CHAPTER 24

COMMAND AND SUPPLY

ENERAL Brett had again become one of the central military J figures in Australia at the end of February when, on the eve of the dissolution of ABDA Command, he had resumed the role of Commanding General, United States Army Forces in Australia (USAFIA). His first task was to reorganise these forces and prepare them for combat and to do everything possible to strengthen the defences of the Commonwealth. He is quoted as saying at this time that it was necessary to build up the defence of Australia to make it "a second England", and he had already ordered radio direction finding equipment, anti-aircraft guns and even barrage balloons.2 In the light of the enemy's capacity to divert their strong carrier forces to attack almost any part of the Australian coastline, his plan was to base air units at Darwin, Townsville, Brisbane, Sydney, Melbourne, Adelaide and Perth; he would need, he estimated, a strength of 3 groups of heavy bombers (each of 4 squadrons), 3 of medium and 3 of light bombers; 6 groups of fighter aircraft and 3 of transport aircraft, plus 2 air depot groups and 2 aviation engineer battalions. But there were allocated to him only 2 groups of heavy, 2 of medium and one of light bombers, and 3 groups of fighters.

The American aircraft actually available were either survivors from Java or in units not yet fully organised. The transport Abbekerk had reached Fremantle on 5th March after a hazardous voyage from Tjilatjap with some of the ground staffs of Nos. 7 and 19 Bombardment Groups. Less than a fortnight later these two groups were reorganised as one—No. 19—with 14 Flying Fortresses that had been able to fly into Broome from Java, plus the ground echelons that had come by sea. This group also absorbed the 12 Fortresses from the former naval task force that had been operating from Townsville under R.A.A.F. control.³ A second heavy bombardment group, No. 43, had been allotted for service in Australia and its ground staff had already arrived, but a long wait for their aircraft was inevitable.⁴ The plan for the delivery of Fortresses had been fixed at two a day after 20th March, so that the two groups of heavy bombers could be built up to, and maintained at, 40 aircraft each. But a revision of the allocation of aircraft to all theatres led to curtailment and only 9

¹ Maj-Gen Barnes, who had succeeded to this post when Brett was appointed to ABDA Command, became his deputy.

² Office of the Chief Engineer, GHQ Army Forces Pacific, Airfield and Base Development (1951), p. 3, Vol VI in the series Engineers of the Southwest Pacific 1941-1945.

² On 18th March 1942 American units in Australia had in commission only 39 bombers (12 heavy and 27 dive bombers) and 177 fighters comprising 85 Airacobras (33 P-39's and 52 P-400's —a lighter-armed version of the P-39) and 92 Kittyhawks. The fighter strength was all that remained of more than 527 that had reached Australia between 23rd December 1941 and 18th March 1942. Most of the aircraft were in need of repair and most of the bomber crews in urgent need of rest.

⁴ The aircraft were not received until September 1942. Craven and Cate, The Army Air Forces in World War II, Vol I, p. 526n.

had reached Australia by the end of March and only 30 were listed for delivery in April. The rest were to follow "as soon thereafter as was possible".⁵

The supply position for medium and light bombers was much the same. No. 3 (Light) Bombardment Group—both aircrews and ground staffhad arrived in Australia and two of its four squadrons (Nos. 13 and 90) were allotted Mitchell medium bombers which had been intended for Dutch units. No. 89 Squadron, while awaiting the arrival of A-20 (Boston) light bombers, were engaged in service and maintenance work on No. 19 Group's Fortresses at Charters Towers. The group's fourth squadron (No. 8) was equipped with 27 Dauntless dive bombers which had been maintaining patrols in the Darwin area, flown by those members of No. 27 Group who had escaped from the Philippines. These experienced airmen were now appointed to key posts in No. 3 Group. Two medium bomber groups had also been assigned to Brett's command-Nos. 38 and 22. The ground staff of No. 38 had arrived on 25th February but, since they had no aircraft, their lot, while waiting, was aircraft assembly for other units and training in infantry tactics. No. 22 received aircraft in March -48 Marauder medium bombers.

The R.A.A.F., still with its small but solid core of experienced operational squadrons—notably (early in March) Nos. 11, 20 and 32 in the New Guinea area; Nos. 2 and 13 in North-Western Area—also had plans, some of which were on the point of achievement. However, a big change for both the U.S.A.A.F. and R.A.A.F. organisations in Australia was being planned at the highest level.

Since the Japanese had shattered the Malay Barrier and interposed their strong forces between the China-Burma-India theatre and the South-West Pacific theatre, the Allies had been set a new problem in organisation and command; a problem that had been receiving very close examination by the American President, the Combined Chiefs of Staff and the American Joint Chiefs of Staff. By 9th March the Joint Chiefs of Staff had worked out a plan whereby the Pacific theatre would be divided into the South-West Pacific Area and the Pacific Ocean Area. Already President Roosevelt had decided to seek the acceptance of General MacArthur as Supreme Commander of the armed forces of the Governments whose formations were operating in the South-West Pacific; Admiral Nimitz was to be appointed Commander-in-Chief, Pacific Ocean Areas.

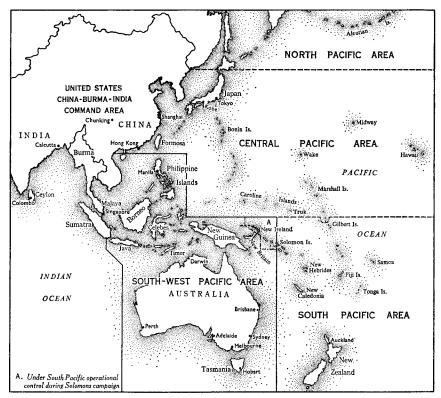
Plans were made for the prompt transfer of MacArthur to Australia. Four Fortresses were dispatched for Mindanao, but only one succeeded in reaching its destination and it was in bad mechanical condition. Major Carmichael was then instructed to prepare more aircraft for the task and three, borrowed from the navy, reached Mindanao safely, carrying with

⁶ Craven and Cate, p. 413.

⁶ The Pacific Ocean Area was sub-divided into three subordinate areas—North, Central and South Pacific.

 $^{^7}$ The Governments concerned were those of Australia, New Zealand, the United Kingdom, the United States, and Holland.

them a consignment of much-needed medical supplies for the forces on Bataan. Meanwhile on a rainy evening (11th March) the general, his wife and young son and several staff officers, including General Harold H. George, boarded two patrol boats which, following separate courses, made the journey from Manila Bay to a rendezvous on Mindanao with all speed and without incident. For the next stage of the journey a night



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take-off was arranged from Del Monte aerodrome, no great distance from the enemy's base at Davao. The Flying Fortresses landed at Batchelor on 17th March. From Darwin the party made its way by road to Alice Springs and thence to Melbourne by train—a journey that occupied three days and a half. On the 17th General Brett had informed Mr Curtin of MacArthur's arrival and added that the United States President would be pleased if the Australian Government were to nominate MacArthur as Supreme Commander of all Allied Forces in the South-West Pacific. The nomination should be submitted simultaneously to London and Washington. That day the War Cabinet agreed that Curtin should do this, and the nomination was approved.

MacArthur immediately began preparing for the establishment of his new command. The area for which he was to be responsible was vast: it included, from the north, the Philippine Islands; the South China Seathe boundary of the area on the west being the coastline of French Indo-China, Thailand and the Malay Peninsula and therefore including the waters of the Gulf of Siam; the whole of Borneo and the Netherlands East Indies, except Sumatra; New Guinea, New Britain and the western "half" of the Solomon Islands group; Australia, and the waters directly to the south of the continent. In relation to the task he had been given, MacArthur had serious misgivings about his forces. In a message to General Marshall, Chief of Staff of the United States Army, he expressed the opinion that none of his forces was adequate. Without a carrier his naval forces would be limited to minor operations; except for two divisions of the A.I.F. (one of reduced strength), his ground forces were inadequately trained; and through lack of organisation and training his air forces would need at least four months of intensive effort to reach a satisfactory condition.8

On 17th April the Australian War Cabinet, on the recommendation of the Chiefs of Staff, approved the assignment to the S.W.P.A. Command of all combat sections of the Australian Defence Forces, and on the 18th General MacArthur formally assumed his new appointment and issued General Order No. 1, which formally constituted the new Command and designated the five commanders who were to serve under him. Three of them were to command the Allied land, air and naval forces; respectively, General Sir Thomas Blamey, Lieut-General Brett and Vice-Admiral Leary. The other two were Lieut-General Wainwright, who had remained on Bataan and was now commander of the forces in the Philippines, and Major-General Barnes who, on Brett's assumption of the Allied air command, was to resume the task of administering the United States Army Forces in Australia.

Allied Air Forces Headquarters, South-West Pacific Area, were established at Victoria Barracks, Melbourne, on 20th April. All United States Army Air Corps tactical units and associated Service elements of the United States Army in Australia, and the operational control of all R.A.A.F. service squadrons (excluding training units), and all service squadrons of the Royal Netherlands East Indies Army Air Force, were assigned to the command. Administrative control of R.A.A.F. units remained with R.A.A.F. Headquarters. On assuming command on that date General Brett announced the appointment to his staff of six Australians: Air Vice-Marshal Bostock as Chief of Staff; Air Commodore Hewitt, Director of Intelligence; Group Captain Scherger, Director of Defence; Group Captain Wiggins, Director of Communications; Wing Commander Hancock, Assistant Director of Plans; and Wing Commander Walters, Assistant Director of Operations. Among the American officers

⁸ Craven and Cate, Vol I, p. 420, note 41.

appointed were: Colonel E. S. Perrin, Deputy Chief of Staff; Brigadier-General Royce, Senior Air Staff Officer; Colonel Eubank, Director of Plans; and Colonel R. G. Hoyt, Director of Operations.

About a month before Brett's assumption of his own command he had received a letter from Mr Curtin informing him that, in keeping with an undertaking he had given to President Roosevelt, Australia was willing to place its air force under his control. This offer was made in general terms without attempting to define the necessary organisation; in fact the letter expressly stated that the Australian Chief of the Air Staff, Air Chief Marshal Sir Charles Burnett, was authorised to confer with Brett so that he could submit an outline of the organisation needed to provide for the control of the combined air forces and to define the sphere and responsibilities of the Air Board and the relation of both Brett and the Air Board to the Australian Government.

In a memorandum to MacArthur dated 23rd March, Brett had said that the plan which he and Burnett had prepared had been "thoroughly discussed" with the Australian Prime Minister and the Minister for Air. He stated that he had been informed that Burnett had prepared an order which would "place under the control of the Combined Air Forces Commander those combat and training units and establishments of the Royal Australian Air Force which are necessary for the effective accomplishment of the mission of these forces".

Appended to the memorandum was a detailed statement on the whole organisation "as worked out by Air Chief Marshal Burnett . . . and myself, which was approved by the Prime Minister under date 19th March". It contained this important assertion:

During a war period the efficient employment of forces can be achieved only if there is one responsible commander of all air forces. Consequently the responsibilities of members of the Australian Air Board, with individual board members responsible for different phases of air force activities, will be modified, and this single commander will be solely responsible to the Supreme Command for all phases of air effort.

This joint statement noted that the officers on the staff would be "American and/or Australian", their choice being governed, in principle, by the ability of the individual. The Chief of the Air Staff (Australia) and the Chief of the United States Army Air Corps would be directly responsible, respectively, to the Australian Government (through the Minister for Air) and to the War Department, Washington, for relevant administrative matters.

Sir Charles Burnett's term of service as Chief of the Australian Air Staff would soon expire and a considerable amount of attention had been given to the selection of a successor. Air Marshal Drummond,⁹ a distinguished

OAir Marshal Sir Peter Drummond, KCB, DSO, OBE, MC. (1914-18: AAMC 1914-15; RFC and RAF, Palestine 1916-18.) SASO HQ RAF ME 1937-41; Deputy AOC-in-C HQ RAF ME 1941-43; Air Member for Training, Air Council 1943-45. Regular air force offr; of Perth, WA; b. Perth, 2 Jun 1894. Killed in aircraft accident 27 Mar 1945.

Australian officer of the Royal Air Force then serving in the Middle East, had been approached tentatively. He had declined the appointment and it was reported that his principal reason for doing so was that the command would be divided between R.A.A.F. Headquarters and Allied Air Forces Headquarters. Burnett then submitted far-reaching proposals affecting the R.A.A.F., the substance of which had been very broadly indicated by Brett in the attachment to his memorandum to MacArthur. But whereas the text Brett had sent to the Supreme Commander stated that "the responsibilities of members of the Australian Air Board . . . will be modified" Burnett's proposals included the abolition of the Board, the appointment of Bostock to succeed him as Chief of the Air Staff, and the union of the R.A.A.F. and the U.S.A.A.F. in the South-West Pacific. Here were issues of great contention. Despite Brett's report to MacArthur that the plan had been "thoroughly discussed" with the Prime Minister and the Minister for Air, Mr Drakeford was by no means prepared to accept Burnett's proposals. However desirable unity of command might be, the transfer of the administration of the R.A.A.F. to an American commander was a step to which he was strongly opposed. His opposition extended with equal force to the abolition of the Air Board and to the appointment of Bostock as Chief of the Air Staff.

It will be recalled that in 1940, on the eve of Burnett's appointment, Fairbairn had anticipated that Williams would succeed the English officer on his retirement. Drakeford was not unmindful of this. At his request, Williams had returned to Australia in February for consultation, after which he had an interview with the Prime Minister. But Mr Curtin was not prepared, at this stage, to accept the return of Australia's highest ranking air officer as the solution to this problem, and took no action towards Williams' reappointment as Chief of the Air Staff. Drakeford did not press the matter further and the choice of Burnett's successor therefore lay between two officers who, in January 1940, had been eleventh and twelfth on the gradation list and who, like eight of the other ten, had had no operational experience in the war against Germany and Italy.¹

The effect of the Government's failure to insist that senior R.A.A.F. officers should go overseas to gain operational experience in the 1939-41 period of the war against Germany, was now evident. It is necessary to go down the Air Force List for January 1940 to Nos. 27 and 28—Wing Commanders Knox-Knight and Lachal, both of whom served in No. 10 Squadron—to find officers who were to gain extensive operational experience before December 1941, and these officers were then the two most junior wing commanders in the Service.²

¹ The exceptions were Air Marshal Williams with several months' experience with Coastal Command, and Air Commodore Cole who had just been appointed to command No. 235 Wing RAF, in the Middle East.

²⁰f the 15 Australian General Officers Commanding listed in the army reorganisation of April 1942, 9 had been in action in 1940-42 in Africa, Asia or Europe and some of them in all of these theatres. Until the end of the war only two of the General Officers Commanding in the field in the SWPA had not served in action in the Middle East and those two had served in that theatre though not in action.

In the event, briefed by the permanent head of the Department of Air, Mr Langslow, and supported, morally at least, by members of the Air Board, other than Burnett and Bostock, Drakeford made a strong protest to the Prime Minister. He proposed that the Air Board should be retained, that Jones and not Bostock should succeed Burnett as Chief of the Air Staff, that administrative control of the R.A.A.F. should remain with R.A.A.F. Headquarters, and that Bostock's appointment as Chief of Staff to Brett should be confirmed.

Mr Curtin was thus presented with a particularly complex aspect of a problem that posed the fundamental question inevitable in an alliance between the forces of a small but strategically important nation and those of a much more powerful nation. The answer, as doubtless he was aware, had to lie in some kind of compromise that might submerge the identity of the Royal Australian Air Force and might also produce a multitude of administrative problems. The Prime Minister therefore heeded the Minister's contentions and agreed to the retention of the Air Board and to control of administration by R.A.A.F. Headquarters, though there was more than a hint of apprehension in his qualifying warning to Drakeford that, if it was proved that this plan did not work satisfactorily, it might be necessary to revert to the proposal that the operational and administrative control of the R.A.A.F. should be unified.

A condition essential to any satisfactory degree of achievement in such an organisation as that proposed by Drakeford was goodwill among the principals. Already there were two opposing camps, the most senior in each of which—Drakeford and Burnett—had already been in keen disagreement. This disagreement came more sharply into focus after an exchange of minutes at War Cabinet level. On 28th April the War Cabinet recorded this decision:

On the recommendation of the Advisory War Council (Minute 916) the following interpretation of the decision relating to the assignment of Australian forces to the Supreme Command was approved:

With the service squadrons there is also assigned R.A.A.F. Area Headquarters, Air Combined Headquarters, all Fighter Sector Headquarters, and such Station Headquarters as have been established for the operational control of R.A.A.F. service squadrons.

Operational control of the R.A.A.F. service squadrons and necessary Operational Headquarters as indicated above, is vested in the Commander of the Allied Air Forces.

The Australian Chief of the Air Staff will be responsible for all matters associated with R.A.A.F. personnel, provision and maintenance of aircraft, supply and equipment, works and buildings, and training. These functions are not assigned to the Commander-in-Chief.

Next day Burnett sent a minute to the Minister in which he stated:

It was agreed at War Cabinet on 28th April 1942 that the interpretation of "the assignment of the Australian Air Forces" means that all operational units of the R.A.A.F., including the headquarters concerned with such units, and the

administration, maintenance and supply organisation to keep the operational units to their maximum efficiency, should come under the direct control of the Commander, Allied Air Forces (General Brett). The training organisation embracing the E.A.T.S. and the administration of all R.A.A.F. personnel and recruiting, will remain the direct responsibility of the Chief of the Australian Air Force.

The minute also requested the Minister to confirm this interpretation with the Prime Minister to enable the new organisation to be established without delay and added that, to save time, a copy of the minute had been sent to the Prime Minister.

Drakeford was annoyed by Burnett's action in sending a copy of his minute direct to the Prime Minister. "The need for saving time," he wrote to Burnett sharply, "does not justify failure to recognise my authority." But this perhaps over-sensitive reaction did not reveal the true point of conflict which lay in the words used by Burnett—"and the administration, maintenance and supply organisation to keep the operational units to their maximum in efficiency, should come under the direct control of the Commander, Allied Air Forces (General Brett)". However wise and necessary their intention, these words were in opposition to the terms of the War Cabinet's minute which, as the final paragraph quoted shows, stated that these functions were not assigned to the Commander-in-Chief.

On 2nd May, Bostock was appointed as Brett's Chief of Staff. Curtin had written to Drakeford stating that "the services of Air Vice-Marshal Bostock are to be made available to Lieut-General Brett as Chief of Staff to the Commander, Allied Air Forces, if the latter is desirous. . . . It is my direction as Minister for Defence that the fullest cooperation is to be afforded the Commander of the Allied Air Forces and this instruction is to be promulgated to all concerned." Drakeford, in a directive to Burnett dated 30th April, in which he stated clearly that "the Chief of the Air Staff would assume responsibility for all matters such as personnel, provision and maintenance of aircraft, supply and equipment, works and buildings, and training of the R.A.A.F." also directed that "the fullest cooperation should be offered Lieut-General Brett".

Appointment of a successor to Burnett could not be delayed longer and on 5th May Jones was appointed Chief of the Air Staff and promoted from the acting rank of air commodore and substantive rank of group captain to the substantive rank of air vice-marshal. This placed him senior in appointment and equal in rank to Bostock, to whom he had been junior in the Service only slightly, but in age by nearly five years. Bostock was regarded as an able officer of driving temperament; Jones as an able and particularly conscientious officer, somewhat shy and reserved. It was characteristic of Jones that he had suggested that Bostock should be appointed Chief of the Air Staff.

Meanwhile the first amalgamation of Australian and American air forces was proving, as those who established it probably expected, that it was at the best an expedient. Despite Brett's assurance to MacArthur that in principle selection of staff officers would be governed by ability, the system

of almost mechanical alternation of American and Australian staff officers right down the line of command, was applied at Allied Air Headquarters and in North-Eastern Area. This was more a diplomatic gesture than a practical method of war organisation. In the first circumstances it was probably the best expedient, however, and it certainly had the merit of throwing officers and men of the two air forces so closely together that they learned more of each other's characteristics and methods in a brief period than otherwise would have been possible. There was, in fact, considerable goodwill between the R.A.A.F. and U.S.A.A.F. staffs, and in North-Eastern Area, as an example, the atmosphere was happy and the staff extremely cooperative.

The operational control of the Allied Air Forces was exercised through the existing R.A.A.F. area organisation with American and Australian coordinated staffs or with American liaison officers attached to Australian staffs in the five areas-North-Eastern, Eastern, Southern, Western and North-Western.³ Each area headquarters staff was under the sole command of an air officer commanding who was responsible to Headquarters U.S.A.A.F. or R.A.A.F. Headquarters (as appropriate) on all questions of personnel, provisioning, works and buildings, supply and equipment. The Americans, naturally, were conscious of the extent of Australian influence in the new organisation. Each of the five areas was commanded by an Australian; R.A.A.F. officers in fact held a majority of the key command posts. R.A.A.F. administrative forms, strange to the Americans, were used, and this tended to increase American dependence on the R.A.A.F., which itself retained administrative control over its own units. One official American report described Australian control at this time as extending to "every echelon of American Air Forces and every airfield at which they are stationed".4 Two complete R.A.A.F. directorates-Operations and Plans—and a proportion of the staffs of the directorates of Intelligence and Signals were transferred to the control of Allied Air Headquarters.

Brett sought flexibility of control for offensive operations and on 4th May established two U.S. Air Commands, No. 1, commanded by Colonel (later Brigadier-General) Albert L. Sneed, at Darwin, and No. 2, commanded by Brigadier-General Martin F. Scanlon, at Townsville. The object was to place with the combat units in each area a mobile command which could move forward with them on the "leap frog" principle, to assume command at the next forward base acquired in an offensive campaign. But these were early days for such organisation, which quickly proved impracticable, and within the month the commands had been dissolved.

Meanwhile G.H.Q. had directed that, if invasion became imminent, all Australian and United States forces (army, navy and air) serving in the

² The area command organisation was adopted by the Allied Air Forces on 11th May 1942. Eastern Area was not formed until four days later. It covered New South Wales and southern Queensland while Southern Area covered Victoria, South Australia and Tasmania.

⁴ Quoted in Craven and Cate, Vol I, p. 420.

Darwin and Port Moresby areas should be placed under the operational control of the general officer commanding the respective forces. These general officers commanding would continue to operate under the direct command of the Commander, Allied Land Forces and would not, except when attack was imminent, "disturb the execution of the general plans" of local commanders of the Allied air and naval forces or of the Commanding General, U.S. Army Forces in Australia. Brett lost a highly competent officer in May when Brigadier-General George was killed on the ground at Darwin by an aircraft that swerved off the runway.

Once Allied Air Force Headquarters had been established and the operational functions of the Australian Chief of the Air Staff had been taken away from him, the composition of the Air Board, which had been preserved at the Minister's insistence, necessarily underwent a change. Four appointments remained unaltered—Chief of the Air Staff (Air Vice-Marshal Jones), Air Member for Personnel (Air Commodore Wrigley⁵), Finance Member (Mr Elvins⁶) and Business Member (Mr W. Sydney Jones⁷). The office of Air Member for Organisation and Equipment, held until 14th May by Air Vice-Marshal Anderson and from that date until 3rd June by the Chief of the Air Staff himself, was abolished. In its place the office of Air Member for Supply and Equipment was created and Air Commodore Mackinolty was appointed to it. Similarly, that of Director-General of Supply and Production, which had been held by Mr R. Lawson, was deleted, and that of Air Member for Engineering and Maintenance substituted with Air Commodore E. C. Wackett as the appointee. Since Air Vice-Marshal Bostock's appointment to General Brett's staff, there had been no Deputy Chief of the Air Staff; Air Commodore McCauley, who had held office briefly as Assistant Chief of the Air Staff, was now given this appointment.

Another change was a proposal to form five maintenance groups to improve the administration of all maintenance units. The first group (No. 5) was formed at Sydney in June to control all maintenance units in New South Wales, Queensland and in Noumea.8

With the development of the Allied Air Forces in progress, the problems of achieving an efficient supply service put a heavy tax on both American and Australian resources. The haste inevitable in the dispatch of equipment and units from the United States still resulted in the arrival of one without the other, the equipment more often than not requiring servicing and repair—notably that shipped as deck cargo. Brett therefore created a new

⁵ AVM H. N. Wrigley, CBE, DFC, AFC. (1914-18: Capt Aust Flying Corps; 2 and 3 Sqns.) Comd 1 Gp 1939-40; AOC Southern Area 1940; Air Member for Personnel 1940-42; AOC Overseas HQ 1942-46. Regular air force offr; of East Malvern, Vic; b. Melbourne, 21 Apr 1892.

⁶ H. C. Elvins. Finance Member Military Board 1940-41, Air Board 1941-46. Comptroller United Nations Secretariat 1946-49. Public servant; b. Yarrawonga, Vic, 13 Aug 1887.

⁷W. Sydney Jones. (1914-18: 7 Fd Arty Bde 1914-17; Lt 3 Div Arty 1918.) Business Member, Air Board 1940-44. Company manager; b. Blayney, NSW, 25 Nov 1890.

No. 4 Maintenance Group was formed at Melbourne on 14th September 1942 to serve Victoria, Tasmania and South Australia. No other groups were formed. At this time the RAAF still manned advanced operational bases at Noumea and Vila but only American naval aircraft were operating from them.

command—the United States Army Air Services—with Major-General Rush B. Lincoln as commander. Formed on 27th April as an "administrative, supply, maintenance and engineering command", it accepted a vast and crucial task. Air service elements normally were attached to the tactical units, but under the new command air base groups were given area responsibility with the result that one such group in the Townsville area was called on to service and maintain seven different types of combat aircraft plus various kinds of transport aircraft. The responsibility of the air depot group, charged with assembly and maintenance of aircraft, was equally pressing. In April there was only one such group in Australia, so that its units had to be divided between three centres—one at Footscray, Victoria, where a central supply depot was established, one at Brisbane which was a branch supply depot, and one at Wagga Wagga (New South Wales) which was a major repair depot. In May another group was formed at Brisbane for aircraft assembly and maintenance. To ease the strain the Australian Department of Aircraft Production, together with private industrial organisations and airline companies, assisted by providing facilities and experienced staff. Perhaps the most ambitious project in this vital phase of the air war effort was that begun in May at Tocumwal, New South Wales, for the construction of a "permanent" supply and maintenance depot requiring four all-weather runways on the aerodrome. satellite airfields, a depot staff of 2,000, and accommodation for 4,600 "military personnel".

The provision and distribution of aviation fuel was alone a huge undertaking beset by many difficulties, not the least of which was that imposed by the diversity of Australia's railway gauges. Supplies of 100 octane fuel were comparatively small and most of the storage capacity was in New South Wales and Victoria. Rail transport to the north where most combat units were stationed was out of the question, for every time a break in gauge occurred the fuel would have to be pumped from one rail tanker to another. Sea transport was the alternative and this meant handling the fuel in an enormous number of drums, which had to be brought from the United States.

As yet, the air transport services were unequal to the task of providing any substantial relief to the services of supply. Within the R.A.A.F., air transport was still in the "luxury" class: the planes were not available. Transport aircraft were included in the pressing requests being made for the allocation of aircraft—requests addressed particularly to the United States. But, no less than combat aircraft, these were in such demand that the waiting list was huge and the deliveries few. Some planes had been acquired from the civil airlines and others requisitioned for service under contract, and the civil airlines, notably Qantas Empire Airways, Australian National Airways, Guinea Airways and Airlines of Australia, gave splendid service. With its Sydney-Singapore mail service suspended since February because of enemy action on the route, Qantas were operat-

ing their flying-boats between Sydney and Darwin as required. Their crews were also undertaking reconnaissance flights, as were the crews on the trans-Tasman service. To the end of April the Commonwealth had impressed 36 aircraft from the regular airline companies and 94 other privately owned aircraft. Most of the impressed aircraft were light types suitable for use in flying training.

A notable though very limited contribution by the U.S.A.A.F. had already been made when Captain Paul I. ("Pappy") Gunn, formerly manager of Philippine Airlines, whose wartime exploits in the Philippines had made him a legendary figure in the Service, was placed in command of an American air force transport unit. In January 1942 a group of officers and enlisted men, who "happened" to be available, were allotted to Captain Gunn to fly and service a strange assortment of old and new aircraft—two aging B-18's and one C-39 that had come from the Philippines, and five new C-53's and three Liberators which had just arrived from the United States. The unit was based on Archerfield, near Brisbane, then the focal point for the delivery and distribution of American supplies. It worked under pressure and performed prodigious "lifts" until the Directorate of Air Transport, Allied Air Force, S.W.P.A., was formed under the command of Group Captain Harold Gatty,9 an Australian pioneer airman who, professionally, had adopted, or been adopted by, the United States.

By this time the R.A.A.F., having received a number of Dakota (C-47) transport aircraft, had set about establishing units of its own. Between 6th February and 12th March four transport squadrons—Nos. 33 (Empire flying-boats and Catalinas), 34 (DH-84's), 35 (Fox Moths and DH-84's) and 36 (DC-2's)—were formed in North-Eastern, North-Western, Western and Southern Areas respectively. No. 33 acquired the two Empire flying-boats which had been serving with Nos. 11 and 20 Squadrons. About two weeks later one of these crashed on take-off. Of eleven on board six (including a member of the W.A.A.A.F., Corporal Diggles¹) were killed, two died later from injuries and three, though injured, survived.

Lack of suitable air bases was not only a hindrance to the progress of the air war effort, it could become the very limiting factor in air defence. To supplement the already immense task being undertaken by the American engineering units in conjunction with the Allied Works Council, the Air Board made a realistic assessment of what was most urgently needed. It was "an organisation capable of producing landing fields in forward areas at short notice while under threat of air attack". This was not a task for a civil construction organisation. The Board therefore planned

⁹ Gp Capt H. Gatty. (RAN College 1917-20.) Director of Air Transport, AAF SWPA, 1942-43. Regional Director Pan American Airways and research engineer for USAAC; b. Campbell Town, Tas, 5 Jan 1903. Died 30 Aug 1957. (Author of *The Raft Book* and other works.)

² Cpl R. A. Diggles, 93900, WAAAF. Northern Area. Clerk and typist; of Brisbane; b. Brisbane, 30 Oct 1913. Killed in aircraft accident 27 Feb 1942.

the formation of what was designated No. 1 Mobile Works Squadron,² which would have a survey, planning and camouflage section, and engineering construction, camp construction and repair and maintenance sections (even including a small sawmill). The squadron would be organised for 24-hours-a-day operation and would be staffed by 27 officers and 1,010 airmen. It had been estimated that if such a unit was to undertake all the work projected for the R.A.A.F. and U.S.A.A.F. in the Northern Territory alone, it would be fully occupied for more than five years.³ On 19th March the War Cabinet gave its approval, and the new unit was formed in April and began field operations in North-Western Area in July. It was the forerunner of an organisation that was to grow until two wings were in operation.

The bombing of Darwin had intensified the demand for the development of an inland ferry route and "all engineering activities suddenly assumed an aspect of urgency".4 The engineering section of the U.S.A.F.I.A. was, as already noted, heavily engaged in developing its own organisation and in coping with its share in the big task.⁵ Added to these demands for aerodrome facilities were those of the Royal Navy and the United States Navy. The U.S.N. wanted a parent aerodrome and six dispersal fields in the Sydney area. The Royal Navy asked for one parent and two dispersal fields in the Schofield area, near Sydney, and jointly the two navies required one parent and four dispersal fields in the Fremantle area. Approval for the construction of these fifteen fields was given on 29th July. In North-Eastern Area there were four operational aerodromes in the Townsville region, Garbutt (near Townsville itself), Antil Plains, Reid River and Charters Towers. Plans had been made for the construction of an aerodrome at Iron Range on the east coast of Cape York Peninsula. In the Port Moresby region there were three—Seven Mile, Ten Mile and Three Mile, the last two being little more than emergency fields at this stage. In wet weather the fighters had to move from the Three Mile to the Ten Mile. Four more fields had been planned and were expected to be operational by October.

The Department of Civil Aviation also had considerable related responsibilities for aerodromes. At the end of April there were in Australia 188 aerodromes and emergency landing grounds provided and maintained by the Commonwealth, and 206 licensed public aerodromes controlled by local authorities. The R.A.A.F. had taken over 39 civil aerodromes for training in addition to using space at five capital city airports for the same purpose. The U.S.A.A.F. had also established units at certain civil

²Later to be known as an airfield construction squadron.

³ In the aerodrome section of the directorate alone the program in March 1942 provided for the selection and construction of 100 new airfields for use by the USAAF and RAAF.

Engineers of the Southwest Pacific 1941-1945, Vol VI, p. 6 et seq.

⁶ Nevertheless, when in June 1942 a plan for an inland ferry route was approved, comprising a project to construct 5 main and 3 emergency airfields from Melbourne to Cloncurry, the task was commenced immediately under top priority. The airfields were Roto, Cobar and Bourke in New South Wales, and Cunnamulla, Quilpie, Blackall, Longreach, Winton and Cloncurry in Queensland.



airports, and other civil aerodromes had been enlarged for use by American aircraft. The Civil Aviation Department's aeronautical engineering branch was now undertaking important design and modification work to meet the demand by the R.A.A.F. for the conversion of both civil and service aircraft. This work included designing the modification of four DC-3 aircraft which, early in the war, had been commissioned on charter from Australian National Airways, and four Empire flying-boats taken over by the R.A.A.F. Design work was also needed for the adaptation of DH-84, DH-86 and DH-89 aircraft for use in the air observer schools. Twenty-two of these aircraft were converted in civil airline workshops under the supervision of the department's engineers. The re-design of three DH-86's for use as air ambulances had been accomplished in this way. Designs had also been prepared for the modification of DH-84, Douglas DC-2, Junkers G-31 and Ford aircraft as ambulances.

In April the War Cabinet asked the United Kingdom Government to allow Australia to retain the first 90 Australian-made Beaufort bombers that had been bespoken for Britain. The request was granted though the United Kingdom Government did not "officially endorse any change that would amount to withdrawing Australian Beauforts from the aircraft pool". At the same time it was thought unlikely that Britain would bid for a share in the Australian Beaufort production. The Beaufort production program was a responsibility of the Department of Aircraft Production, which had been created in June 1941, with Senator Leckie⁶ as its first Minister; and, from January 1942, with Mr Essington Lewis as Director-General, it replaced the Aircraft Production Commission. On 18th February 1942 the War Cabinet had reviewed the practicability of building in Australia a well-armed interceptor fighter.⁷ There were three main reasons for supporting this proposal, which had been submitted by the Commonwealth Aircraft Corporation. The first was a recognition of the need for some insurance against the possibility that deliveries of American fighter aircraft might be seriously interrupted or prevented. The second was that, with the Wirraway program now regarded as complete, C.A.C. needed a project to occupy their 2,000 skilled workers until tooling up had been completed for the production of what was known as the CA-11 bomber; the prototype of this aircraft had been completed for flight testing in September 1941 and 105 had been ordered. The third reason submitted in support of the new fighter proposal was the ready availability of Wirraway parts and basic materials. Production of this aircraft could begin almost immediately. The War Cabinet accepted this planning and authorised an order for 100 of the new type, to be known initially as CA-12.8 The Australian aircraft supply position, as it

⁶ Hon J. W. Leckie, MLA Vic 1913-17. Senator 1934-47; Asst Minister for Labour and National Service 1940-41; Minister for Aircraft Production 1941. Manufacturer; of Kew, Vic; b. Alexandra, Vic, 14 Oct 1872. Died 25 Sep 1947.

⁷ War Cabinet Agendum No. 46, 1942.

⁸ This aircraft was later to be named the Boomerang. It became CAC's second operational aircraft to be used in combat. For a more detailed account of Australian aircraft production see D. P. Mellor, *The Role of Science and Industry*, in the civil series of this history.

related to the principal operational types at 8th May 1942, is shown in the accompanying table.

Type 4	No. on Order	Source	Delivery details	
Beaufort	180	Dept of Aircraft Production	80 by end July, 20 a month, then 40 a month	
Catalina	119	USA	27 received, 6 allocated	
Hudson	246	"	All received or en route	
Kittyhawk	771	"	50 received, 69 en route, 6 allocated	
Beaufighter	362	UK	54 received or shipped	
Vultee Vengeance	367	USA	Possibly 12 en route	
Boston	-	,,	27 received from NEI	
CA-11 (bomber)	105	Dept of Aircraft Production	To begin Jan 1943; planned production rate 20 a month	
CA-12 (interceptor-		,,	To begin June 1942 at 10 a	
fighter)	100	••	month	
Transports (type not				
specified)	90	USA	Indefinite	
Flying Fortress	143	**	Indefinite	
Mitchell		"	19 received or shipped	
Vought Sikorsky			34 received from NEI	
Dornier		_	6 received from NEI	

Inability to determine with any real degree of accuracy the numbers and types of aircraft that would be allotted to the Allied Air Forces made it very difficult to assess the aviation fuel needs. An Aviation Fuel Coordinating Committee was formed, the membership comprising one representative each from U.S.A.F.I.A., the R.A.A.F., and the U.S.A.A.F. The combined stock of aviation fuel on hand on 8th May was approximately 30,000,000 imperial gallons and the reserve in fuel and oil needed for six months of war operations, so far as it could be estimated, was set at 53,000,000 gallons of aviation spirit and 2,120,000 gallons of aircraft engine lubricating oils. The War Cabinet approved of the installation of additional talks for inland bulk storage in Australia with a capacity of 20,760,000 gallons which would bring this "safe area" storage capacity to about 25,000,000 gallons of aviation spirit.

A special obligation had been placed on local manufacturers for the supply of highly specialised equipment such as radio units and electrical bomb-control mechanism, delivery of which could not be obtained from overseas. The bomb-control mechanism was needed to replace unprocurable pneumatic mechanism previously obtained from Great Britain. The Standards Association of Australia was providing valuable aid by creating standards for metallic materials that met the specifications for both British and American aircraft.

These problems of service and supply, though they were many and

great, were not insuperable. The American concept of the supply situation at this stage has been expressed thus:

Considering the brief interval that had elapsed since the debacle in the Netherlands East Indies, however, the emphasis must be placed on the progress made. During April and May, significant steps were taken by the Australian Government to adjust the economic capacities of the country to the needs of Allied military forces. In close coordination with General MacArthur's staff, the administrative machinery was provided to relieve congestion in the harbors, for a more efficient direction of the production and distribution of food, and for the supply of labor and equipment required in the construction of military installations. Through these and other actions, Australia's productive capacity would substantially reduce the burden imposed on Allied shipping.1

If the dominant Australian note in the initial structure of the Allied Air Forces had soon to become subdued, the R.A.A.F. itself was now, in May, a force twenty-two times greater than its immediate pre-war numerical strength of 3,489 (310 officers and 3,179 other ranks). In little more than two years and a half its numbers had reached 79,074 (5,714 officers and 73,360 other ranks). The total was divided as shown in the accompanying table.

Home Defence Units:	Officers	Airmen	Total
Serving in Australia	. 1,714	40,200	41,9142
Serving overseas	. 295	1,050	1,345
Prisoners of war	. 150	198	348
Total Home Defence	. 2,159	41,448	43,607
Empire Air Scheme:			
Staffs of units	. 2,247	16,094	18,341
Aircrew under instruction in Australia	. 44	8,285	8,329
Aircrew under instruction overseas .	. —	1,213	1,213
Aircrew serving overseas	. 1,230	3,794	5,024
· ·	34	375	4093
Total E.A.T.S	. 3,555	29,761	33,316
E.A.T.S. Squadrons	•	2,151	2,151
Grand total	. 5,714	73,360	79,0744

To meet the demands of the war in the East the Air Staff prepared a plan for the expansion of the R.A.A.F. to a force of 73 squadrons. This was sent to the Minister on 6th February in the form of a draft War Cabinet Agendum, but 17 days later no action had been taken. Thereupon Burnett by-passed the Secretariat, took a copy of the draft Agendum to a War Cabinet meeting and it was approved in principle.⁵ On 2nd March the War Cabinet approved a re-drafted Agendum, with an important though obvious qualification being expressed in the words "having regard to the availability of aircraft". With 73 squadrons established, the first-

¹ Craven and Cate, Vol I, p. 424.

² Including 413 officers and 11,380 airmen under instruction.

⁸ Awaiting embarkation as at 1st May 1942.

Including 5,780 members of the W.A.A.A.F.

Minute by DCAS, 27th February 1942.

line strength was to be 1,314 aircraft. Mobility was to be the key to the use of this force, and so provision was made in the plan for 9 transport squadrons so that combat squadrons in any one area could be reinforced speedily from other areas if necessary. Apart from these units, the composition of the force could be: 11 general reconnaissance (medium and torpedo bomber), 12 dive bomber, 7 flying-boat, 24 fighter, 4 heavy bomber, 1 fleet cooperation, and 5 army cooperation squadrons.

On 20th May the Air Board decided to make 45 squadrons the objective to be achieved by the end of the year, but it was soon seen that not enough aircraft would be available, and the revised objective, set in October, was to have 35 squadrons by April 1943.

These, then, were the terms on which the R.A.A.F. was planning. The answer to the problem lay not only in the provision of sufficient aircraft of the right type but in training the crews to man them, a need that was being heavily emphasised by the extreme strain under which the existing combat units were operating. One of the keenest questions of the time, therefore, was the extent of the Australian overseas contribution to the Empire Training Scheme. The last draft for Rhodesia had been dispatched on 7th January, and when the 300 still in training there had passed out that phase of the program would end. At that time the drafts to Canada had been suspended but, on 24th February, the War Cabinet had decided that "for the present" Australia would continue to provide her agreed quota. There were six qualifying factors attached to this decision: (i) the reduction in the number of partially-trained men sent abroad caused by the increase in the percentage of men given advanced training in Australia, (ii) development to the highest stage possible of facilities for operational training in Australia, (iii) the acquisition of the aircraft needed for the proposed developments, (iv) a regulated inward flow of Australian aircrew with combat experience to provide a nucleus in each R.A.A.F. unit in Australia, (v) retention of sufficient fully-trained aircrew to fill the establishments of Australian squadrons at home and abroad, and (vi) the allotment of as many Australian aircrew as possible to fill the establishments of the "infiltrated" R.A.A.F. squadrons in the Pacific theatre. So far as ground staff were concerned, the planned growth of the R.A.A.F. was such that obviously airmen in the essential musterings, whose numbers had been banking up in anticipation of the formation of further Article XV squadrons for overseas service, would be absorbed by units forming in Australia.

"Post-graduate" training was now an essential need, and the capacity of the operational training units to meet it was being developed. Gunnery and reconnaissance schools, torpedo training units and seaplane training squadrons were being formed, their establishments being keyed to the "undergraduate" training plan. In these days when actual combat units were so few and so hard pressed, the front-line value of these operational training units and even of service flying training schools, could not be overlooked and provision was made for their use in an emergency. The

R.A.A.F. in this way provided itself with 17 reserve squadrons (4 Wirraway dive bomber, 2 Battle general purpose and 11 Anson general reconnaissance units) giving a second-line strength of 414 aircraft available for service at short notice.

One of the most serious handicaps to the development of the increasingly vital training program was the aircraft unserviceability rate. This was so high that it was causing anxiety. A conference of all R.A.A.F. directors concerned, held late in April, recommended urgent action to hasten and improve the supply of spares. It was emphasised that provision of spares was the first responsibility of the Department of Aircraft Production. On reviewing the directors' report, the Air Board decided that the British Air Ministry should be informed urgently that the slow delivery of spares was causing a breakdown in the E.A.T.S. commitments. It noted a recommendation of the conference that until the serviceability rate was improved the intake of pilots for training should be halved. The chief cause of engine unserviceability was dust on the aerodromes, which had been greatly increased by unusually dry weather. Provision of air cleaners on the engines was an urgent need and the sealing or at least gravelling of runways was a task which in the board's opinion should not be deferred by consideration of expense or manpower. The conference had reported as a further important factor the delay in the delivery of Vultee Vengeance dive bombers, an order for which had been placed in the United States. Instead of arriving at a rate of 20 a month, none had yet been delivered. This had meant that Wirraways intended for training had been diverted to operational squadrons and preference in the provision of spares had therefore been given to those squadrons. Of the Wirraways in service for training 56 per cent were unserviceable, as were 48 per cent of the Fairey Battles.

Another and related problem arose from the need for the R.A.A.F. to provide facilities for American air units. This affected the whole training pattern, for already six E.A.T.S. schools, including the site of the Central Flying School at Camden, had been vacated to make room for U.S.A.A.F. formations. This meant that the capacity of the remaining schools had to be increased by 75 per cent to absorb the staff and trainees so displaced. On 12th March Brett had written to Burnett proposing that all Australian "flight and operational training" and the technical training of ground staff should be undertaken in the United States. This he contended would relieve congestion on Australian aerodromes and offer better aircraft production, maintenance and repair facilities. The trainees could be carried to America in ships that were returning empty. Burnett regarded this proposal as impracticable because the establishment of an organisation of adequate size for such a project could not be achieved within a year, efficiency would be lost in the time spent in transit to and from the United States, and the aircraft then in use would be wasted. Added to this, Australian policy had now been directed towards retaining as much manpower as was practicable in the Commonwealth at this critical time.

In Washington the War Department ended the discussion by formally stating that such training could not be undertaken by the U.S.A.A.F.

A phase of specialised training at this time was provided by the School of Army Cooperation that had been established on 29th December 1941 at Canberra. Now commanded by Wing Commander Stephenson, R.A.F., who had had considerable experience in this type of training in the Middle East, the school was attended by members of both the air force and the army.

Meanwhile the Empire training plan, which had now been in operation for almost exactly two years, was being reviewed in the light of experience and changing circumstances. At a conference held in Ottawa in May the extension of training in Canada for a further period of two years—to 31st March 1945—was planned.⁷ On 3rd June a new agreement, to become known as the British Commonwealth Air Training Plan, was signed. This superseded the four-Power agreement of 1939. To come into operation on 1st July 1942, it related specifically to training in Canada. Australia undertook to endeavour to send each year 1,300 pilots trained to elementary flying school standard and 676 observers and 936 wireless air gunners trained to initial school standard.

Australia's four-weekly commitment for aircrew trainees drafted to Canada remained as amended in January 1941: pilots from elementary schools, 100; observers and wireless air gunners from initial schools, 52 and 72 respectively. The deficiency in the numbers of pilot trainees caused by the four-months suspension of drafts after Japan's entry into the war had been largely made up by the increase in subsequent drafts but the lapsed quotas for observers and wireless air gunners in this period had not been filled. To provide for its own home defence needs without drawing on the aircrew trained under the Ottawa agreement the R.A.A.F. planned an increase of 25 per cent in pilots and 10 per cent in aircrew generally. The rate of intake every four weeks, including this increase, now became 480 pilots, 203 observers and 320 wireless air gunners and air gunners. These intakes were expected to give an output of 336 pilots, 172 observers and 272 wireless air gunners and air gunners. From these outputs the R.A.A.F. was entitled to retain its requirements for its own squadrons to the extent required to man the aircraft allocated to it.

For the two-year period of the new agreement it was planned that Australia should take in for training 26,286 aircrew to be fully trained in Australia and 6,838 to complete their training in Canada—a total of 33,124. Thus the planned total intake for the two years was far more than the total planned intake set by the original agreement (26,420). From this original intake total to March 1943, an output of 15,956 had been expected. But by sending 675 trainees to Rhodesia and increasing

⁶ AVM J. N. T. Stephenson, CB, CBE, RAF. Comd 613 Sqn RAF 1940-41, School of Army Cooperation Canberra 1942-43; Deputy Director of Tactical Opns Air Ministry 1943-45; comd 345 Wing SEAC 1945-46, Regular air force offr; of London; b. Camberwell, London, 16 Nov 1907.

⁷ The details and effects of this conference are reviewed by J. Herington in Air War Against Germany and Italy 1939-43, in this series.

the quotas to Canada and the intake for aircrew for complete training in Australia the total output of Australian aircrew for the period was, in fact, raised to 19,197. Experience showed the percentage of wastage to be 31.33 in pilot training and 11 and 11.33 respectively in the training of air observers and wireless air gunners.8

An issue that had been causing concern for some time was the practice of granting a substantial percentage of commissions on graduation. Though this was in keeping with the terms of the agreement circumstances were proving that it was impracticable to maintain the percentages. The large increase in the number of trainees and the consequential drain on the sources from which they were being drawn, was accompanied by a decline in the average quality of the recruits. To maintain the same basis of commissioning in these changed circumstances meant that very competent members of aircrew, who had graduated from earlier courses without commissions, now had less opportunity of gaining them than aircrew from current and future courses whose standard might well be inferior to theirs, and who lacked their operational experience. Apart from limiting the actual standard of competence in operations in a direct sense, this could cause discontent to aircrew in all theatres. The matter was reviewed both at the Ottawa conference and in subsequent discussions in London, at which the R.A.A.F. representatives advocated that any member recommended and found suitable should receive a commission. The percentage system should be used simply as a general guide so that approximately the same over-all proportions would be commissioned. The proposal was accepted and adopted for pilots and navigators (as air observers had been redesignated about this time). The percentage basis was retained for wireless air gunners and air gunners.

The lower qualifications of a proportion of later batches of aircrew applicants was a problem that remained to be overcome. The army gave some aid by agreeing to release men anxious to join the air force as aircrew, but resisted all attempts on the part of the R.A.A.F. to recruit ground staff from its ranks; the men the air force most desired were the very men the army was least willing to part with.

Transfer of the operational control of the Commonwealth's meteorological services to the Air Board had been one of the early and logical decisions of the War Cabinet. That was in 1939. The decision had left administrative control of these services with the Department of the Interior. This had proved cumbersome and so, in July 1940, that function had been transferred to the Department of Air. In April 1941 all members of the meteorological services, except a number engaged in exclusively civil duties, were either enlisted in or appointed to the R.A.A.F's newly formed Directorate of Meteorology with Group Captain Warren as the

⁸ Most trainees who failed to qualify as WAG's graduated as air gunners.

¹ Gp Capt H. N. Warren, 252489. Director of Meteorological Services RAAF 1941-46, Allied Meteorological Services SWPA 1942. Public servant; of Melbourne; b. Melbourne, 6 Apr 1888. Died 5 Aug 1950.

first director. At the Central Bureau in Melbourne a central headquarters had been provided for the administrative control and direction of all meteorological activities throughout the Australian region, the coordination of services with those of adjoining countries, special investigations for the high commands, training of staff for war stations, development and research activities, and instrument maintenance and repair. A divisional bureau in each capital city controlled observer stations and other meteorological units in its area and provided the State's forecasting requirements both military and civil. A meteorological officer serving on the staff of each air force area coordinated the meteorological services of all air force stations in the area, one forecasting station meeting the operational needs of a group of air force stations. There were permanently staffed stations at intervals of from 300 to 500 miles along the principal air routes. Army formations in the field—corps and divisional headquarters—had specially trained and equipped flights or sections from a mobile meteorological squadron. The navy's meteorological needs were provided mainly by synoptic radio messages transmitted from a master station at Laverton. Daily information on coastal and seaward conditions was sent to navy headquarters and naval and merchant shipping were specially served, the facilities including a storm warning system. A "fleet message" providing a descriptive weather chart of the relevant areas was transmitted in code for the use of meteorologists at sea with major

In the research and development field much was being achieved through the local production of mobile equipment and radio-sonde ground and airborne equipment. This gave information about upper air conditions at considerable altitudes, work that had immediate operational value and promised considerable improvement in the accuracy of forecasting. Climatological data compiled by the civilian staff before the war proved to have great wartime value. Studies in this field, compiled for the use of forces operating in enemy-occupied areas, were supplied to General Headquarters, and the headquarters of the Allied Naval Forces and Allied Air Forces. Long-range forecasts were also made to cover the movement of combined operational forces.

In June 1942 No. 15 Weather Squadron of the U.S.A.A.F. reached Australia. To achieve coordination between this unit and the R.A.A.F. Meteorological Service in administration and equipment, General Brett appointed Group Captain Warren to be Director of Allied Meteorological Services in the South-West Pacific Area. The commanding officer of the American unit was appointed deputy director.²

Daily forecasts were prepared with the aid of reports from several hundred observer stations, most of which were manned by honorary staff located chiefly at post offices and lighthouses. Most of this informa-

² Late in 1942 the American squadron was detached and posted to serve exclusively as a mobile weather unit with Fifth Air Force. The Allied meteorological organisation was therefore dissolved and the RAAF organisation resumed independent operations. About this time a GHQ Meteorological Committee was formed from representatives of the various Services, with the RAAF director as chairman.

tion was transmitted by telegraph land-line but, for inland areas, the R.A.A.F. Meteorological and Signals services developed between them a system of radio communication through special meteorological broadcasting stations at Laverton (Victoria), Richmond (New South Wales), Amberley and Townsville (Queensland), Birdum (Northern Territory) and Pearce (Western Australia).

These highly-organised and widely-distributed services raised an unusual aspect of censorship. An endeavour was made to deny, in every way possible, the passage of weather information to the enemy and yet meet the urgent economic needs of the community. Locally produced codes were distributed to all essential points in the South-West Pacific Area, the South Pacific and Indian Ocean regions and to the British Air Ministry and Admiralty for use by ships and ferried aircraft moving into the South-West Pacific Area.³

An important decision affecting the progress of the Women's Auxiliary Australian Air Force was that by which the War Cabinet on 14th July made it a part of the Citizen Force branch of the Commonwealth Defence Forces. This meant that, instead of being enrolled, airwomen were formally enlisted, and officers were granted commissions by the Governor-General as were members of the R.A.A.F. Whereas, previously, on enrolment members undertook to submit to certain minor punishments, under the new regulations there was a distinct disciplinary code. Members of the W.A.A.A.F. were not given the right to elect to be tried by court martial and there were certain sections of the Air Force Act under which they could not be found guilty. Normally they could be punished for breaches of the regulations only by their commanding officer. Penalties were lighter than those prescribed for members of the R.A.A.F. To deal with a serious offence the commanding officer was given power to adjourn the proceedings and, with the consent of the Attorney-General, to take action for prosecution in a civil court. If an offence warranted it a member could be discharged from the Service. But provision for such extremes was more a formality than a need. The women's auxiliary, from having gained acceptance in the face of masculine prejudice, had come to be accepted as an indispensable part of the air force.

While endowing a W.A.A.A.F. officer with much the same legal powers as a R.A.A.F. officer, the regulations provided that a W.A.A.A.F. officer could not be a member of a court martial, could not exercise command over male members of the air force unless such members had been detailed for duty under her command and were in fact engaged in such duty, and could not order into arrest or exercise any disciplinary power or powers

⁸ The introduction of new procedures and new codes by the US Forces in the SWPA led to a Pacific Region conference at Auckland in 1942. Recommendations from this conference were passed to the Combined Chiefs of Staff, Washington, under whom the Combined Meteorological Committee dealt with all weather problems in all theatres of war. In March 1943 a representative of the RAAF Meteorological Services was sent to Washington to assist the committee in coordinating systems for use in the Pacific areas. Meanwhile the RAAF services had expanded to a staff strength (as at 1st May 1943) of 199 officers, 321 assistants and 301 charters, of whom the WAAAF provided 9, 64, and 120 in the respective categories. This staff served on 48 forecasting and 27 observing stations.

of punishment over any male members of the air force. The W.A.A.A.F. now numbered more than 12,500 airwomen and almost 350 officers.⁴ The musterings in which its members were authorised to serve totalled 42. Fresh service trades in which members of the W.A.A.A.F. might serve had been proposed early in 1942. Some of these were new for women in Australian civil life; examples were meteorological assistant, instrument repairer and radar operator, the last also having no civilian counterpart among civilian men.⁵

On assuming office in October 1941 the Curtin Government had stopped all recruiting for the W.A.A.A.F. but a month later it had been resumed on an even greater scale. Throughout the war the areas in which members of the W.A.A.A.F. might serve were frequently discussed and the arguments for and against sending them to such operational areas as Darwin, Port Moresby and Milne Bay were weighed, but ministerial direction blocked all such plans; none served farther north than Cairns and Charters Towers. In North-Eastern Area, soon after the Allied Air Forces began operating from there, a considerable number of W.A.A.A.F. members were posted to Townsville. Some time later rumours of misbehaviour directed against them gained currency but with little justification. An investigation by responsible officers showed that the average standard of W.A.A.A.F. behaviour was higher than that of women in the normal civilian population. There was some concern that these rumours would have an adverse effect on W.A.A.A.F. recruiting and a move to withdraw members from the area was made in July but before long their number was being increased instead of decreased. While the conditions of service broadly were comparable with those in the R.A.A.F., rates of pay for airwomen were generally two-thirds of those for airmen in the same musterings, with lower rates for minors and, in certain circumstances, with allowances lower than those granted to R.A.A.F. members. For officers the rates of pay were comparable with those of the R.A.A.F. Nursing Service.

Another ancillary service of considerable value to the air war effort, and notably to the home defence system, was that provided by the Voluntary Air Observers' Corps. Inaugurated in 1941, it had developed rapidly. The original memorandum that gave form to the corps had set out a general plan for the establishment of a network of observation posts arranged in a uniform pattern to cover the coastal belt and the industrial areas of the Commonwealth. Towards the end of 1941 the Air Board had accepted the plan and on the last day of the year the

The increase was due mainly to the formation of a radio station at Townsville. By December 1942 there were more than 400 airwomen serving in the units based there.



⁴ The WAAAF's strength as at 31st December in each year of the war period was: 1941, 1,583; 1942, 14,195; 1943, 16,892; 1944, 17,999; 1945, 7,180; 1946, 500. For comparison, the approximate strengths of the four women's services at September 1944 were: WRANS, 2,000; AWAS, 18,000; WAAAF, 18,000; Nursing Services, 900.

⁵ On 30th October 1942 the Air Board issued an order describing the reorganisation of the WAAAF to permit the entry of women into 26 additional musterings and by December eight more were added to the list (including that of shoemaker though only one was ever on strength). In all, WAAAF members served in more than 70 musterings.

War Cabinet had given approval for the formation of the corps. Navy coastwatchers and military reporters also used the network. The telephone system, with direct lines when necessary, was used where possible to link observation and control posts, and teleradio sets were installed at control posts to provide continuous communication between these points and the main control posts. A high degree of priority was given by the Postmaster-General's Department to all aircraft sighting reports, which were known as "airflash" messages and which could be transmitted to the appropriate centre within minutes. The naval and military authorities and the local defence coordinating committees all collaborated in the inauguration of the system. By 31st March 1942 six main control posts, 13 subsidiary posts and 483 observer posts were in operation on a 24-hour basis. The V.A.O.C. was also established in the Darwin and Port Moresby areas where radio was the main means of communication. In north-western Australia, between Darwin, Wyndham and Port Hedland, use was made of the pedal "transceiver" sets that had been installed by station owners and others as part of the Flying Doctor Service network; about 150 of these sets were brought within the V.A.O.C. system.

With the expansion of air operations after the formation of Allied Air Headquarters, the observer system was expanded, hundreds of new posts being established. In critical areas the system extended as much as 150 miles inland and it ranged from Cairns in north Queensland, down the entire eastern seaboard and thence westward to Ceduna in South Australia. In Western Australia it extended from Albany northward to Geraldton. At the request of the United States forces an air-raid warning system was installed by the corps at Charleville. To reduce delay in the transmission of reports from control posts to fighter sectors, the zoning systems adjacent to the sectors were intensified so that each would have between 60 and 70 observation posts. Although primarily a "landward" pre-warning system for plotting and tracking the movements of enemy aircraft, the corps gave valuable aid to Allied aircraft that were in difficulty and was responsible on a number of occasions for saving the lives of aircrew and their aircraft.⁷

A significant administrative step taken in 1942 was the formation in January of the Rehabilitation Section within the Directorate of Personal Services. The significance lay in its timing; the task of fitting members of the Service for their return to civil life had begun while enemy victories dominated the news and recruiting and training for a war which threatened to become increasingly grim were at high pitch. It was good psychology. It demonstrated complete confidence in the outcome of the war and it gave the best possible assurance to those in or about to enter the air force that the Service was accepting a responsibility for their welfare that was beyond the limits of their efficiency in war.

⁷ By May 1943 the corps had a membership of 38.000, manning 7 capital city and 36 other control posts and 2,639 observation posts.

But the chief rehabilitation officer, Squadron Leader Gordon,8 in private life a schoolmaster of more than ordinary academic and athletic distinction, had been given a task of singular difficulty. To make any progress he must first convince Service officers whose cooperation was essential, and these included members of the general duties branch who were concerned exclusively with combat, that a rehabilitation program at this early date was not only wise but urgent. To attempt this was to invite the challenge, "What about letting us win the war first?" That challenge was frequently expressed. To answer it effectively called for patience, tact and intelligence. Fortunately Gordon had strong and wise backing, particularly from his director, Wing Commander Winneke,9 who, like himself, possessed a specialised knowledge of human reactions; Gordon's having been gained in the field of progressive education while Winneke's came from distinguished practice at the Bar. But apart from its ultimate purpose the rehabilitation program had an immediate value which Gordon used as a wedge. Inevitably a large part of a fighting Service is not engaged in combat. Many R.A.A.F. units, including quite a number that were operational, were forced to spend long periods at isolated posts where, with only routine duties to perform, they had to counter extreme monotony. The Rehabilitation Section was charged with providing facilities for non-service education—the real foundation for rehabilitation. The purpose of these facilities was to promote and encourage individual study and group discussion and the subjects might range anywhere within the field of intelligent thought and action. Here was Gordon's opportunity to prove the immediate value of rehabilitation. The stimulation of constructive thinking itself offered the best antidote for boredom, a complaint to which moral fibre is so very susceptible. Rehabilitation officers were selected and sent into the field. Initially it was a research task but to those who saw the war in some perspective it was a most encouraging development. It was also a development that entitled the R.A.A.F. to claim credit for vision and for constructive thinking on its own part—its Rehabilitation Section had been formed six months earlier than that of any other fighting Service for which records are available.

⁸ W Cdr C. E. S. Gordon, 253863. AMF 1941; Directorate of Personal Services RAAF 1942-45. Headmaster of St Peter's College Adelaide 1946-60. B. Bernice, British Guiana, 24 Dec 1907. Died 22 Aug 1960.

⁶ Gp Capt Sir Henry Winneke, OBE. Inspectorate of Aircraft Accidents 1940-41; Dep Director of Personal Services 1942, Director 1943-46. Solicitor-General, Victoria, since 1951. Of Kew, Vic; b. Melbourne, 29 Oct 1908.