 Cadets billets, QM Store building, wet and dry canteen building, and the Sergeants' Mess (Hospitals No. 1 - 5) were completed by 1857. Included in the building programme were the boiler house, washrooms, and administrative buildings, all constructed in local sandstone.

No. 1 officer cadet billet (No. 1 hospital) was destroyed by fire and rebuilt in 1923. From the time the station was gazetted, isolation was enforced by police supervision. Accordingly, accommodation was provided for police officers. In 1870, a strip three chains wide abutting the east boundary of the quarantine grounds was temporarily withdrawn from public sale. Finally on the recommendation of the Chief Medical Officer in Melbourne, Dr. McCrae, it was permanently preserved, by order, on 31st March, 1871. The cost of construction of the first five double-storied buildings was about £10,000. The contractor's name was White, and the Station was designed to accommodate 1,000 persons.

The first school at Portsea was also in the quarantine station grounds. It proved unsatisfactory during quarantine, because the children of the station staff and the teacher stayed inside, while Portsea children had to sit on a form outside the fence and learn their lessons through this barrier. The Quarantine Station originally included leper and cattle quarantine stations. However, in 1908, the Commonwealth applied for 420 acres for defence purposes. This land included the cattle jetty built in 1879, which is still evident.

An interesting and imposing monument still exists in the area where the *Ticonderoga* victims were buried. It was erected by an Irishman named Heaton who was engaged to supervise the building of the five hospitals and other brick buildings within the Quarantine Station grounds. He had no relatives in Australia, and decided that he would like to design a monument to himself. This was built, it is said, at a cost of several hundred pounds (perhaps £400) by workmen engaged on the Government buildings. Heaton eventually died in Melbourne, and his monument remained unoccupied. It is an interesting structure, complete with vault and stone panel which was to be engraved after his death. It is still blank, and the vault has of late years been filled in with sand.

There is an additional cemetery in the area of the Defence Reserve, about a mile closer to Point Nepean and adjacent to the Nepean Highway. It is close to the Regimental Sergeant Major's married quarters, originally known as the Master Gunner's cottage. In it are buried many of the first settlers who lived between Point Nepean and Rye. A number of drowned sailors from the ships *Cheviot* (1887) and *Tornado* (1868), sunk at the Heads, are also interred therein.

It was used by the general public until 1890 when the Sorrento General Cemetery was

opened. The cemetery has a connection with the defence of the area. A memorandum from T. W. H. Holmes to the Secretary of Lands in 1912 said, amongst other things, that "In the event of bombardment of Point Nepean, this cemetery will be the most convenient in which to bring the killed."

It has always been external to land included in the Quarantine Station, and today is still within the Defence Reserve, although very neglected. Occasional burials occurred up to 1919 when a soldier returning from World War I, who apparently died from influenza while quarantined, was buried in an official war grave. Some thousands of returning soldiers were quarantined in 1918-19 in the area. It is understood that when the troop ships were anchored for inspection off the Quarantine Station, troops eager to get discharged and home, were prone to bombard the station staff with all and every kind of debris in an attempt to deter them from their duty. It is the Health Department's proud claim that at no time were boarders ever repelled.

Construction of Defences

Construction of defences at Port Phillip Heads was proceeding in 1882 according to plans and recommendations submitted to Parliament by Colonel (later Major-General) Sir Peter Scratchley, KCMG, Royal Engineers, and a Mr. Steel of the Department of Public Works. Sir Peter Scratchley, whose name is perpetuated in Fort Scratchley, Newcastle, and Sir William Jervois, GCMG, CB, (Governor of South Australia in 1877), were mainly responsible for the extensive system of coast defences which were constructed in the early days of the colonies. General Scratchley died whilst occupying the post of High Commissioner in New Guinea, and was buried in Melbourne.

Major Ellery (State Government Astronomer), who commanded the Volunteer Torpedo and Signal Corps (formed about 1869) until its disbandment in July, 1882, accepted in August of the same year command of the Militia Torpedo Corps. Their vessel (S.S. *Miner*) was obtained from the Public Works Department. This began the Permanent Section, Torpedo Corps, later known as the Permanent Section, Submarine Mining Company, still later Permanent Section, Victorian Engineers, and today existing as Royal Australian Engineers.

By General Order 20/1885, the Permanent Section then at Swan Island was attached for discipline to the Victorian Artillery, and Major E. F. Rhodes, Royal Engineers, a brother of Cecil Rhodes of South African fame, was appointed Commanding Engineer, vice Major Ellery.

The year 1885 marked the height of the Russian War scare, and in consequence there was much defence activity. Melbourne became one of the best defended ports in the Empire. Large sums of money were spent on the batteries, maps of Port Phillip were prepared, lines of ground and electro-contact mines

were made ready for placement, and in places actually laid, and other schemes investigated for blocking the channels of approach. During Easter manoeuvres in 1886, a night exercise with torpedo boats was conducted at the Heads. The Torpedo Corps operated three defence electric lights, one at Point Nepean, and two at Queenscliff.

In 1886 the schemes for defence of Melbourne included batteries at Point Nepean and Queenscliff with the task of defending the entrance to Port Phillip Bay, another at Swan Island, together with mines, protecting the west channel, forts at Franklin (Portsea) and south channel, together with submarine mines controlled electrically from the test room at the south channel fort. Symonds channel was to be blocked and some 2,000-lb. mines were kept for the defence of the Heads themselves. However, as the blasting gelignite used deteriorated in storage, these mines were emptied. These defences were backed by an inner battery at Gellibrand, and the Victorian Naval Forces.

So intense was the concept of defence in our country before 1900, that it was estimated that three of every ten men were militia volunteers. By 1894 Portsea became a garrison town and barracks and forts were built. The limestone content of the cliffs again became important as it enabled deep underground galleries, passages, and magazines to be quarried into Point Nepean. Today the area comprises abandoned fortifications, slowly filling up with windblown sand. The Point Nepean fort, although it never had to beat off a Russian invader, had two moments of glory.

In 1903 two 6-inch mark 7 naval guns were installed at the tip of Point Nepean commanding the "Rip". The gun emplacements were called F1 and H1 respectively. A decade later, England declared war on Germany at 11 p.m. in London on 4th August, 1914. This was announced in Australia at 12.45 p.m. on 5th August by the then Prime Minister, Mr. Cook. Owing to the 10 hours difference in standard time, one and three-quarter hours only had elapsed since the declaration of war in Britain.

The German freighter *Pfalz* (Captain Kuhiken) had departed Melbourne and arrived at Port Phillip Heads in a desperate attempt to escape to the open sea. The time in Melbourne was 12.30 p.m., 15 minutes to go. Her papers were checked and found correct, and as a state of war did not exist she proceeded to the Heads still guided by an Australian pilot. At 12.45 p.m., the declaration of war was flashed to Fort Nepean where a full charge of 25-lb. of cordite and a 100-lb. projectile were already loaded in the breach of F1. Due to the angle between the gun and the vessel, the first shot fired anywhere in the British Empire in World War I passed across the bows of the *Pfalz* as expected, but finished up in the water 50 yards astern of it. The message was quickly

received by the master of the *Pfalz* who turned back to anchor off Portsea. The master and crew, German naval reserves, were interned. The vessel itself was found to be carrying warlike stores, and its deck plates were drilled to receive 4-inch guns stored in the hold. No doubt it was intended to become a merchant raider. The *Pfalz* was used as an Australian troopship during World War I, although renamed *Boorara*.

Fantastic as it may seem, the same gun, with a different barrel (No. 1317) was later to fire the first shot in World War II. The official gun log shows that at 1.50 a.m. on 4th September, 1939, a small Bass Strait freighter, the *Woniora*, attempted to enter the Heads without acknowledging the recognition signal. A well-directed 100-lb. shell caused her to swiftly establish her identity.

Fortunately for posterity, gun barrel No. 1317, which was sold for scrap in 1948, was located in a scrap metal dealer's yard in Melbourne. Due to the co-operation of the owner, Mr. Dawson, of Stern Industries, Brookfield, Victoria, it has been recovered and is now one of the museum pieces held by the Officer Cadet School. The other barrel (No. 1489) is preserved at Port Wakefield proof and experimental range, South Australia.

It has been claimed that the first British artillery shell of World War I was fired on 22nd August, 1914, from a 13-pounder by Bombardier John Watson. The gun itself is in the Imperial War Museum. The British claim, however, cannot be accepted in view of the events which took place on 4th August at Point Nepean.

Conclusion

Today in 1965 the army and the staff of the Quarantine Station jointly live in the area. Since the OCS commenced, its tenure has been more or less permanent. Many new buildings have been erected by the army for its own use, and the original sandstone hospitals internally modified beyond recognition. The lawns and gardens maintained by the Army have made the area one of the most attractive in the district. As quarantines are rare, the Health Department's interests are supervised by a skeleton staff of five who maintain the technical equipment belonging to their organization. If any early settlers' ghosts, or those of the *Ticonderoga* dead still walk the grounds at Portsea, they must feel well satisfied with the efforts of those who have inherited their resting place.

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