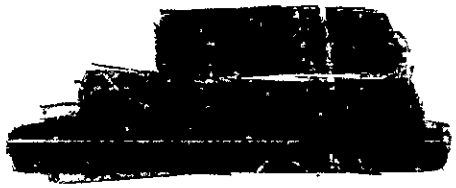

Army Air Forces Historical Studies: No. 9

THE AAF in AUSTRALIA

TO THE SUMMER OF 1942

Prepared by
ASSISTANT CHIEF OF AIR STAFF
INTELLIGENCE
HISTORICAL DIVISION

[redacted]

UNCLASSIFIED

ARMY AIR FORCES HISTORICAL STUDIES: NO. 9

THE AAF IN AUSTRALIA
TO THE SUMMER OF 1942

The original of this monograph and the documents from which it was written are in the USAF Historical Division, Archives Branch, Bldg. 914, Maxwell Air Force Base, Alabama.

UNCLASSIFIED

Prepared by
Assistant Chief of Air Staff, Intelligence
Historical Division
July 1944

[redacted]

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PREFACE

This "first narrative" has been prepared by the Historical Division, AC/AS, Intelligence as a contribution to the history of the Army Air Forces in the current war. The story is primarily concerned with administrative problems and developments. It is felt that the account is as complete and accurate as is possible until additional records are made available.

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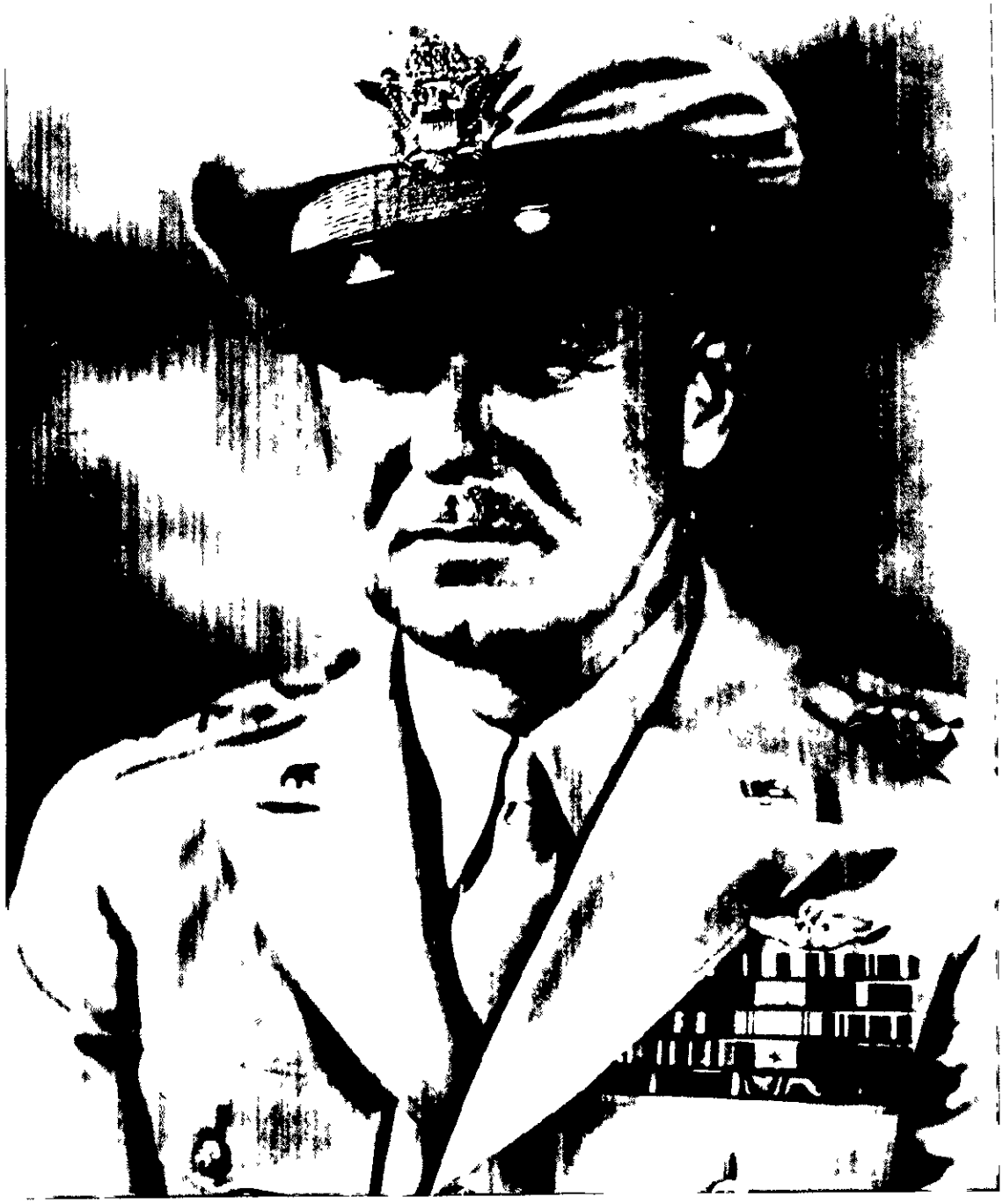

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FOREWORD

It is the desire of the President, the Secretary of War, and the Commanding General, Army Air Forces, that a solid record of the experiences of the AAF be compiled. This is one of a series of studies prepared as a "first narrative" in the projected overall history of the Army Air Forces.

The decision to make the information contained herein available for staff and operational use without delay has prevented recourse to some primary sources. Readers familiar with this subject matter are invited to contribute additional facts, interpretations, and constructive suggestions.

This study will be handled in strict compliance with AR 380-5.

THOMAS D. WHITE
Brigadier General, U. S. Army
Assistant Chief of Air Staff,
Intelligence

Readers are requested to forward comments and criticisms, and to this end perforated sheets, properly addressed, are appended at the back of this study.

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CHAPTER I

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INTRODUCTION

During the first eight months of American participation in the second World War, when Japanese victories quickly followed one after another and American airmen fought valiantly against a foe superior in numbers, certain units of the United States Army Air Forces found themselves in Australia with the task of stemming the onrushing enemy tide in the Southwest Pacific. A few members of the Far East Air Force managed to survive the Philippine and Netherlands East Indies fighting and eventually made their way to Australia. Other Army air units, on their way to the Philippines when the war started, were diverted to the continent "down under."

Shortly after the outbreak of the war a slow trickle of B-17's started toward Australia from the United States via the South Atlantic ferry route, while early in 1942 heavy bombers began pioneer flights across the newly-opened South Pacific ferry route. Bombardiers who had never served in a tactical unit, navigators who were still aviation cadets, and co-pilots who had never before been in a four-engine bomber were suddenly shifted from relatively ideal training conditions into the harsh realities of aerial combat. In the face of a relentless enemy, indefatigable bomber crews flew eight-hour missions, returned to base, refueled and serviced their own planes, and then took off on another mission. Newly-arrived ground crews in Australia worked feverishly to assemble A-24's which were needed in the Philippines--only to discover that certain essential parts had been left sitting on the docks at San Francisco.

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In the earliest operations in the Southwest Pacific area men and machines were pushed to the point of complete exhaustion. Anxious crews petted and cajoled weary B-17's into flying just one more mission, while supply officers rushed from one Australian port to another in search of equipment belonging to their units. Such routine peacetime items as morning reports and pay vouchers were forgotten in the mush of those hectic days. Battered remnants of squadrons arriving in Australia from the Netherlands East Indies and fresh units from the United States learned painful but valuable lessons in operating an air force in a strange land, nearly 7,000 miles from the center of production and supply.

Geographical distances posed a fundamental problem in the establishment of air strength in the Australian Theatre. Vast stretches of ocean, sparsely dotted with tiny islands—some of them barely within bomber range of each other—uncharted airways, undeveloped bases, and long, tenuous supply lines all presented difficulties which were not unsurmountable, as subsequent events were to prove, but which nevertheless limited the effectiveness of the Army Air Forces during the early months of the war in the Pacific.

In addition to the obvious shipping problems involved in moving the hundreds of troops necessary to maintain ground services, and all the bombs, ammunition, fuel, repair machinery, and spare parts necessary for the operation of aircraft, there were even greater problems involved in moving planes to the Southwest Pacific. While medium bombers and fighters could be dismantled and shipped by water, the only practicable

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way of delivering heavy bombers was to fly them to their destination. In this respect, the history of the United States air units in Australia does not begin with their arrival shortly after the outbreak of war, but it begins rather with the efforts to establish air routes to Australia—via both the Pacific and the South Atlantic.

The necessity for defending the Philippines resulted in the preparation of an aerial route from the United States early in 1941, although it was not until 28 August 1941 that the first reinforcements of B-17's began to wing their way across the Pacific via Hawaii, Midway, and Wake, then down to Rabaul, Port Moresby or Darwin, and north to the Philippines.[1] A more northerly route, via Guam instead of Rabaul and Port Moresby, had been tested by several flights of B-17's, but its value was limited by the fact that Guam lay dangerously close to the Japanese-mandated Marianas and Caroline Islands.[2]

Likewise, the proximity of Japanese garrisons in the Marshall Islands endangered Wake, in case hostilities should begin. Recognising this lack of security, the Air Corps early in 1941 began to press its case for the development of a South Pacific ferry route, although the War Department in the latter part of 1940 had stated its policy of opposition to the development of airfields other than on Midway and Wake—a policy which was based upon the assumption that there would be no necessity for sending land-based bombers across the Pacific.[3] The Chief of the Air Corps, however, did not consider such an assumption to be logical; he visualized the day when the presence of long-range bombers in the Far East would be of vital importance to the United

States--as important to this nation as the urgent British demands for such aircraft were to that nation.[4]

The Air Corps initially recommended to the Civil Aeronautics Authority that landplane facilities be developed on Canton, Jarvis, and Johnston Islands, with a view toward the partial establishment of a long-range landplane route to Australia. This action, in conjunction with similar developments on Samoa, the Fiji Islands, and possibly on New Caledonia, was viewed by the Air Corps as a step which should prove equally valuable in meeting anticipated commercial requirements. Urging a reconsideration of War Department policy on this matter, the Assistant Chief of the Air Corps on 3 February 1941 stated that "unless such facilities are provided, it is . . . believed that full advantage can [not] be taken of the potentialities and capabilities of long range land-based aviation and that its value to the United States in the scheme of national defense would be commensurably curtailed."[5] In little more than a year Maj. Gen. George H. Brett, who expressed this opinion as Assistant Chief of the Air Corps, faced a situation in Australia which supported his point far more strongly than could any words.

In spite of the pleas of the Air Corps, the War Department remained firm in its original decision not to develop airfields other than those on Wake and Midway Islands, with the explanation offered on 21 February 1941 that "neither the War nor the Navy Department has any plan for operations that would require the movement of long range Army bombardment aviation to the Orient, nor can the need for such a plan now be

foreseen."[6] The decision was in keeping with a policy of maintaining the strategic defensive in the Pacific, and any action which might have appeared aggressive or offensive to Japan was thus discouraged. The decision was further supported by the argument that such land-plane facilities, if provided, "might possibly fall into the hands of the enemy." In the opinion of the Air Corps, however, even if sufficient troops and facilities could not be provided for protecting such bases in case of attack, the detachments necessary for maintenance services would be sufficient in number to destroy those bases and thereby nullify their usefulness to any potential enemy.[7]

As the year 1941 wore on and events in the Pacific appeared to become more ominous, the War Department found it advisable to reverse its position, and on 24 October 1941 the Chief of Staff approved a project calling for development of a South Pacific ferry route from Hawaii to the Philippines.[8] While the State Department was arranging for Australian, New Zealand, and British cooperation with the United States in the project, the War Department rushed plans for the construction of air facilities on Canton and Christmas Islands, at Nandi (in the Fiji Islands), at New Caledonia, and at Townsville, Australia. It was estimated in October 1941 that, with the cooperation of the interested governments, a route for land-based planes of relatively short range would be completed by the end of June 1942, the Commanding General, Hawaiian Department, directing the construction.[9] By the end of November the deadline had been moved up to 15 January, and the early completion of the project was viewed as a matter of extreme urgency—a matter which "must be thought of in terms of weeks and not years."[10]

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If the Japanese knew of the project, as they undoubtedly did, they were not so accommodating as to wait for its completion before striking at Pearl Harbor. After the beginning of hostilities the Chief of the Air Staff directed that all matters pertaining to the South Pacific ferry route be held in abeyance, although the procurement of equipment was to be continued, pending final decision on continuation of the project. By 15 December, however, action was ordered resumed in accordance with the original plans.[11]

While both Army and Navy construction crews redoubled their efforts on various island installations in the Central and South Pacific, the Japanese were methodically continuing their conquest of southeastern Asia and the Philippines. With the enemy occupation of Wake Island on 23 December the existing air route to the Philippines was broken; and since the South Pacific route was still uncompleted, the hope of heavy bomber reinforcements for the Philippines and Australia lay in a route from Miami, via Brazil, Africa, India, Sumatra, and Java, to Australia. While many of the airfields were inadequate and initial stocks of fuel were low, circumstances forced the use of this route, the facilities of which soon became congested with "four-motored bombers piled up from Bangalore to Trinidad."[12] Stretching two thirds of the distance around the world, this route proved costly in the ferrying of heavy bombers to Australia, for by 22 January 1942 a loss of 25 per cent of the bombers had been suffered, largely because of the lack of spare parts.[13]

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In the meantime, the South Pacific route had been completed--that is, the bare essentials for heavy bomber landings and take-offs had been provided--but extensive use of the route was held up because of the strong head-winds between the United States and Hawaii which prevail until about the middle of March.[14]

In the face of an increasing enemy threat to the Netherlands East Indies section of the route from Africa, attention was directed to the possibility of a route by way of British-held islands in the Indian Ocean to the west coast of Australia. Early in February 1942 the Secretary of War directed the construction of an air route from the east coast of Africa to Port Hedland, Australia, via Coetivy Island, Diego Garcia Island, and the Cocos Islands in the Indian Ocean.[15] The plans included the development of Point Noire, French Equatorial Africa, as the airport of entry into Africa, with the following steps constituting the most feasible route from there: Leopoldville and Bukama in the Belgian Congo, Mbeya in Tanganyika, Mombasa in Kenya, and the British-held islands in the Indian Ocean. The route from Mombasa to Port Hedland had been flown by a seaplane and was considered feasible for use by heavy bombers, although no landing had been made at Coetivy.

With preliminary plans completed, a party consisting of Col. Herman H. Pohl, Maj. Harold B. Willis, and Sgt. John S. McCall, left the United States for Cairo on 10 February to begin a survey of the Indian Ocean section of the proposed route.[16] Before the initial survey could be completed, however, the Japanese in the latter part of February

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overran the entire Netherlands East Indies, thus cutting into the former ferry route through Sumatra and Java and putting themselves in a position to threaten the security of any route through the Indian Ocean. By 3 March the situation was such that General Brett, in recommending the return of the survey party to safer territory, could state that any idea of a route to Australia via the Cocos Islands was out of the question since the islands were less than 800 miles from the newly-won Japanese positions in Java and Sumatra.[17]

With the cutting of their life-lines from the west, air units in Australia were thus forced to depend entirely upon the new and not-too-dependable South Pacific ferry route. While the Hawaii-Canton-Suva-Tontouta-Townsville route was reported on 28 December to be open, it was far from complete; and availability was doubtful in regard to certain essential items, such as lubricating oil and hydraulic brake fluid, at all stops.[18] Landing fields were provided also at Palmyra and Christmas Islands.

Even though complete facilities had not been provided at all stops and information was lacking for some items, on 6 January 1942 three B-17's, piloted by Maj. Kenneth B. Hobson, 1st Lt. Jack M. Hughes, and 1st Lt. Clarence E. McPherson, left Hickam Field, Hawaii, and, "hopping southwestward via a string of Pacific islands and atolls most of which had never before seen a land plane," made the inaugural flight over the new route.[19] After the completion of this flight, other heavy bombers made their way from the United States to Australia, although flights were limited during the kona season and facilities en route continued

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to be partially adequate during the first few months of operation.[20] Before housing was available, the crews slept on cots under the planes; and in some instances the planes had to be refueled from 55-gallon drums.[21]

While these practically defenseless islands constantly faced the threat of Japanese attack, now—in direct contrast to the situation a year before—the possibility of their falling into enemy hands did not stand in the way of their development and use.[22] Necessity was the dictating factor; lack of security, inadequate facilities, and all other considerations were relegated to the background. There was no time to bemoan the fact that the route had not been charted and that construction had not been started earlier. With a rapidly advancing enemy threatening to overrun the Southwest Pacific and eventually the entire Pacific, the United States and her allies had to prepare for a stand in Australia. The South Pacific ferry route, even though tenuous and uncertain at first, was to develop as the lifeline for the air forces in Australia, for without it there could have been no heavy bomber replacements, no rush delivery of desperately needed supplies, and no speedy transportation of urgently needed personnel. Indeed, without it there could have been no effective air force in Australia, for most of the enemy's outposts could not have been reached by any aircraft other than long-range, heavy bombers.

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CHAPTER II

THE AIR FORCES IN AUSTRALIA DURING THE JAVA CAMPAIGN

During the first three months of war in the Pacific the Air Corps units in Australia, handicapped by a lack of organization, struggled to train combat crews, to assemble aircraft, and in general to aid in reinforcing the Allies who were trying to halt the Japanese advance through the Philippines and the Netherlands East Indies. This was a period when changes of command had to be made before officers were able to acquire a full understanding of their missions, when Allied plans had to be revised almost before they could be put into operation, and when Air Corps units had to be shifted to new locations before they were settled in their former ones, all because of the rapid advance of the enemy.

The first indication of this pattern of action came on 7 December 1941, when the Japanese attack on Pearl Harbor caught certain B-17's en their way to the Philippines, forcing them to remain in Hawaii, and caught a convoy of approximately 4,600 troops en route to the Philippines, forcing on them a diversion to Australia. In November the gathering war clouds in the Pacific had resulted in the speeding up of War Department plans for reinforcing the U. S. garrisons in the Far East.[1] The 19th Bombardment Group (H) with 35 B-17's,[2] which constituted the heavy bomber strength of the Far East Air Force[3] at the end of November, was scheduled to be reinforced by the 7th Bombardment Group (H) early in December. [redacted]

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Six crews of the 88th Reconnaissance Squadron of the 7th Group were among the bewildered young Air Corps men who flew into Pearl Harbor shortly after eight o'clock on Sunday morning, 7 December, expecting to make an uneventful landing at Hickam Field. Instead, they were greeted by the sight of flames leaping high into the air, of burning warships emitting billows of black smoke, of bombs bursting on all sides, and of enemy aircraft firing at buildings and personnel. Flying unarmed, Lts. Frank P. Bostrom, Harold N. Chaffin, Harry M. Brandon, Robert E. Thacker, and David G. Rawls, led by their squadron commander, Maj. Richard H. Carmichael, eluded the fire from enemy aircraft and successfully landed their new Flying Fortresses. Lieutenant Bostrom was chased by three enemy planes almost all the way around the island, but he outflew them and brought his plane down on a golf course with only a few minutes' supply of gasoline remaining. Lieutenants Brandon, Thacker, and Rawls landed their planes on Hickam Field, and the crews were strafed as they sought shelter in ditches. Major Carmichael and Lieutenant Chaffin, with only a few bullet holes in their B-17's, managed to land on a tiny auxiliary field.[4] These crews, along with several others[5] scheduled for the Philippine Islands, were to remain in Hawaii for two months, flying numerous missions before moving on to Australia.

On 21 November 1941, sixteen days before the departure of the flying echelon of the 88th Reconnaissance Squadron, the ground crews of the 11th, 22d, and 88th Squadrons of the 7th Bombardment Group had embarked from San Francisco on the transport, Republic. After stopping at Hawaii on 29 November, the ship joined a convoy which [redacted]

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of the USAT Chaumont, the USAT Meigs, the USAT Holbrook, the USS Yacht Niagara, and three freighters: the Admiral Halstead, U. S.; the Great Farmer, U. S.; and the Bloemfontaine, Netherlands, with the Pensacola as naval escort.[6]

These ships were fairly bulging with material and troops which, had they been able to reach their destination, might have made the defense of the Philippines an entirely different story. In addition to the 2,600 Air Corps troops (including 48 pilots) and 2,000 other troops (including two regiments of field artillery), the vessels carried the usual troop equipment and approximately 340 motor vehicles, forty-eight 75-mm. guns, over three and one-half million rounds of ammunition, over 600 tons of bombs, 6,000 drums of aviation oil, 3,000 drums of aviation gasoline, a number of P-40's, and 52 A-24's (knocked down), which their crews--members of the 27th Bombardment Group (L) already in the Philippines--were shortly to be needing.[7]

Pursuing a southwestward course, instead of the normal course through the Japanese-mandated islands, the convoy crossed the equator on 6 December and on the following day received news of the outbreak of hostilities. Orders were issued for the vessels to proceed to Suva, in the Fiji Islands, and the eight machine guns which were found on the Republic were hurriedly set up on improvised mounts while five other ships in the group had to sail entirely without armament. On 12 December the troops were designated as a task force under the command of Brig. Gen. Julian F. Barnes, senior officer of the convoy and troop commander of the Republic.[8] On the following day the convoy was ordered

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to proceed to Australia instead of to the Philippines. General Barnes, with a new designation as Commander of the U. S. Army Forces in Australia, was assigned the mission of effecting the supply of General MacArthur's troops in the Philippines.[9]

After stopping overnight at Suva on 15 December, when a few more guns were found and placed on the Republic and the Holbrook, the convoy by-passed New Caledonia and made its way to Brisbane, Australia, where Col. Van S. Merle-Smith, U. S. Military Attache in Australia, had made tentative arrangements for the erection of aircraft and for the disposition of the ships.[10]

By 23 December, when the convoy docked at Brisbane, Maj. Gen. George H. Brett (en route to Australia after a conference in Chungking) had been designated as commander of all U. S. military troops and facilities in Australia, and Brig. Gen. Henry B. Claggett had arrived from the Philippines to assist in the command. In the absence of General Brett, General Claggett named General Barnes as Chief of Staff.

With tenting and messing facilities provided by the Australian Army, the troops of the convoy debarked and were quartered at the Ascot and Doomben race tracks. The task of unloading the organic equipment for these troops proved to be cumbersome, inasmuch as the vessels had been loaded on a peace-time basis.[11]

Meanwhile, as the troops in Australia sought to adjust themselves in their hastily-improvised quarters and some of them took time out for a Christmas feast of cold bologna sandwiches and sweet milk, the position of the men defending the Philippines was rapidly growing more

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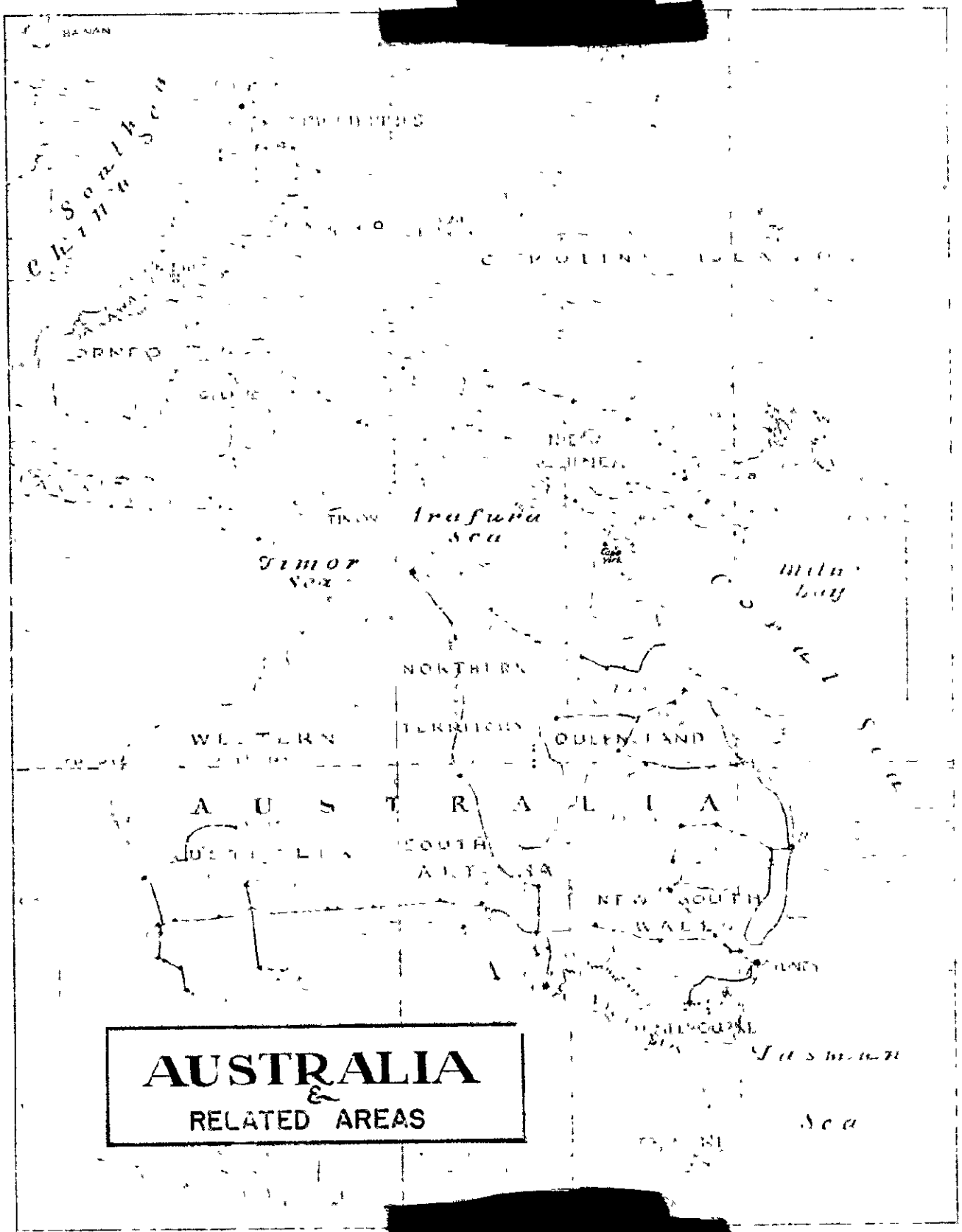

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precarious.[12] The initial enemy attack on Clark Field on 8 December had destroyed approximately half of the heavy bomber force in the Philippines. Within two weeks the remaining bombers had to be moved to Australia and the Netherlands East Indies, since their operation from bases in the Philippines was no longer possible.[13] When the members of the 27th Bombardment Group (L) heard that their A-24's had arrived in Australia, Maj. John H. Davies, commanding officer, loaded 20 of his pilots into two B-18's and a C-39 and left Clark Field before dawn on 19 December for what was to have been a 10-day trip to Australia to ferry their planes back to the Philippines.[14] The rapid Japanese advance on Luzon, however, forcing General MacArthur's withdrawal to Bataan and Corregidor, and the Japanese infiltration of the Netherlands East Indies soon eliminated the possibility of ferrying pursuit and dive bomber planes to the hard-pressed American and Filipino troops.

Realizing the impossibility of carrying out extensive bombing operations from the Philippines, General MacArthur ordered the movement of the Far East Air Force headquarters to the south. Leaving the Philippines on Christmas Eve in two PB2Y airplanes, Maj. Gen. Lewis H. Brereton, commander of the air force, accompanied by Maj. Samuel S. Lamb (signal officer), Capts. William G. Hipps and Louis E. Hebbs of the 27th Bombardment Group, Cols. Francis M. Brady and Charles H. Caldwell, and Lt. Col. Eugene L. Eubank, commander of the "Combat Command," flew to Darwin, Australia, where temporary headquarters were set up on the day of their arrival, 29 December. Having been directed by General MacArthur to organize advance bases of operation for protecting lines

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of communication and for securing bases in Mindanao, General Brereton immediately dispatched nine of the 14 evacuated B-17's to Malang, Java, which was to be their base for operations against the Japanese in Borneo.[15] One week earlier, however, nine of these B-17's, coming in from Darwin, had bombed 12 transport ships at Davao, but according to General MacArthur the results were "indeterminate and possibly negligible."[16]

General Brett, upon his arrival in Australia on 1 January 1942,[17] took immediate steps to organize the air forces and to build up his staff. After designating General Barnes as his Chief of Staff and placing General Claggett in command of the port at Townsville, General Brett made a hurried survey of the facilities and forces at his disposal.[18] With four pursuit groups, one light, two medium, and two heavy bombardment groups scheduled for his command, he planned to use the Darwin area as a jumping-off point for tactical air units and as a secondary base for first and second echelon maintenance; the Townsville area as a major repair, maintenance, and supply base; and the Brisbane area as a larger maintenance and erection base and trans-shipment point for Townsville and Darwin. The reception and distribution center for troops arriving from the United States and headquarters for the U. S. Army Forces in Australia were to be located at Melbourne, a center of Australian military and political control.[19]

Before he had time to make more than preliminary arrangements, however, General Brett was made Deputy Supreme Commander of the newly-formed American, British, Dutch, Australian Command (ABDA Command), under the British General Sir Archibald P. Wavell. In this capacity

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General Brett represented the U. S. Army interests at ABDA headquarters in Bandoeng, Java, but had no direct responsibilities for the control and operation of the American forces. On 12 January 1942 all U. S. Army forces in Australia and other areas of the Southwest Pacific (excluding the Philippines, which were still under General MacArthur) were placed under the command of General Brereton, who was also acting as Deputy Chief of the Air Staff in the ABDA Command.[20]

Throughout the month of January the command situation was in a state of fluctuation. Four days after his appointment General Brereton reported to General Marshall his dissatisfaction with his existing status, although he was proceeding to Melbourne to assume the duties as directed. Temporary command of the Far East Air Force was assumed by Col. Francis M. Brady, who was to act also as a member of the ABDA Air Staff.[21] With the eventual clarification of General Brereton's mission, General Barnes was placed in command of all United States Army Forces in Australia, although on 29 January he was still somewhat in doubt as to his relationship with the ABDA Command and with General Brett.[22]

While command and organisational problems were being settled, the Japanese drive through the Malay States, the Netherlands East Indies, and the Philippines was continuing unabated. With the landings on north Celebes and northeast Borneo on 7 January, with the entrance of Japanese forces into Kuala Lumpur (capital of the Federated Malay States) on 11 January, and with the landings on south Borneo and southeast Celebes on 24 January, the tightening Japanese pincers in this area

were increasing the already urgent necessity for Allied air reinforcements.

Throughout the months of January and February the Air Corps units in Australia worked feverishly to erect planes and to train men for combat operations in the Netherlands East Indies. After the dismantled P-40's and A-24's had been unloaded at Brisbane in the latter part of December, the ground echelon of the 7th Bombardment Group, the 20 pilots of the 27th Bombardment Group (under Maj. John H. Davies) who had arrived from the Philippines, and the 8th Material Squadron, with the help of a few Australians, assembled the planes at Amberley and Archerfield Airdromes, near Brisbane. Working 24 hours a day in three shifts, the men assembled enough planes to begin training operations by the first of January, although the lack of certain essential parts at first rendered the planes practically useless for combat operations.[23] There was no Prestone for the 18 P-40's; but by 14 January, with 17 P-40's ready for combat, the 17th Pursuit Squadron (Provisional) was formed from personnel then available at Amberley Field (4 pilots who had just arrived from Hamilton Field, Calif., and 13 pilots who had flown to Australia from the Philippines), and the squadron was soon engaging the enemy in Java and Sumatra.[24]

Casual personnel and advance units of certain pursuit groups, which arrived at Brisbane on 12 January, made possible the formation of other provisional squadrons. After sailing from San Francisco on 18 December, 55 officers and 110 enlisted men (55 crew chiefs and 55 armorers) of the 14th, 20th, 35th, and 51st Pursuit Groups, bringing

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55 P-40E's on the President Polk, spent the latter part of January getting their planes ready for operation and organizing the 3d, 20th, and 33d Pursuit Squadrons (Provisional). A portion of these units eventually participated in the Java operations, but many of the combat teams had to be halted en route to the Netherlands East Indies and were later assigned to the 8th, 35th, and 49th Pursuit Groups in Australia.[25]

In the meantime, after the 52 A-24's were assembled, it was discovered that certain pieces of armament were missing. A thorough search of the cargo unloaded at Brisbane disclosed no trace of the triggers, solenoids, and gun mounts. This exasperating situation caused at least one harassed lieutenant to rush around "frantically all day in his Jeep trying to collect spare parts, and wildly beat his head when none were available." The bitterness and disappointment of those pilots of the 27th Bombardment Group is reflected in their commander's statement that the persons in America responsible for shipping the planes without the necessary parts were "subject to trial for criminal negligence."[26]

Making the best of a difficult situation, however, the few pilots of the 27th Bombardment Group began a "dive bomber school" at Amberley Field, with a number of pilots who had come directly from West Coast training schools. They were given transition training, formation and night flying, and practice in bombing and gunnery. By 23 January the pilots in training had advanced to the stage of readiness for organization into combat squadrons. The 91st Bombardment Squadron was organized at Archerfield with Capt. Edward N. Backus in command, while the 16th and 17th Squadrons were organized at Amberley Field with Capts. Floyd W.

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Rogers and Herman F. Lowery, respectively, in command.[27]

First of the three squadrons to be ready for the move into the battle area, the 91st by 8 February had flown via Charleville, Cloncurry, and Daly Waters to Darwin, and on 9 and 11 February the planes left in two flights for Koepang, Timor. Less fortunate in getting into combat were the crews of the 16th and 17th Squadrons. Part of the 16th was ready to leave Darwin and the 17th was at Daly Waters en route to Darwin when news came that Koepang had fallen into Japanese hands.[28]

The newly-organized squadrons of the 27th Bombardment Group, however, were not the only Air Corps units in Australia which were busy during the month of February. The arrival of fresh troops from the United States gave new hope to the Allies in their seemingly hopeless struggle north of Australia. On the first of February four shipments of troops, which had left San Francisco on 12 January, arrived in Australia bringing Air Corps troops comprising the main strength of the 45th and 51st Air Base Groups, the 35th Pursuit Group (less three squadrons), the 49th, and 51st Pursuit Groups, with their attached medical, chaplain, ordnance, and quartermaster services, the 4th Air Depot Group, and the 808th Engineers Battalion (Aviation).[29]

From this shipment and from some of the troops already in Australia another convoy was formed in the latter part of February for the reinforcement of Java. After discussing the situation with General Wavell, however, General Brett decided that since there was already in Java a sufficient number of Air Corps troops to operate all the aircraft which they had or were likely to have, the troops in the new convoy should be

reloaded at Fremantle, Australia, and sent to India.[30] Accordingly, on 22 February, a total of 146 officers and 2,807 men, comprising Air Corps combat units and services, sailed from Fremantle for India. Included in this shipment were the 51st Pursuit Group, Headquarters and Headquarters Squadron and the 35th Interceptor Control Squadron of the 35th Pursuit Group, part of the 7th Bombardment Group, the 51st Air Base Group, and attached services.[31]

Three days later a larger shipment of Air Corps troops arrived at Brisbane, after leaving San Francisco at the end of January. The amended orders for this shipment provided for the movement of 827 officers and 10,128 enlisted men, or a total of 10,955 Air Corps men. The majority of these units, including the 22d and 38th Bombardment Groups (M), the 3d Bombardment Group (L), three squadrons of the 35th Pursuit Group (I), and the 35th, 36th, and 46th Air Base Groups, left San Francisco on 31 January and arrived at Brisbane on 25 February. The remaining units, comprising the 8th Pursuit Group (I) and the 22d Air Base Group, boarded ship and were ready to leave on 31 January, but because of engine trouble the ship had to be unloaded, and the two groups did not leave the United States until 12 February on the USAT Maui, arriving in Australia on 6 March. The mere fact that a certain number of Air Corps troops were in Australia at this time, however, does not indicate a state of readiness for combat. For example, the flying echelons of the two medium bombardment groups and the 35th Pursuit Group were not scheduled for inclusion in these shipments, nor were any pursuit or medium bomber planes to be shipped at this time. Twenty-eight B-26's

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were scheduled for movement from San Francisco to Australia as soon as shipping became available. The 3d Bombardment Group, however, was accompanied by 15 A-24's.[32]

While all these units arriving from the United States were lacking in combat experience and were forced to wait a number of weeks before they could get into operations, there were a few seasoned fliers who arrived in Australia during February—men of the 88th Reconnaissance and 22d Bombardment Squadrons of the 7th Bombardment Group, some of whom had flown into Pearl Harbor in the midst of the Japanese attack on 7 December. After flying 168 missions out of Hawaii in two months, the squadron of 12 B-17's, commanded by Maj. Richard H. Carmichael, was attached to naval Task Force ANZAC and left Hawaii on 10 and 11 February, moving south to protect the supply line to Australia.[33] Stopping in the Fiji Islands for five days, the squadron flew twelve missions and then moved on to Townsville, Australia, on 18 and 19 February.[34] Although still attached to the naval Task Force, these B-17's flew reconnaissance and bombing missions from Townsville for over a month without the aid of ground crews. After flying long missions during the day, the combat personnel worked at night on maintenance and repairs, refueling, and bomb-loading. In the absence of fighter protection and adequate antiaircraft installations, the planes had to be dispersed into the interior of Australia, thereby necessitating two flights—one from the interior to the coast, and one from the coast to the advanced base—before take-off could be made on an actual mission.[35]

Operating under obvious difficulties, and with only six B-17's in flying condition, six crews of this squadron assembled above Magnetic

Island on the morning of 23 February, and proceeded to carry out the first American bombardment of Rabaul, New Britain. While the full extent of the damage to the Japanese garrison could not be determined because of unfavorable weather, a 10,000-ton cargo ship was sunk, another vessel was damaged, and three or four Zeros were shot down. Three of the B-17's were badly shot up, three crew members were wounded, but all six crews gained valuable combat experience. One of the planes, after running out of gas, made a belly-landing 220 miles from Port Moresby, and the malaria-thinned crew did not return to the squadron until 1 April.[36]

This American "offensive" strike from the east coast of Australia, though modest in scale, was nevertheless a "shot in the arm" for the tired and outnumbered members of the Royal Australian Air Force who were attempting to oppose the Japanese advance through New Guinea and New Britain. To provide for the defense of New Guinea, New Britain, and the whole of Australia except Darwin (which was considered in the ABDA area) the RAAF in January had a total of only 43 operational aircraft—29 Hudsons, 14 Catalinas, and no fighter planes. In addition, it had 80 Wirraways—advanced training planes—which, of course, were ineffective in operations against the enemy.[37] With heavy losses being sustained daily in the New Guinea area, this small force was rapidly depleted, but by the end of January the members of the RAAF had already distinguished themselves in making the most of the little at their disposal.

The heavy Japanese attack on Rabaul on 20 January had seen five slow Wirraways rise to defend the Australian garrison against more than 100

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enemy planes. Although the Wirraways were lost after exacting their toll of five enemy aircraft, this action set the pattern for Australian air resistance during the first few months of 1942.[38] Likewise, the action at Rabaul was typical of the enemy assaults on practically defenseless Australian positions throughout the Bismarck Archipelago. Following closely upon the heavy aerial bombardment, the Japanese on 22 and 23 January landed strong invasion forces at Rabaul and drove the Australian garrison of 1400 men from their positions. At the same time, landings were made in the northern Solomons, and the bombardment of northern New Guinea continued. On 21 January enemy cruisers had shelled undefended Kavieng, New Ireland, while bombs were being dropped on Lorengau (capital of the Admiralty Islands) and on Madang and Salamaua, New Guinea. Lae, undefended capital of Northeast New Guinea, was subjected to 45 minutes of heavy bombing and strafing by over 60 enemy aircraft on 22 January, resulting in the destruction of property worth almost one million dollars.[39]

Extending the range of their attacks still farther, the Japanese on 3 February bombed Port Moresby, capital of Papua, only 334 miles from the northern tip of Australia. For the defense of this strategic point in New Guinea the Australians had only one antiaircraft battery and a dwindling handful of Hudson and Catalina planes. With this new penetration to the south by an enemy which was superior in numbers and in equipment, it was obvious that the northern coast, and perhaps even the whole, of New Guinea would be untenable. Mining prospectors who had pioneered in the gold fields of New Guinea and other civilians living on New Britain and islands of the northern Solomons had to leave

their holdings and possessions in a hurried flight to safer territory on the Australian mainland. Throughout January and February every airplane in the area—both civilian and military—was pressed into service, with the result that more than 2,000 men, women, and children were rescued without the loss of a single life. "All the laws of civil aviation were flouted. Planes built to carry sixteen carried thirty-five. . . . Day after day the crazy rescue fleet of battered old transport planes that had freighted the mining dredges up to Edie Creek and Bululo; of unwieldy old Ford monoplanes; of sleek, modern airliners; of two-seater Moths, and shabby, fabric-covered biplanes, joined with camouflaged bombers of the Royal Australian Air Force in ferrying backward and forward between Australia and the newest battle zone of the Pacific."[40]

The continent to which these evacuated civilians were carried, however, was not beyond the reach of enemy air attacks. On 19 February, Darwin, with its large naval concentrations, was heavily bombed by two waves of Japanese aircraft, resulting in serious naval and aircraft losses to the Australians and Americans.[41] The first attack was made by approximately 54 type-97 naval dive bombers, 17 army type-97 heavy bombers, and 18 fighters, followed shortly thereafter with a second attack by 54 type-97 heavy bombers in two formations. Three United States ships, the destroyer Peary and the transports Manna Loa and Meigs, were sunk, while 4 Australian ships were sunk, 2 were damaged extensively, and 5 received minor damages. Aircraft losses for the Allies totaled 9 P-40's shot down and 6 Hudsons, 2 P-40's, and 1 LB-30 destroyed on the ground. The Japanese lost from 5 to 10 planes.[42] Casualties were not heavy, but the far-reaching effects of the attack

probably exceeded all enemy hopes.

Chief among the results was the denial to the Allies of the use of port facilities at Darwin, which were being used extensively in transshipping reinforcements and supplies to the troops in the Netherlands East Indies. In a broader sense, these two raids gave tangible proof of the enemy's capability and intention of bringing the war to the continent of Australia. Because of the proximity of the newest enemy gains in the Netherlands East Indies the northwestern coast of Australia was no longer safe for military concentrations. Immediately following the Darwin attacks, therefore, the Australian army authorities ordered the demolition of Keats Airdrome, 130 miles southwest of Darwin, and ordered certain other west coast airdromes prepared for demolition.[43]

These two enemy attacks had a dark foreboding about them which started the hurried movement of civilians from the west coast to the interior of Australia. Likewise, the attacks were portentous of the trend of events in the Netherlands East Indies, for it was becoming increasingly evident that Allied resistance could no longer continue. By 14 February Japanese parachute troops had occupied Palembang, center of the oil fields in south Sumatra. Six days later enemy landings were made on Bali, the island east of Java, and on Timor, the island between Java and the Australian mainland. By this time General Brett had made plans for the evacuation of American forces from Java, the mass of the troops being scheduled for shipment to India since a "sufficient number" of troops had been allotted to Australia.[44] By 20 February all aircraft which were not in combat operations were being employed in the evacuation of non-essential clerical forces and military personnel not required

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for the maintenance of the few pieces of equipment which remained.[45]

In accordance with the desire of General Marshall, Chief of Staff, all the American combat crews with minimum maintenance personnel, planes, and ground forces were ordered to continue the defense of Java, even though the ABDA Command would no longer be in existence.[46] On 22 February General Brereton left by plane for India, going first to Australia, and on the following day General Wavell received orders from London to set up headquarters elsewhere at his discretion.[47] General Brett arrived in Melbourne on 24 February and temporarily assumed command of all U. S. Army troops in Australia.[48] While the ABDA Command was formally dissolved at noon, 25 February, the Dutch and the few remaining Allied planes continued formal resistance to the enemy until approximately 7 March.

Similarly, General Brett in Australia continued with plans for reinforcement of Allied troops remaining in Java. The transfer of heavy bombers to Java was suspended, but efforts were made to get a large number of P-40's into the fight.[49] The convoy which on 22 February had sailed from Fremantle for India, escorted by the U. S. cruiser Phoenix, included the aircraft carrier Langley, with 32 assembled P-40's on deck and with 30 pilots and 12 crewmen on board, and the Seawitch, carrying 27 crated P-40's. Upon receiving the personal assurance of the Dutch Admiral Helfrich that protection would be provided, General Brett directed the diversion of the two ships with the P-40's to Java. The ill-fated Langley, however, was sunk by enemy aircraft on 27 February, within 100 miles of Tjilatjap, Java. More fortunate in evading enemy detection, the Seawitch reached her destination at Tjilatjap on 28

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February, but to no avail. On 27 February, in an Allied attempt to prevent an enemy landing, a major naval engagement had taken place in the Java Sea. Again, however, the force of the enemy decided the issue, and the Japanese landed on 1 March, before the crated P-40's could be assembled. They were reported destroyed in their crates in order to prevent their falling into the hands of the enemy.[50]

The loss of 59 P-40's was one which the forces in the Southwest Pacific could ill afford, but it served to emphasize the seriousness of the Allied position. By this time the few remaining American aircraft in Java were beginning to evacuate to Australia all the passengers who could be crammed into the planes. As might be expected, however, this evacuation was not to proceed unchallenged by the enemy. On 3 March, Japanese air attacks on Broome and Wyndham, on the northwest coast of Australia, took a toll of 65 lives and 17 aircraft. The harbor at Broome was jammed with flying boats and the airfield was thick with B-17's, LB-30's, and Hudsons which were transferring civilians and military forces to safer territory in southeast Australia. Shortly before noon 12 Zeros swooped over the harbor and airfield and, resisted by only one aerial .30-caliber gun on the ground, proceeded to fire at every available target. Of the planes on the water, the Dutch lost three Dornier 24's and one Quantas flying boat, the British lost three planes, and the Americans lost two PBY's. Of the planes on the airfield, the Dutch lost one DC-3 and one Lodestar; the Australians lost one Lockheed Hudson, and the Americans lost two B-17's and one B-24. In the air, one Scout Observation Curtiss plane and one B-24 were shot

down, resulting in the loss of 20 Air Corps men. In addition, 45 Dutch men, women, and children were killed when the flying boats were destroyed. One Zero was shot down, either by a Dutch pilot or by the .30-caliber gun.[51]

Air Corps men who survived the Java campaign and the attacks on western Australia gradually made their way to southeast Australia, but they were unorganized and without equipment. They were the remnants of units which—along with the units already in Australia—were to be welded into a new air force, but in the first week of March the prospects seemed dismal. The Allies in Australia had their backs to the wall and were faced with the threat of increasing enemy pressure, not only from the northwest but also from the northeast. In the latter direction, some relief would be provided by a U. S. task force, commanded by Brig. Gen. Alexander M. Patch, which was en route to New Caledonia after docking and reloading at Melbourne in the last week of February;[52] but it was clear that Australia now had to be the main base for operations against the enemy in the Southwest Pacific—not simply the supply base for forward units. Three months of war had resulted in a radical change of Allied plans, and for the moment the Air Corps units in Australia were not at all certain of their future. In this period of uncertainty the Secretary of War could well state that "circumstances will determine the extent and nature of future United States air operations in the Southwest Pacific area,"[53] but the American airmen and their commanding officers in Australia wondered just what those circumstances would be.

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CHAPTER III

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AUSTRALIA AS A BASE FOR OPERATIONS

While the Air Corps units in Australia had a formidable enemy in the Japanese, they soon discovered that they had an enemy almost as formidable in the natural barriers to operations offered by the continent of Australia—the world's smallest continent and largest island. Those American airmen who, after surviving the Java campaign, tried to make their way from the west coast of Australia to Melbourne learned something of the difficulties of transportation—the inadequate railroads skirting the coast and the undeveloped roadways running through vast stretches of uninhabited land. The perplexing logistical problems occasioned by the geography, terrain, inadequate transportation and communications facilities, and certain governmental policies, however, did not lessen the necessity for defending Australia. An understanding of these problems and of the strategic importance of the continent is essential for a full appreciation of the difficulties which had to be overcome in setting up air units for the defense of Australia and for future offensive operations in the Southwest Pacific.

With an area only 52,198 square miles less than that of the United States and with over 12,000 miles of coastline, Australia is not a country which can easily be defended. Its great desert region in the center of the continent is virtually uninhabitable. Australia's sparse population, which in 1941 was less than 5½ per cent of that of the United States, was largely concentrated in the coastal towns of Sydney, Melbourne, Adelaide, Brisbane, Hobart, Fremantle, Townsville, and

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Darwin. These centers of population, all important seaports, were the strategically vital areas of Australia (the southeast area being the most important); their loss would destroy Australian military and naval power by driving the population into the "bush" country.[1]

Because of its island character the continent is largely dependent upon sea power and control of certain sea lanes for its existence. Its surrounding bodies of water--the Indian Ocean on the west and south, the Tasman Sea and South Pacific Ocean on the east, and the Timor, Arafura, and Coral seas on the north and northeast--thus become for Australia "a protection, an obstacle, a highway, or a source of danger, depending upon sea power." The strong breakers which pound the beaches make landings difficult except along the northeast coast, which is protected somewhat by the Great Barrier Reef, stretching over 1,000 miles along the Queensland coast. The coastline south of the reef has less protection, thus making Australia's most vital area vulnerable to enemy attack. Sydney, as the center of this populous, industrial, and agricultural region, would be a much sought-for prize by an invading enemy.[2]

Bearing more resemblance to the United States in its government than in its geography and industrial development, Australia is a parliamentary democracy made up of a union of states--New South Wales, Victoria, South Australia, Tasmania, Queensland, Western Australia, and the Northern Territory. While the powers of the central government are probably not so great as those of the federal government of the United States, the general structures of the two governments are the same, the chief difference lying in the fact that the Australian Prime

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Minister and cabinets held office at the pleasure of a parliamentary majority. As a member of the British Commonwealth of Nations, Australia has strong ties binding her to the United Kingdom, although she retains her full independence and the exercise of executive, legislative, and judicial functions.[3] The imprint of British ideas and ideals is unmistakable in Australian life, but a certain youthful independence has been added and her domestic policy is dominated by labor interests.

When war came to the United Kingdom in September 1939, Australia was quick to offer military assistance. Many of the "Aussies" volunteered for overseas duty, and these volunteers--along with the men conscripted for home defense--gave Australia a military force which was large for a nation her size. After two years of war her ground army strength totaled 354,800, a force of considerable size for a nation of slightly more than 7,000,000 people. Approximately 88,000 of the Australian Imperial Forces were serving in the Middle East in the fall of 1941, where they gained excellent combat experience before being returned for the defense of their homeland in March 1942.[4]

Australia was likewise furnishing a large proportion of air reinforcements for the United Kingdom. By January 1942 the island continent had furnished 6,500 air crew personnel and 2,300 ground crew personnel for the Royal Air Force--or approximately 36 per cent of the total personnel being trained under the Empire Air Training Scheme. In addition, six squadrons of the RAAF were serving overseas.[5] On 7 December 1941, Australian airmen were serving as far away from home as Europe and Africa.[6] This dispersion of forces left the continent of Australia almost defenseless.[7]

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Another feature of Australian policy has been the maintenance of a "white Australia." The establishment of barriers against the immigration of black, brown, and yellow races has received the support of all political parties, and could not be ignored by American military authorities. In the movement orders for the large shipment of troops which left San Francisco on 31 January and arrived in Australia on 25 February, two colored units were scheduled to sail: Company G and Company L of the 31st QM Regiment (Truck). When Australia's "white" policy was called to the attention of A-3 at Headquarters in Washington, orders for the movement of these two companies were cancelled and orders were issued for the 704th QM Company and Company F, 30th QM Regiment (Truck), the only white quartermaster truck companies then available to the Air Force Combat Command. Coming at this late date, however, the orders did not provide enough time for the two companies to prepare for shipment by the end of the month. Five days after the issuance of this amended order a further amendment relieved Company F, 30th QM Regiment (Truck) and substituted the 733d QM Company (Truck), which was yet to be activated.[8]

The details of this action, while comparatively unimportant, nevertheless illustrate some of the confusion which resulted from Australia's policy on the subject. In this instance, however, part of the confusion came about through an oversight, for War Plans Division had previously directed that no colored troops should be sent to Australia for a permanent change of station, inasmuch as the Australian government had expressed an unfavorable attitude when the question was

raised.[9] The urgent need for labor battalions in Australia, though, soon caused that government to ease its restrictions and allow the entrance of colored troops, with the understanding that they were to be withdrawn when they were no longer needed.[10] Oddly enough, the principal clashes in Australia occurred not between the Australians and the colored, but between the American white and colored troops.[11] The situation was such that General Brett, on 25 March, recommended the withdrawal of all colored troops; but his recommendation was not favorably acted upon.[12]

More than her domestic and foreign policies, Australia's inadequate communication and transportation facilities presented difficulties in the organization and operation of Air Corps units there. The radio, telephone, and telegraph systems, already carrying a heavy load in peacetime, were more than overloaded with wartime traffic. With all these communications systems under the control of the Australian Army, the Americans were forced to depend upon the Australians until they could set up their own systems--a feat which could not be accomplished overnight. Early in January the facilities of the RAAF Signal School at Brisbane were provided for training American operators in the Australian procedure. In addition, the RAAF operated certain channels for the use of the Americans, but this was only a temporary arrangement. With Maj. Samuel S. Lamb as signal officer of the Air Force and Maj. Joseph L. Antz as signal officer of the Army Forces in Australia, plans were carried out for the establishment of a signal depot at Brisbane.[13] Recognizing the inadequacy of the existing systems, General Brett on 2 January requested that $100,000 be allotted immediately for the

purchase of radio equipment and a similar amount for telephone and telegraph services.[14]

Four months later the situation had improved very little, for additional equipment and sufficient personnel were still lacking. Air Corps men and materiel had to be withdrawn from tactical units in order to meet the communications demands. While the training of 150 operators in the RAAF school was of some help, the four-month course could not possibly turn out the trained personnel as fast as they were needed. The real need was for "fully trained operators rather than untrained recruits."[15] Even as late as midsummer of 1942 the situation was still far from satisfactory, for all the Signal Corps troops which had been promised by the War Department had not arrived. In urging the immediate dispatch of these troops, Maj. Gen. Robert C. Richardson, Jr., on a visit to Australia from General Staff headquarters in Washington, epitomized the feelings of the American airmen in Australia when he wrote to General Marshall: ". . . no American Commander should be placed in the position of being dependent on foreigners for the communications essential to combat."[16]

Perhaps the chief hindrance to the rapid development and organization of an air force in Australia lay in the great distances between strategic points and in the insufficient means of traversing those distances. The fact that, after Canada, Australia had the greatest length of railway per head of any country in the world, is no indication that the American troops found their transportation problems solved by the railroads. A more revealing fact is that Australia, in relation

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to area, had in 1937 only 9.36 miles of railway per 1,000 square miles--a lower figure than any country except Brazil and Egypt.[17] To compliecate matters further, there were five different gauges--a situation which resulted from the development of railroads by the individual states rather than by the federal government.[18] The two narrowest gauges were relatively unimportant, since they comprised only 1 per cent of the total, with the broad gauge (5 feet, 3 inches) accounting for 22 per cent, the standard (4 feet, 8½ inches) for 26 per cent, and the narrow (3 feet, 6 inches) for the remaining 51 per cent.[19] Even if there had been only two different gauges, the U. S. Army air units in Australia would still have been forced to spend a great deal of valuable time in the necessary process of loading, unloading, and reloading cargoes with each change of gauge.

The main rail line, running from Perth in Western Australia to Cairns in Queensland, connected all the major seaports and centers of population on this section of the continent; but it was broken into five segments by changes in gauge.[20] There were no railroads running through the uninhabited desert center of the continent, although feeder lines extended into the interior 300 miles from Darwin, 535 from Townsville, 625 from Brisbane, 375 from Melbourne, and 1,000 from Adelaide.[21] Darwin was the most isolated of the strategic coastal points, since it was not connected by rail with any of the other coastal towns. Its feeder line to Birdum, however, and the line from Adelaide to Alice Springs were connected by a newly-constructed highway which was usually in a fair condition during dry weather, thus providing at least one overland route to Darwin. Most of the railways were single-

track, and the average train hauled only about one-fifth the number of cars that American railroads carried.[22] In addition, a great deal of the rolling stock was antiquated, with wooden--rather than steel--coaches being used almost exclusively.[23]

Finding the railroads inadequate because of clearance requirements and car sizes, the American airmen had to depend largely upon "trunk-tractor-trailers" for moving their crated aircraft from ports to erection centers.[24] But here, again, numerous difficulties impeded operations. In the first place, many of the roads were merely graded or covered with gravel or crushed rock and in many cases were impassable during rainy weather. General Royce reported that he had known "many of our large units to be stuck for as long as a month, although we desperately needed them at the combat zone."[25] In the second place, approximately half of the reported mileage of roadways consisted of ungraded and unsurfaced tracks. According to American standards, the roads at their best were only second-class or worse. Narrow bridges with limited load-carrying capacity added further restrictions to the usefulness of the roads.[26]

With large shipments of materiel and personnel to be moved over great distances, the American air units naturally came to depend to a large extent upon water transportation from one major port to another, but such movements were subject to enemy submarine attack. In view of this threat and in view of the inadequate overland means of transportation, it is not surprising that air transport became of vital importance. The Australians had discovered the advantages of air transportation long before the war. In 1928 an air ambulance service had been

developed at Cloncurry, Queensland, for settlers in remote areas, and by 1940 bases existed at Wyndham, Port Hedland, and Broken Hill. With the Civil Aviation Department of the Commonwealth encouraging the development of commercial routes, Australia in 1937 had over 117,000 miles of approved regular service routes, as well as 256 landing fields which were under government control.[27] These figures might indicate that the Air Corps units arriving in Australia found a large number of well-constructed airdromes and airfields which were ready for combat operations, but such was not the case. Except for a few airdromes near the large cities, the fields were not well situated from a tactical standpoint, nor were they large enough to accommodate heavy military airplanes. Minor landing fields could be constructed at low cost because of the flat terrain on most of the continent, but along the east coast and in the extreme north the rocky terrain and dense forests greatly hindered the construction of military fields. The Air Corps units found a successful formula in the building of operational strips, 6,000 by 300 feet, with the middle hard-surfaced for heavy bomber operations, although the dust problem caused considerable trouble.[28] Even with construction and operational problems, the need for heavy transport was imperative from the first day that U. S. air units arrived in Australia, and the need continued to grow as the tactical units became dispersed and as the forces expanded in size and increased their operations.

Because of the time involved in shipping material from the United States to Australia and because of the difficulties encountered in

transporting these supplies on the continent, the U. S. forces attempted to make maximum use of Australian goods and services; but a complete reorganisation of industry was necessary in order to meet these new demands.[29] Labor was diverted from non-essential tasks to work in factories producing military goods, the manufacture of many unessential items was banned, and Australia attained a new high in production figures. Many months were required, however, before this stepped-up schedule of production could be realised.[30]

In order to coordinate and supervise all purchasing agents of the U. S. Army and Navy forces stationed on the continent, the Commanding General of the Army Forces in Australia was directed on 3 February 1942 to establish a General Purchasing Board with a General Purchasing Agent at its head. Other members were to be the senior officer of each supply arm and service under the Commander of the Army Forces in Australia, an officer of the Supply Corps, U. S. Navy (to be designated by the Commander in Chief, U. S. Asiatic Fleet), and such other members as might be directed by the Commanding General of the U. S. Army Forces in Australia. Specifically, the functions of the Board included (1) supervision of the purchase, procurement, and inspection of supplies purchased in the Australian area, (2) perfecting of arrangements with the designated representatives of the Australian and other governments for the purchase of supplies, (3) negotiation of standard arrangements with the Australian and other governments for the procurement of services and labor, (4) issuance of regulations for insuring cooperation between all United States purchasing agents in the Australian area to

prevent competition among them, and (5) consolidation of purchases of the several supply arms and services where practicable. It was also directed that a Board of Contracts and Adjustments be established in the office of the General Purchasing Agent.[31]

The establishment of the desired organizations, however, and the approval of certain supply levels[32] for the forces in Australia did not necessarily insure a smoothly-operating system of supply. In addition to the difficulties which were to be expected from the peculiar features of the continent, there were other difficulties which had their origin in the United States and still others which resulted from the labor situation in Australia. One of the most frequently-voiced complaints from the Air Corps units upon their arrival in Australia was that their equipment did not arrive simultaneously. General Brett urged that the basic, essential equipment be sent on the same ship with the units, or at least in the same convoy; but, for the first six months at least, the War Department did not find unit-loading practicable.[33] As a result of this policy, some of the units in Australia were forced to carry on without part of their equipment until it arrived in a later shipment, or until it could be located at another port. Code numbers assigned to each unit and its equipment added to the confusion, especially when supply officers were not informed of the code numbers and were at a loss to identify their supplies.

The task of unloading the equipment was frequently a source of dismay to the Americans, who could not reconcile with the pressure of the war the terms under which Australian stevedores worked. According

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to Maj. Earl C. Stewart, assistant military attache at Melbourne, the stevedores worked under iron-clad contracts which were drawn up solely in the interest of the laborers, who in turn paid little attention to the actual number of hours they were scheduled to work.[34] As estimated by Col. T. G. Plant, chief of the Water Section, Transport Services, U. S. Army Services of Supply, Southwest Pacific Area, and by Lt. Col. J. A. Haselwood, his executive officer, the stevedores did not work more than 50 per cent of the time for which they were actually paid.[35] The contract stipulation that the men should not work in the rain usually resulted in the cessation of work at the first drop of rain. The suspension of cargo handling on all holidays and weekends was also an inviolable rule.

To the Air Corps men who were anxiously awaiting the unloading of their crated planes and equipment, this situation was beyond comprehension. On a few occasions, when a particularly critical cargo was to be unloaded, American troops were used; but this practice was never made general, since it might have precipitated a crisis. The Australian Army attempted to improve the situation by organizing two stevedore battalions. Commonwealth restrictions, however, soon barred the effective use of these troops.[36]

Perhaps better than any generalisations on this subject, concrete illustrations of the experience of certain Air Corps groups show the difficulties encountered in obtaining their equipment. The 8th Pursuit Group was shipped from San Francisco on 12 February, but its equipment was not sent in the same convoy and was apparently delivered

to South Australia instead of Brisbane.[37] By 23 March, after 18 days in Australia, the group had failed to receive 14 tractors for moving its aircraft and also 93 vehicles out of a total of 126 authorized vehicles (according to T/BA No. 1 for Air Corps). From Base Section No. 3 (Brisbane) transportation officer, the group secured the loan of about 30 vehicles belonging to units which apparently were unaware of their whereabouts. The base transportation officer and the S-4 officers, not knowing the identity of certain code numbers, were unable to assign much of the equipment to the proper organizations. Because of security measures and delays in the base S-4 office, manifests of ships in the convoy were not available to organizations for some days; and without the manifests, of course, the units were unable to know which ships carried their equipment. Some of the equipment belonging to the 8th Pursuit Group was secured from the docks on Saturday afternoon and Sunday, but only after considerable delay because of the Australian stevedores' disinclination to work on weekends.

Ammunition for the group was sent unloaded, necessitating the use of hand-belt loading machines in Australia. On 23 March the amount of loaded ammunition on hand was less than one day's normal requirements.[38] Considerable trouble was encountered in trying to secure shovels and picks. Before the group had left its home station of Mitchel Field, N. Y., unsuccessful attempts were made to secure these items; similar attempts were made on the west coast. Upon arrival in Australia the group requisitioned 400 picks and shovels, but received only 50 of each, the base quartermaster remarking that 400 of each would deplete his stock.

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When the members of the 8th Pursuit Group arrived at Archerfield, they found no base units there. The 18th Reconnaissance Squadron was acting as a base unit, apparently without specific authority to do so. The officers responsible for the aircraft assembly plant at Base No. 3 had no permanent personnel at this time and therefore had to depend upon transient personnel and Australian mechanics over which they had no direct control, with resultant confusion and inefficiency. When the P-39's for the 8th Group were unloaded, it was discovered that some of the planes had been shipped with considerable engine time on them and spindle reinforcements had not been made on the landing gear, with the result that a number of the planes were damaged upon arrival. This list of discrepancies and difficulties is by no means complete, but it serves to indicate some of the conditions which confronted this pursuit group in the early months of 1942.

The experience of the 35th Pursuit Group[39] was similar to that of the 8th Group. Upon arriving at Brisbane on 25 February, the group discovered that its vehicles and other important items of equipment (such as crew chief kits filled with tools and .45-caliber pistols) had been left on the wharf at San Francisco—presumably for subsequent shipment.[40] About two months later, the equipment began to arrive at Brisbane, Sydney, Melbourne, and other ports in Australia, but the group was not notified of its arrival. It was necessary to send an officer to all the ports in an effort to locate the equipment and have it re-shipped to the group. In the case of the vehicles, approximately 70 of them arrived at Melbourne, but the group obtained only seven.

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The remainder either had been given to other organizations or no record was available on them.

From this brief summary of the experience of the 8th and the 35th Pursuit Groups it is clear that the supply problem was one of the chief obstacles to immediate and effective operations by the Air Corps units in Australia. Without equipment the units simply could not function, and obtaining the equipment was a task which was conditioned by the two primary factors of time and space. After the somewhat disordered and confused months which immediately followed the outbreak of war, many of the discrepancies and difficulties naturally cleared up as a more orderly system of supply was established and as procedures became standardized. But no amount of organization and no set of procedures could alter the natural conditions which the continent of Australia imposed upon air operations. Admittedly, Australia was not an ideal base for operations, but the Allies had no choice in the matter. With no alternative after the fall of Java, General Brett set about the task of reorganizing the American forces in Australia, fully cognizant of the problems involved in the defense of a continent three fourths the size of Europe.

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CHAPTER IV

REORGANIZATION OF ARMY AIR FORCE UNITS IN AUSTRALIA

During the two months following the Java campaign, while the AAF units in Australia were getting into tactical position and awaiting the arrival of much of their equipment, the fragments of squadrons which arrived from Java were welded into new units and a foundation was laid for the organization of the Allied Air Forces in Australia. This was a period which saw daring flights from Australia into the Philippines and significant advances by the enemy in New Guinea.

Already resigned to the presence of an enemy threat from the northwest, the Allies in Australia from the first week in March were made increasingly aware of a new threat from the northeast. By this time the Japanese had established themselves in strategic positions throughout the Bismarck Archipelago—at Rabaul and Gasmata, New Britain, at Kavieng, New Ireland, and on Mussau Island, northwest of New Hanover. They had also occupied positions on Buka Island (northernmost of the Solomons) and reportedly were occupying Kieta in the Solomons and Rossel Island in the Louisiades. Repeated air attacks on the lower Solomons and on Lae, Salamaua, Buna, and Port Moresby, New Guinea, indicated the enemy intention of pushing farther to the south. Concrete evidence of this intention was seen on 7 March when, following air raids on Lae and Salamaua and shelling of the two ports by naval craft, the Japanese effected landings at both points by late evening. In less than 24 hours Lae and Salamaua were in enemy hands.[1]

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This action brought about a change in plans for certain forces in the Australia-New Zealand area. Arrangements had been made for naval Task Force ANZAC to provide protection for the movement of American forces from Australia to New Caledonia, these troops comprising the task force which had arrived at Melbourne on 26 February for transshipment to New Caledonia.[2] On the night of 6 March the force left for its destination, supported by naval Task Force ANZAC. Plans for protection of the movement included carrier-based attacks on enemy ships and installations in the Bismarck-Solomons area. When information was received on 7 March, however, that a Japanese convoy, consisting of transports, a cruiser, and several destroyers, was moving toward New Guinea, and when further information was received on the following day that 11 additional ships had begun to shell Lae and Salamaua, the original plans were changed and an assault on these newest enemy attempts was scheduled for 10 March.[3]

After two planes from the task force had secured terrain and weather data from Townsville and Port Moresby, two U. S. aircraft carrier groups--operating in a coordinated attack for the first time in history--sailed into the Gulf of Papua and launched over 100 planes across the mountains of New Guinea to attack the naval forces at Lae and Salamaua.[4] Eight B-17's from Townsville and a number of RAAF Hudsons also took part in the attack, concentrating mainly on additional ships which were sighted 25 miles off the coast.[5] With a loss of only one scout bomber, which was shot down by shore-based antiaircraft fire off Lae, the combined forces sank a reported total of 5 merchant ships, 2 heavy cruisers, 1 light cruiser, and 1 destroyer; probably sank

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1 mine layer; seriously damaged and possibly sank 2 destroyers and 1 gunboat; and seriously damaged 1 seaplane tender and 1 gunboat.[6] Though greatly hampered in their efforts, the Japanese continued with the occupation of Lae and Salamaua—a move which was viewed by General Brett as preliminary to the first phase of operations against the northeast coast of Australia or possibly New Caledonia and the Solomons.[7]

With the consolidation of their gains in the Netherlands East Indies, at least two Japanese divisions and one or more aircraft carriers were expected by the Allies to be used for a joint task force operation against the northwest coast of Australia.[8] Attacks were also expected on Allied shipping in the Indian Ocean and on Fremantle.[9] Actually, any point on the continent of Australia was subject to air attack because of the flexibility of enemy carrier-based operations. In order to meet this threat General Brett found that air units would have to be stationed in each of seven widely-separated areas: Darwin (Base Section No. 1), Townsville (Base Section No. 2), Brisbane (Base Section No. 3), Melbourne (Base Section No. 4), Adelaide (Base Section No. 5), Perth (Base Section No. 6), and Sydney (later to become Base Section No. 7). To provide the defensive and offensive air strength in Australia, General Brett estimated that the following units would be required: 3 heavy bombardment groups of 4 squadrons each, 3 medium bombardment groups, 3 light bombardment groups, 6 pursuit groups, 3 transport groups, 2 air depot groups, 2 engineer battalions (aviation), and the necessary air support organization.[10] As was the case throughout the AAF, however, the demand for combat units at this time far exceeded the supply. The attitude of the Office of the Assistant

Chief of Air Staff, Plans at Headquarters, AAF, was that General Brett's strategy should be revised and only the more critical areas defended if he found the allotted 3 pursuit groups, and 1 light, 2 medium, and 2 heavy bombardment groups insufficient for the defense of the seven critical areas.[11]

In pathetic contrast with the tactical strength which was scheduled for the American air units in Australia, at the end of February there were only 16 bombers, 29 dive bombers, and 110 pursuit planes reported in combat commission, and there were no pursuit squadrons yet in position to use the latter.[12] On 8 March it was estimated by General Brett that an RAAF fighter squadron, to be equipped with 25 P-40's, would be ready for action within 10 days and that an additional squadron could be made ready for combat within a month.[13] The 15 A-24's, belonging to the 3d Bombardment Group (L), which had arrived at Brisbane on 25 February, were being assembled. Of the 52 A-24's which had arrived on 23 December in the convoy scheduled for the Philippines, only 29 were left.[14]

During the first week of March, squadrons from the Java area were evacuated to the west coast of Australia—the squadrons almost as depleted as their aircraft—while on the opposite coast of the continent other groups, some newly-arrived, were engaged in various duties. On 9 March the 3d Bombardment Group and the 35th Air Base Group were reported at Charters Towers, engaged in training and maintenance.[15] The 49th Pursuit Group was in the Sydney area, engaged in operational training; the 35th Pursuit Group and the 46th Air Base Group were at Mt. Gambier, engaged in training and maintenance; while the 8th Pursuit and 22d Air Base Groups were disembarking at Brisbane.

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The 22d Bombardment Group (M) at Brisbane and the 38th Bombardment Group (M) and 36th Air Base Group at Ballarat were engaged in training and maintenance. The 45th Air Base Group was doing maintenance work at Charleville, and the 4th Air Depot Group was erecting planes at Geelong.[16] Operating under RAAF headquarters at Darwin, the 16th and 17th Squadrons of the 27th Bombardment Group were carrying out patrol missions in the Darwin area.[17] Certain U. S. Army ground units were also in the Northern Territory: at Noonamah the 147th Field Artillery Regiment, attached to the 7th Australian Military District, was engaged in the defense of Darwin; the 148th Field Artillery Regiment (less one battalion) was at Howard Springs, reorganizing and performing salvage operations after the Darwin raid of 19 February. The 808th Engineer Battalion (Aviation) was at Katherine, en route to Darwin for airdrome construction. The 43d and 46th Engineers (General Service) were at Melbourne, awaiting the arrival of equipment. The personnel comprising all these American units in Australia on 9 March totaled 1,654 officers, 4 warrant officers, and 20,809 enlisted men.[18]

As a result of a decision by the Combined Chiefs of Staff, the 12 B-17's at Townsville were ordered to remain in Australia, and the Australian Chiefs of Staff were requested to consult with General Brett and Vice Adm. Herbert F. Leary as to the command, maintenance, and personnel requirements.[19] Because the Australian Air Command was not equipped or trained in the maintenance of heavy bombers, General Brett's recommendation, that the 12 B-17's be placed under his command, was accepted and the planes and personnel became part of the new 40th Reconnaissance Squadron of the 19th Bombardment Group.[20]

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Not merely the 40th Reconnaissance Squadron, but the entire 19th Bombardment Group had to be reorganized. Part of the ground echelon of the 7th Bombardment Group--to be taken into the 19th Group--arrived at Fremantle on the Abbekerk on 5 March, after a precarious voyage of 1500 miles from Tjilatjap, the last port in Java to be occupied by the Japanese. Air echelons made their way to Melbourne by train, air transportation, or any other means available to them. During the first two weeks of March, while the men were in a rest camp, plans were made for the reorganization of the 19th Group. With plans completed, following the verbal orders of General Brett on 12 March, the 19th Group was reorganized on 14 March by Special Order No. 1, when Lt. Col. Kenneth B. Hobson became commanding officer.[21]

In accordance with designations issued by the War Department, the new group was composed of Headquarters and Headquarters Squadron, the 28th, 30th, and 93d Bombardment Squadrons, and the 40th Reconnaissance Squadron. By the same orders, the 22d Bombardment Squadron was relieved from assignment to the 7th Bombardment Group and its personnel and equipment were transferred to the 40th Reconnaissance Squadron, which was also to include the personnel and equipment at Townsville operating under the naval task force.[22] Traveling from Melbourne by train, the air echelon of the 22d Squadron and part of the ground echelon arrived in Townsville on 27 March, thus providing the flying echelon at Townsville with ground crews for the first time since their arrival in Australia. Lt. Col. Richard H. Carmichael became commander of the new 40th Reconnaissance Squadron, while Capt. Jack W. Hughes became commander of Headquarters and Headquarters Squadron of the 19th Group;

Capt. Elbert Helton, of the 28th Squadron; Maj. Raymond V. Schwanbeck, of the 30th; and Maj. James T. Connally, of the 93d.[23]

After absorbing the remaining personnel and equipment of the 22d and 11th Squadrons of the 7th Bombardment Group, the 19th Group had more pilots than planes.[24] Retaining double the number of first pilots for all B-17's in commission, General Brett sent 19 excess pilots and navigators to Hawaii in order to ferry new bombers to Australia. By the middle of March all heavy bombers scheduled for Australia were being equipped with bullet-proof bomb bay tanks in order that they might be safely ferried to the Southwest Pacific.[25] In accordance with General Arnold's directive that a minimum of 40 heavy bombers be maintained for each of the two heavy bombardment groups in Australia,[26] plans were made for the dispatch of two planes per day, beginning about 20 March, until the total number reached 80.[27] After utilizing the personnel which General Brett had sent to Hawaii, the Ferrying Command was to deliver the remaining bombers to Australia. By the end of March, however, only nine of these planes had been received by General Brett, and urgent operational plans--based upon the promise of the two planes per day--could not be formulated without War Department clarification of its intentions. General Brett was advised by the Commanding General of the Hawaiian Department that, in accordance with a War Department ruling, no more B-17's could be sent from Hawaii until replacements arrived from the United States.[28]

The delay was caused by the War Department decision to suspend temporarily the dispatch of heavy bombers to Australia, pending reconsideration of allocations of this type of aircraft to all theaters.[29]

The final decision, however, was virtually the same as the original one.[30] In order to bring the two heavy bombardment groups to full strength, less reserves, 30 B-17's were scheduled for dispatch to Australia during the month of April, with a reserve of 40 B-17's to be furnished "as soon as possible."[31] Thus, the initial supplying of heavy bombers for Australia was a drawn-out affair, overcast with the uncertainty that accompanies any situation constantly subject to change.

From the time of its reorganization, approximately two months elapsed before the entire 19th Group could get into operations. On 27 March part of the 28th Squadron was sent to Cunderdin (near Perth, in Western Australia) for patrol work with LB-30's. Another small portion of this squadron and part of the 93d went from Melbourne to Cloncurry by train. The remainder of the 28th and the 93d, after waiting for supplies and planes, sailed from Melbourne about the middle of April, arriving in Brisbane on 21 April.[32]

Following the reorganization of the 19th Bombardment Group, the two light bombardment groups had to be combined. Because the production of light bombers in the United States did not permit the maintenance of two groups in Australia, plans were made at Headquarters, AAF, for the withdrawal (on paper) of the 3d Bombardment Group. In accordance with General Brett's recommendation, however, the 3d Group was allowed to remain and to absorb the 27th Group, since the former was a complete group and the latter was not.[33] The 16th and 17th Squadrons of the 27th Group, under the command of Lt. Col. John H. Davies, operated in the Darwin area until they were ordered to Townsville for eventual

operations out of Port Moresby—a move which was occasioned by the operation of enemy planes from the newly-won airfields at Lae and Salamaua.[34] While at Townsville the squadrons operated without ground crews, with the pilots and rear gunners doing all the maintenance work. Before undertaking missions from Port Moresby, the squadrons of the 27th Group were combined with those of the 3d Group, which was at Charters Towers, about 70 miles inland from Townsville.[35]

The reorganized 3d Bombardment Group proved to be one of the most versatile air units in Australia. One squadron with A-24's was moved into Port Moresby for operations against Lae and Salamaua. With no dive bomber replacements available from the United States, the number of A-24's of the 3d Group was rapidly becoming depleted.[36] In the latter part of March a number of B-25's, which had been ordered by the Dutch but could not be used by them, were made available to the 3d Group. Enough B-25's were eventually provided for two full squadrons. Keeping two ground echelons in Port Moresby, Colonel Davies, commander of the group, rotated two squadrons of B-25's and A-24's between Charters Towers and Port Moresby, shifting about every 15 days. With the eventual attrition of the remaining A-24's, A-20's were made available as replacements, making a total of three types of planes which the 3d Bombardment Group had to operate within a period of less than six months.[37]

The three pursuit groups, having absorbed the remnants of the 3d, 17th, and 20th Pursuit Squadrons (Provisional), and equipped with aircraft by the middle of March, were busy getting into tactical position in three of the vital areas of Australia. First of the three groups to get into operations, the 49th, commanded by Lt. Col. Paul B. Wurtsmith

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and equipped with P-40's, moved to the RAAF airdrome in the Darwin area.[38] The 8th Pursuit Group, equipped with P-39's, was preparing to take up its position in the Brisbane area, while the 35th Group, equipped with P-400's, was going into position in the Sydney area.[39] General Brett's urgent request for three additional pursuit groups could not be granted, in view of the critical shortage of pursuit planes throughout the AAF.[40]

Even more urgent was the need for transport planes in Australia. With no transport groups or squadrons authorized for this theater, approximately 15 cargo planes and other types unfit for combat duty were being used for this purpose in late February. To impose a certain amount of order and organization upon this motley group, General Barnes on 21 February recommended the activation of a transport squadron, with pilots and crews being furnished from the personnel then operating the planes, and with personnel being built up from casual filler troops arriving from the United States.[41] Accordingly, the 21st Transport Squadron was constituted on 7 March and was to be activated at the earliest practicable date from Air Corps personnel available in Australia.[42] Apparently unaware that this action had been taken, General Brett on 23 March requested that authority be granted to activate the 21st Transport Squadron. After the letter authorizing the activation was brought to the attention of the commander of American forces in Australia, the 21st Transport Squadron was activated on 3 April 1942 and stationed at Brisbane.[43]

One squadron was soon found to be insufficient for the needs of the air forces in Australia. In view of the frequent moves of personnel which were occasioned by tactical threats and in view of the inadequate

rail and highway facilities, air transportation became of vital importance. To meet the demands of tactical squadrons which were moving into forward areas, General Brett on 12 March requested the immediate delivery of 10 transport planes with wide doors. Three days prior to his request, however, three C-39's and two C-47's had left the United States for Australia via boat, and these five planes represented the maximum number which could be sent at that time.[44]

Upon receipt of the terse War Department reply on 17 March, "additional transports unavailable," General Brett had to look elsewhere for possibilities of acquiring the needed aircraft. Australian commercial planes were insufficient to meet the demands, although the transport service--under the guidance of Harold Gatty, honorary group captain in the RAAF--was performing an invaluable service.[45] The only available transports were the Dutch military and commercial planes evacuated from Java. As a result of a conference with Dr. Hubertus van Mook of the Dutch government and with officials of Knilm (the commercial airline company), General Brett arranged for the purchase of 11 Dutch Army Lockheed Lodestars, with an average service life of one year, and one Martin bomber--all at a total cost of $1,030,000. This amount was to be credited to the Dutch government in the United States, and under terms of the agreement all 12 of the planes were to be delivered to the United States air forces at Melbourne prior to 21 March.[46] In addition, 2 DC-2's, 2 DC-3's, 3 DC-5's, and 4 Lockheed Lodestars were chartered from Knilm, through Pan American Airlines, at an hourly price based upon operating cost figures. The charter was to terminate at such time as the War Department approved the purchase of these aircraft.[47]

With the acquisition of the Dutch planes the number of transport aircraft operated by the U. S. forces in Australia reached a total of 36, including a wide variety of types. This number gave support to General Brett's request on 23 March for the activation of an additional transport squadron.[48] Eight days later the War Department granted authorization for activation of the 22d Transport Squadron from personnel then available in Australia.[49] The expanded transport service, however, increased the demand for additional personnel and necessitated a request for 50 experienced transport pilots. In making this request General Brett suggested that pilots no longer suited for combat duty should be sent to Australia to replace combat pilots then engaged in transport missions.[50] But shortages in personnel and problems in maintenance, occasioned by the wide variety of aircraft, were to plague the two transport squadrons throughout the first few months of their existence, while the whole transportation problem was one of the chief deterring factors in the organization and operation of the air forces in Australia.

With three separate nations attempting to operate their own air forces in Australia, nothing was more obvious than the need for closer coordination among the Americans, Dutch, and Australians. Without a central authority there could be no effective long-range planning and consequently no effective strategy against the common enemy. Not only the air forces but also the ground and naval forces of all three nations operating in the Southwest Pacific needed one controlling office. To meet this demand, plans were made late in February for bringing to Australia a commander for the Allied forces. On Sunday morning, 8 March,

General Royce, Chief of Staff for General Brett, flew to the base of the reconnaissance squadron located at Townsville and announced that three crews were to be selected for an extraordinary flight to the Philippines. Only those crew members who were to make the flight were told the purpose of their mission, and it was left to the navigators to map out a route which would be fairly safe from the numerous Japanese installations which dotted the general route to the Philippines. Four B-17's made the first stage of the flight to the hopping-off point in northcentral Australia, but because of engine failure only two of the planes reached the blacked-out airfield at Mindanao on the first evening. The next evening a third B-17 completed the flight to the Philippines.[51]

After the cargo of medical supplies and other sorely needed items had been unloaded, the planes took on an important group of passengers--Gen. Douglas C. MacArthur, who had been directed to head the Allied forces in the Southwest Pacific, his wife and small son, and a number of his staff officers. The party had left Luzon in two speedy PT boats on the rainy evening of 11 March. Taking separate routes, the two boats had darted out of Manila Bay and between islands, dodging Japanese ships all the way to Mindanao.[52] The flight to Australia, made in favorable weather, was carried out without mishap.[53] After landing on the coast on 17 March, members of the party were flown inland where they entrained for Melbourne.[54] At Canberra, Prime Minister John Curtin announced to a wildly enthusiastic Australia General MacArthur's arrival and also the appointment of General Brett as commander of the Allied Air Forces.[55]

With this tangible evidence that the Southwest Pacific was not a forgotten theater of war, the morale of the Australians reached a new peak. Approximately 10 days later their morale received another boost with the arrival of part of the Australian Imperial Forces which had been serving under General Sir Thomas Blamey in the Middle East. At a South African port General Blamey and his wife had boarded the Queen Mary which left Boston on 18 February, carrying over 8,000 American troops. Included in this number were the 8th Air Base Group and the 43d Bombardment Group (with the exception of combat crews). Arriving at Sydney on the evening of 28 March, after a 39-day voyage, the air force troops disembarked in a downpour of rain and settled at Randwick racetrack to await the arrival of their equipment or transportation to other areas.[56]

The 8th Air Base Group, commanded by Col. Harold R. Wells, had to gather its equipment from Melbourne and Brisbane and re-ship it to Sydney, and it was approximately two months before the troops received all of their barracks bags.[57] The 43d Bombardment Group, commanded by Maj. C. H. Diehl, likewise had its difficulties, but—oddly enough—it suffered from an excess of equipment, rather than from a lack of it. According to Major Diehl, the group did not receive instructions as to the climate of its destination, and as a result the group arrived in Australia with both tropical and Arctic equipment. Each of the squadrons had approximately 75 tons of organizational equipment, much of which was lost or damaged in the half-dozen moves which the group had to make before being able to turn in the material.[58]

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The arrival of the 5th Air Base Group and the ground echelon of the 43d Bombardment Group completed the main strength of units which were authorized for the American air forces in Australia. Having laid the groundwork for the organization and operation of the individual American units, General Brett could turn to the larger task of organizing the Allied Air Forces in Australia. Informed on 21 March of his appointment to the newly-created position, General Brett immediately submitted an outline of organization for the combined staffs which received the approval of the Australian Prime Minister.[59]

One of the undetermined factors was the part which the Dutch air forces would occupy in the new Allied organization. The disposal of the airplanes which had been ordered and purchased by the government of the Netherlands East Indies, as well as the deployment of the evacuated personnel, gave a considerable amount of concern to the Allied commanders in Australia. On 10 March approximately 500 planes which had been ordered by the Dutch were undelivered, and production and delivery of the last plane was not expected to be accomplished until December.[60] At this time, without knowing whether Dutch combat or maintenance crews were available in Australia, the Combined Chiefs of Staff approved arrangements whereby all the remaining planes on order were to be delivered to Australia, with the Dutch forces using as many as they were able and the RAAF and American air forces in Australia taking the remainder.[61]

By the middle of March approximately 900 Dutch Army and Navy personnel had been evacuated to Australia and were under Maj. Gen. L. H.

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van Oyen, commander of all NEI forces outside of the Indies. Of this number approximately 450 were air force personnel, most of whom were students. There were enough instructors to train the students, but sufficient facilities were not available in Australia--there was no adequate ground organization, the few airfields had to be occupied by combat units, and there were not enough training planes even for the Australian students.[62] There were, however, sufficient Dutch pilots to form one bombardment squadron. General van Oyen, in conference with General Brett, in the latter part of March, agreed that 18 of the B-25's on order should be used to equip the one complete Dutch squadron, but that immediate delivery of 12 B-25's should be made to the American forces, in view of the urgent tactical situation in the northern part of Australia and in view of the fact that an American squadron could use the planes immediately.[63]

Negotiations between the American and Dutch forces and consequent decisions as to the fate of the Dutch forces in Australia were considerably hampered by a lack of understanding as to the authority of Allied commanders over these forces. After General Brett's new designation on 21 March, it was the understanding of the Combined Chiefs of Staff that all air forces operating in and out from Australia were to be under his control. The Dutch, however, insisted upon control of their own forces. On 11 April, General van Oyen left Australia for the United States, but before doing so he informed General Brett that Vice Admiral Helfrich, then in Colombo, was supreme commander of all Dutch air forces in Australia, with the exception of the semi-formed Dutch squadron which was to operate the 18 B-25's.[64]

General van Oyen's visit to the United States was made in the interest of a training plan which had been approved in principle by General Marshall. Since facilities were not available in Australia for the training of Dutch pilots, representatives of the Netherlands government had requested that arrangements be perfected with the War Department for training the Dutch students then in Australia. With the project approved by the War Department, preliminary details were being worked out in early April by the Flying Training Command of the AAF and Colonel Weijerman of the Netherlands Legation. The AAF agreed to furnish a flying field and housing for approximately 400 students, 500 technicians, and 90 Dutch instructors to come from Australia, while the planes were to be furnished from those already on order by the Netherlands government.[65] This arrangement therefore relieved General Brett and Australian authorities from the problem of providing facilities for the Dutch students in Australia,[66] but at the same time it meant the cessation of aircraft deliveries which had been ordered by the Dutch.[67]

General MacArthur, hampered as was General Brett by the lack of a formal declaration of his authority, nevertheless began to make plans for his staff and for the organization of the forces under his command.[68] By 2 April he was able to report that the reorganization of Australian forces was well under way. He had suggested, furthermore, that all Australian units be brought to full strength immediately, that an intensive program of training be initiated, and that the officer corps be strengthened by the prompt elimination of all incompetents, regardless of rank—suggestions which were met with "complete acquiescence and

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prompt action" on the part of the Australians.[69] With these positive signs of action, the general public attitude of defeatism was replaced with a growing feeling of confidence and self-reliance.[70]

While the Australians were taking heart from these organisational changes as indicative of future aggressive action, the beleagered American and Filipino troops 3,000 miles to the north received their first aerial combat assistance since General MacArthur had left the Philippines. The flights of B-17's to evacuate personnel from the Philippines to Australia had demonstrated the possibility—precarious though it was—of getting bombers up to Japanese-infested Mindanao and back to the continent safely. Early in April rumors of another flight into the Philippines began to be whispered among the crews of the 40th Reconnaissance Squadron operating from Townsville and the 3d Bombardment Group at Charters Towers.[71] Plans had to be made hurriedly, for the position of the troops was growing more tenuous in the face of strong Japanese pressure in Luzon. By 9 April the American and Filipino troops at Bataan were overwhelmed, leaving only the fortress of Corregidor, which was to hold out for approximately a month.[72] Regardless of the need for air reinforcements in these islands, any plans for aid from Australia had to be based on a small scale, for on 4 April there were only 6 B-17's and 8 B-25's reported in commission, with 6 additional B-25's under repair.[73]

Fully conscious of the fact that any mission into Japanese-held territory approximated a suicide flight, the crews of 11 B-25's and three B-17's assembled at the RAAF airdrome at Darwin early on the morning of 11 April and ate a hurried breakfast while their planes were

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being refueled for the long, over-water hop to Mindanao. To those members of the 27th Bombardment Group (at that time a part of the 3d Group) who had been bouncing around the skies for several months in A-24's, the B-25 "felt like a ball of fire" until they could become accustomed to the extra speed and power. The 11 B-25's had flown to Brisbane two days before in order to pick up bomb bay tanks for the long flight northward. The entire mission was under the personal leadership of General Royce, who flew in the lead B-17, piloted by Capt. Frank P. Bostrom of the 40th Reconnaissance Squadron. The first flight of five B-25's was led by Col. John H. Davies and the second flight by Capt. Herman F. Lowery.[74]

After taking off from Darwin on the morning of 11 April, the three B-17's and 10 B-25's (one of the 11 had failed to take off) managed to hold their formation until they reached the coast of Mindanao late in the afternoon.[75] Heavy black rain clouds forced the formation to break up, and each plane found its way alone to Del Monte airfield.[76] Battle-scarred veterans of the Philippines, from colonels down to privates, rushed out to meet the first planes and cluttered around them "with tears of appreciation in their eyes, viewing the new arrivals as saviors and conquering heroes." The last plane landed after dark, 12 hours after taking off from Darwin. The flight of B-25's led by Captain Lowery flew 40 miles to Valencia, a dispersal strip cut out of the jungle, and the remaining planes were dispersed at Del Monte for the night.[77]

The night was spent in removing bomb bay tanks from the B-25's, loading bombs on the planes, and refueling for the dawn missions.

After being briefed, the combat crews rolled up in blankets under the planes for a few hours' rest. At dawn on 12 April the two flights of B-25's headed for Cebu, where they bombed the town area, sank several ships in the harbor, and left the dock installations in flames. One of the B-17's participated in this attack, obtaining hits on surface craft. Another B-17, piloted by Captain Bostrom, scoured the seas for enemy concentrations, flew over Corregidor, and then bombed Nichols Field, Manila. The third B-17, unable to participate in the mission because of motor trouble, was at Del Monte field undergoing maintenance work when Japanese planes began a series of bombing attacks which resulted in serious damage to the plane. Immediately upon the return of the other B-17's, the crews rushed to prepare for another mission. Before the planes could take off, however, the Japanese resumed their air attacks and succeeded in destroying one B-17 with a direct hit and in damaging the other two planes.[78]

While the crews spent the next 15 hours repairing the two B-17's in order that they might limp back to Australia, the B-25's continued to carry out bombing attacks on Japanese installations. After the first attack on Cebu, one flight of B-25's had returned to Valencia, and another landed at Maramag, a well-concealed strip in the jungle near Del Monte. After bombs were loaded and the planes were refueled, the B-25's took off at 1330 on the same day, 12 April, and again attacked Cebu shipping and dock installations, having been unable to find an aircraft carrier reported in the vicinity.[79]

On the next day each flight carried out two more missions. After taking off at 0600, the B-25's bombed Cebu shipping and Davao installations,

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including the airport. Taking to the air again at 1745 on 13 April, the planes heavily bombed the Davao dock area, sinking one boat and causing fires and explosions among the dock installations. Upon their return from this mission the B-25's landed at Del Monte field, where bomb bay tanks were reinstalled and the planes were prepared for the return flight to Australia.[80]

The two B-17's had managed to take off by dawn, carrying as many passengers as could be crowded into the planes. The first plane just barely hopped the fence at the end of the field, and the other was clearing the field as Japanese bombs began to fall. Flying over Japanese-held territory most of the way, the crippled B-17's completed their flight to Australia without mishap, although one of the planes was forced to ground-loop upon landing. Shortly before midnight on 13 April the 10 B-25's, overloaded with men recently evacuated from Bataan, began their flight from Del Monte to Australia. Landing at Batchelor Field, 40 miles south of Darwin, after daylight on 14 April, the planes refueled and then made the last leg of the flight to Charters Towers, arriving in the evening.[81]

Thus, the four-day mission was completed. Without the loss of a single man and with the loss of only one B-17 on the ground, the 10 B-25's and 2 B-17's had sunk or badly damaged 4 enemy transports (1 large, 1 small, and 2 medium), and scored direct hits on 2 others and near misses on 8 others; in addition, they had succeeded in badly damaging the warehouse and docks at Davao and Cebu, and in damaging Nichols Field and buildings in the area of Davao.[82] General MacArthur's

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promise to send aid to the Philippines had seen its initial fulfillment. When the planes had passed over Dansalan, a small town in Mindanao, on their way to bomb Cebu and Davao, Filipino peasants had left their carabaos and rushed to the rooftops to get a better view of the aircraft. Pointing at the planes in jubilation, they had shouted, "MacArthur! MacArthur!" They were sure that their idol had returned to rid the islands of their new conqueror.[83]

When news of the damage to Japanese shipping and installations reached Manila, it was reported that the Filipino citizens threw their hats into the air and cheered, "under the very guns of the Japanese sentries."[84] But this remarkable aerial feat, which had given new hope to the Filipinos and Americans on the islands, could not be repeated. The Japanese immediately tightened their hold on Mindanao. The alternate base which the fliers from Australia had planned to use was taken on the day of their arrival in Mindanao, and the main field was taken only one week later.[85]

In the seven weeks following the fall of Java, not only the tactical, but also the organizational picture had changed for the American air forces in Australia. The rapidly advancing Japanese forces increased the need for Allied operational air units. By the middle of April the United States Army troops in Australia totaled 2,183 officers and 34,231 enlisted men in the ground forces and 1,650 officers and 17,115 enlisted men in the air forces.[86] But these air force troops had to await the arrival of their equipment, the building of suitable bases, and the setting up of operational procedures before they could be placed in combat. Furthermore, in the absence of specific information from

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the War Department, General Brett had difficulty in formulating plans for air participation in the Southwest Pacific action. He felt justified in urging the forwarding of the desired information, as well as the requisite supplies and experienced personnel, since "the first phase of all operations are necessarily air."[87]

With the decision to form an Allied command in Australia, still more time had to be taken up with plans for the organization. General MacArthur and General Brett had made strides in the initial stages of the planning, but the actual carrying out of the plans was delayed by the absence of a formal directive from the Allied governments. This directive was shortly to be transmitted to General MacArthur and was to clarify the situation and remove the uncertainty which had existed up until the middle of April.

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CHAPTER V

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ORGANIZATION OF THE ALLIED AIR FORCES

On the evening of 18 April 1942 the Japanese people, trying to recover from the shock and destruction caused by the first American air attacks on five of their cities, were probably too preoccupied to take notice of an event nearly 5,000 miles to the south which was to have a more permanent and far-reaching effect upon their nation. Thirty-two days after General MacArthur's arrival in Australia "a terse announcement disclosed that all Allied nations had agreed to entrust the strategy of their vital Southwest Pacific campaign to him," effective midnight, 18 April, a step which indicated that at last the Allies would be united in this area.[1]

Two days later, from Allied Headquarters at Melbourne, the commanders under General MacArthur were announced as follows:[2]

Gen. Sir Thomas Blamey, Commander of Allied Land Forces (and second in command of the Southwest Pacific Area, by virtue of his rank)
Lt. Gen. George H. Brett, Commander of Allied Air Forces
Vice Adm. Herbert F. Leary, Commander of Allied Naval Forces
Lt. Gen. Jonathan M. Wainwright, Commander of Forces in the Philippines
Maj. Gen. Julian F. Barnes, Commander of U. S. Army Forces in Australia.

Additional members of General MacArthur's staff included:[3]

Maj. Gen. Richard K. Sutherland, Chief of Staff
Brig. Gen. Richard J. Marshall, Deputy Chief of Staff
Col. B. M. Fitch, Adjutant General
Col. C. P. Stivers and Col. C. A. Willoughby, Assistant Chiefs of Staff
Brig. Gen. S. J. Chamberlain, Assistant Chief of Staff for Operations

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Col. L. J. Whitlock, Assistant Chief of Staff for Supply
Col. H. F. H. Durant and Lt. Col. John D. Rogers of Australia
and Lt. Col. J. M. R. Sandberg of the Netherlands East Indies.
"Working Members."

As Supreme Commander in the Southwest Pacific Area, General MacArthur was not eligible to command directly any national force; and, in accordance with the directive to him, the operations in this area would be designed to accomplish the following:[4]

Hold the key military regions of Australia as bases for future offensive action against Japan, and in order to check the Japanese conquest of the Southwest Pacific area.

Check the enemy advance toward Australia and its essential lines of communication by the destruction of enemy combatant, troop, and supply ships, aircraft, and bases in Eastern Malaysia and the New Guinea-Bismarck-Solomon Islands region.

Exert economic pressure on the enemy by destroying vessels transporting raw materials from the recently conquered territories to Japan.

Maintain our position in the Philippine Islands.

Protect land, sea, and air communications within the Southwest Pacific Area, and its close approaches.

Route shipping in the Southwest Pacific Area.

Support the operations of friendly forces in the Pacific Ocean Area and in the Indian Theater.

Prepare to take the offensive.

While authorized to issue all communiques concerning the forces under his command and to direct and coordinate "the creation and development of administrative facilities and the broad allocation of war materials," General MacArthur was not responsible for the internal administration of the various forces under his command, nor was he responsible for grand strategy. General jurisdiction over grand strategy policy and related factors was to be exercised by the Combined Chiefs of Staff, while jurisdiction over all matters pertaining to operational strategy was to be exercised by the U. S. Joint Chiefs of Staff. The latter arrangement was in keeping with the agreement among the govern-

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ments of Australia, New Zealand, the United Kingdom, the Netherlands, and the United States, which designated the entire Pacific Theater as an area of U. S. strategic responsibility.[5]

The Pacific Theater was divided into three large areas: the Southwest Pacific, the Southeast Pacific, and the Pacific Ocean, the latter of which was further divided into the North, the Central, and the South Pacific Areas. Closely related to the Southwest Pacific Area, the South Pacific Area (which included New Zealand and New Caledonia) was set up as a naval command under the Commander in Chief of the Pacific Ocean Area, whose operations were to be designed to accomplish the following:[6]

> Hold the island positions between the United States and the Southwest Pacific Area necessary for the security of the line of communications between those regions; and for supporting naval, air and amphibious operations against Japanese forces.
> Support the operations of the forces in the Southwest Pacific Area.
> Contain Japanese forces within the Pacific Theater.
> Support the defense of the continent of North America.
> Protect the essential sea and air communications.
> Prepare for the execution of major amphibious offensives against positions held by Japan, the initial offensives to be launched from the South Pacific Area and the Southwest Pacific Area.

Early in April the decision was made by the Combined Chiefs of Staff to "rid Australia and New Zealand of the menace of Japanese invasion" and thereby strengthen the tenuous supply lines to those bases; for four months, however, the project had to be confined largely to "paper strategy," awaiting the Navy's gradual recovery from the blow at Pearl Harbor and awaiting the consolidation and organization of Allied forces in the Southwest Pacific.[7] Certainly no offensive campaign could be launched from the Southwest Pacific Area at this early stage of organization.

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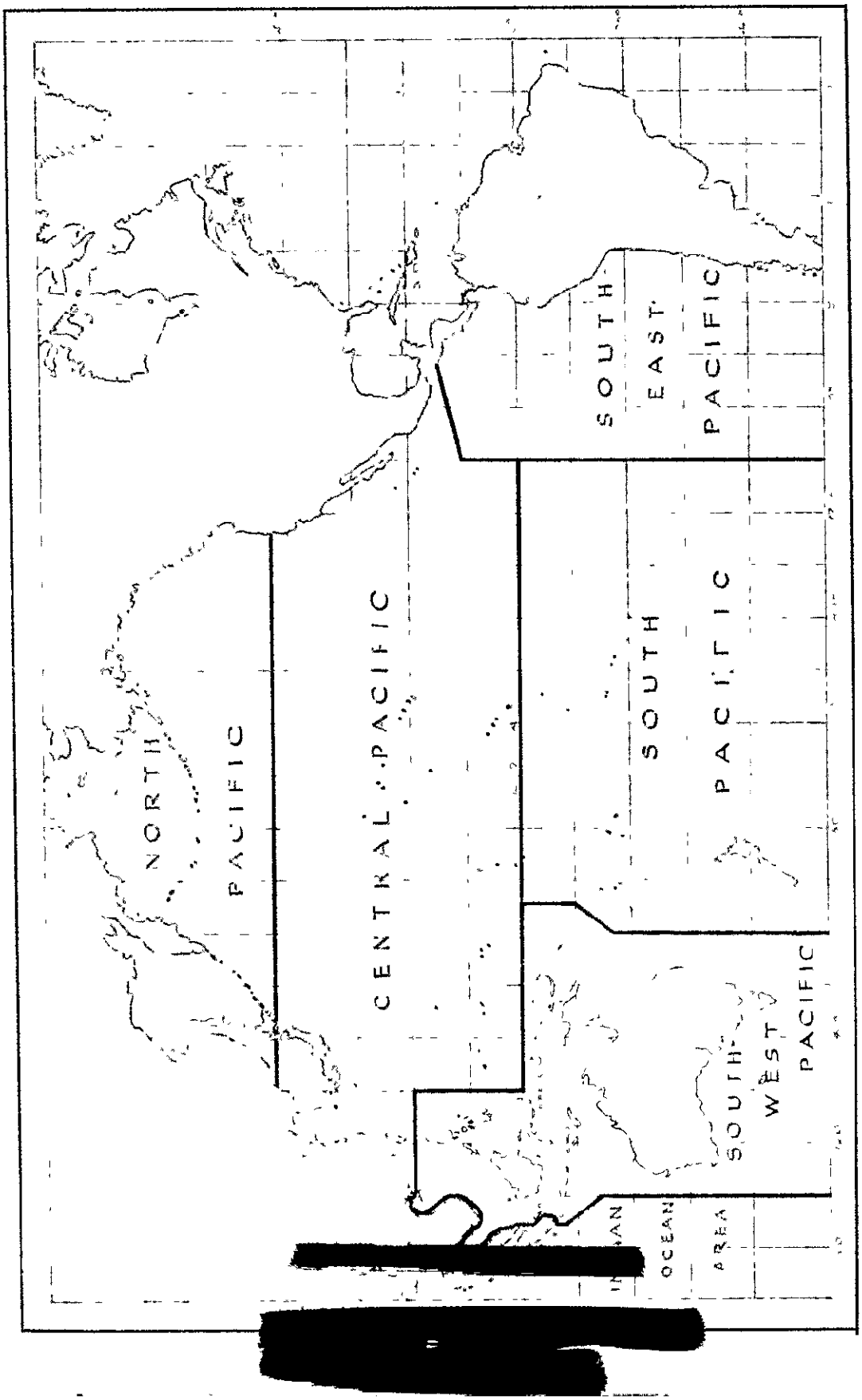

PACIFIC OCEAN AREAS
May 1942

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With the limited forces at his disposal, General MacArthur viewed his assigned missions largely as a pattern for future development, since he considered each of the three elements of assigned naval, ground, and air strength as inadequate. His request for aircraft carrier strength could not be granted, since--in the words of the Navy Department -- all the available carriers were "employed on indispensable tasks."[8]

Reviewing the situation at the beginning of May, General MacArthur stated that, in the absence of a carrier, the naval forces available to him were suitable only for operations of a minor and subsidiary nature. The ground troops at his disposal were considered insufficient in numbers and would not be prepared for operations for several months. It is true, the two divisions (less two brigades) of the Australian Army which had returned from the Middle East were undoubtedly effective troops and one additional division in the home force was approaching combat condition, but the remainder of the army was composed of a militia which was in a very indifferent state of training and equipment and which could be prepared for combat only by prolonged and intensive methods. The two Army divisions from the United States, scheduled for the Southwest Pacific Area, were assumed by General MacArthur to be satisfactorily organized, trained, and equipped.

The air forces were even less prepared for the offensive than the ground forces. According to General MacArthur, the RAAF would require many months for its development and then its efforts would be absorbed to a large extent in the defense of the extensive Australian coastline. The strength of the U. S. air forces in Australia comprised only two heavy bombardment groups, two medium bombardment groups (less two squadrons),

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one light bombardment group, and three pursuit groups, to be equipped 100 per cent with operating aircraft and with 50 per cent reserve, no specific number having been assigned for wastage. The state of organization and training was far below the required standard and it was estimated that at least four months of intensive effort would be required to reach a satisfactory condition.[9]

Even before the formal organization of the Allied Air Forces, however, General Brett could report that they were destroying six Japanese planes for every Allied plane lost. At the same time he reported that the Allied Air Forces were being organized "with the best men getting the important jobs without regard to nationality."[10] General Brett officially assumed command of the Allied Air Forces on 20 April with the following assignments to his command: (1) all U. S. Army Air Corps tactical units and associated service elements of the U. S. Army then in Australia, (2) operational control of all service squadrons (not including training units) of the RAAF, and (3) operational control of all service squadrons of the Royal Netherlands East Indies Army Air Force.[11]

As it happened, the staff positions were evenly divided between the Australians and Americans. On 2 May the following staff officers were announced:[12]

Air Vice Marshal William D. Bostock, RAAF, Chief of Staff
Col. Edwin S. Perrin, Deputy Chief of Staff
Brig. Gen. Ralph Royce, Senior Air Staff Officer
Col. Eugene L. Eubank, Director of Plans
Col. Ross J. Hoyt, Director of Operations

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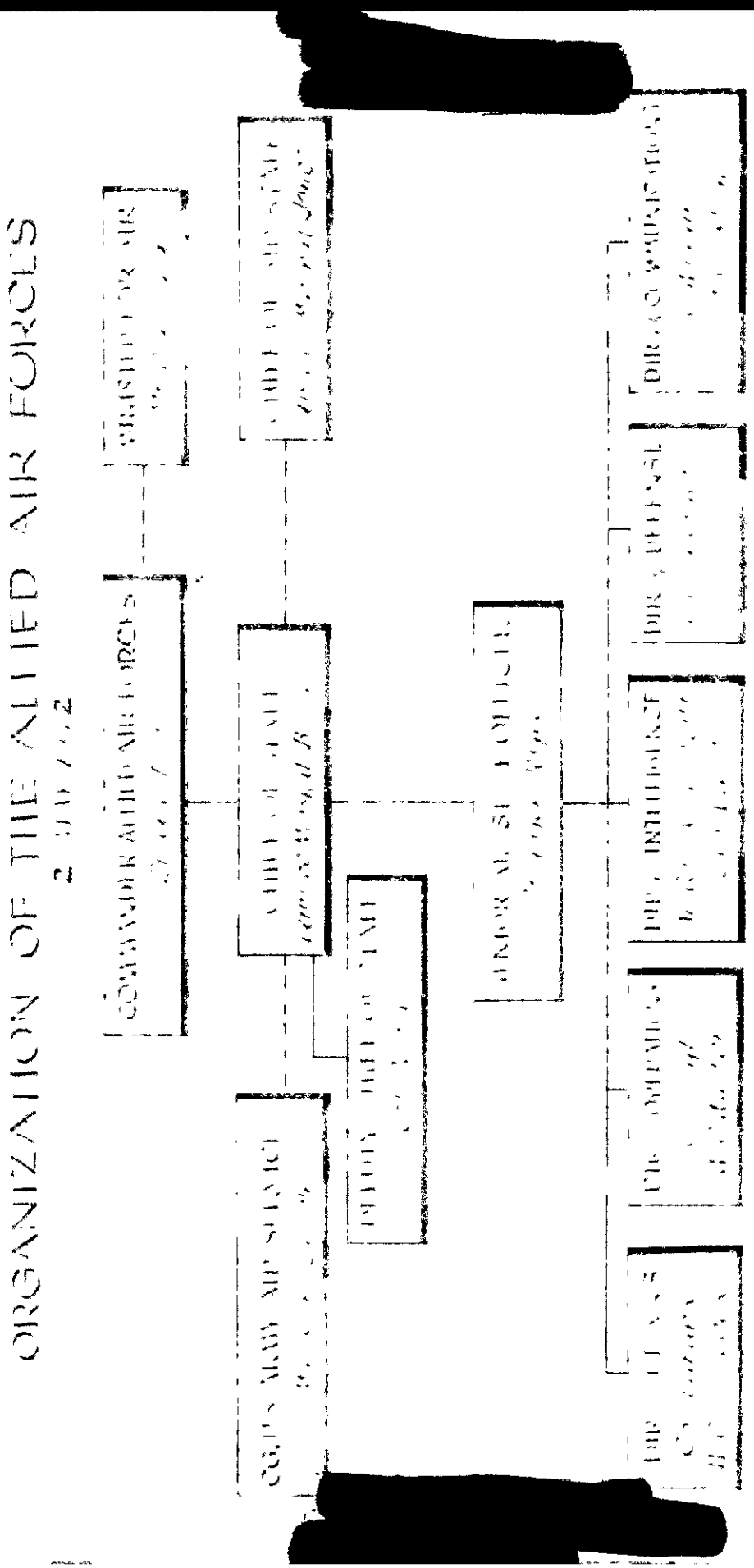

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Air Commodore Joseph E. Hewitt, RAAF, Director of Intelligence
Group Capt. Frederick R. W. Scherger, RAAF, Director of Defense
Group Capt. Carn S. Wiggins, RAAF, Director of Communications
Wing Comdr. Valston E. Hancock, RAAF, Assistant Director of Plans
Wing Comdr. Allan L. Walters, RAAF, Assistant Director of Operations
Lt. Col. Reginald F. C. Vance, Assistant Director of Intelligence
1st Lt. Warner Grexton, Assistant Director of Communications.

This seemingly equal representation between the two air forces theoretically should have made for a smoothly-operating organization, with the even division of responsibility precluding any domination of one over the other. Actually, however, it did not work out this way. While the cooperation between the RAAF and General Brett was reported as "excellent," the Allied commander did not have complete command of the RAAF. In the words of General Brett, all control over the RAAF (except for operations) was taken from him, "due mainly to Australian political interference and sabotage."[13] Furthermore, the U. S. air units were controlled largely by the Australians.

In order to understand this fact, it is necessary to see the general concept of the Australian military scheme in 1942. The continent was divided into five military districts: the Northwestern, Northeastern, Western, Eastern, and Southern areas.[14] The result, in brief, was a somewhat static, area command. Each area was under the command of an Australian officer, who in turn was commanded by a general of the Australian ground forces. Since all military organizations in the respective areas were controlled by the area commander, the American air units—in the last analysis—

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were not commanded by their own officers. This situation was not confined merely to the highest echelon, but it extended to Australian control of "every airfield" at which American air units were stationed.[15]

The question immediately arises as to why, under an Allied organization, officers from the United States forces were not given some of the command positions. The answer lies in the fact that there were not enough American officers who were qualified by experience to take over the positions. This problem was not a new one to General Brett, for he had had to contend with the same situation during the days of the ABDA Command, when the failure or the inability of the War Department to furnish officers of suitable rank and experience forced the Americans to occupy subordinate positions under British and Australian officers.[16] General Brett strongly felt that it was contrary to the policy of the War Department for U. S. Air Corps units to be commanded by RAAF officers, yet in February it was becoming increasingly apparent that this situation would again arise if suitable Air Corps commanders were not furnished in the Australian area.[17] A sufficient number of qualified officers did not arrive from the United States and, as a result, when pursuit squadrons were being moved into the Northeastern and Northwestern areas in early April, there was "not a single station in the entire area commanded by an American officer."[18] The existence of this condition was verified on a tour of inspection by General Brett, who again urgently requested the War Department to send adequate personnel for relieving the situation, which was having a definite effect upon the morale of the American airmen.[19] But no appreciable amount of relief was given, and

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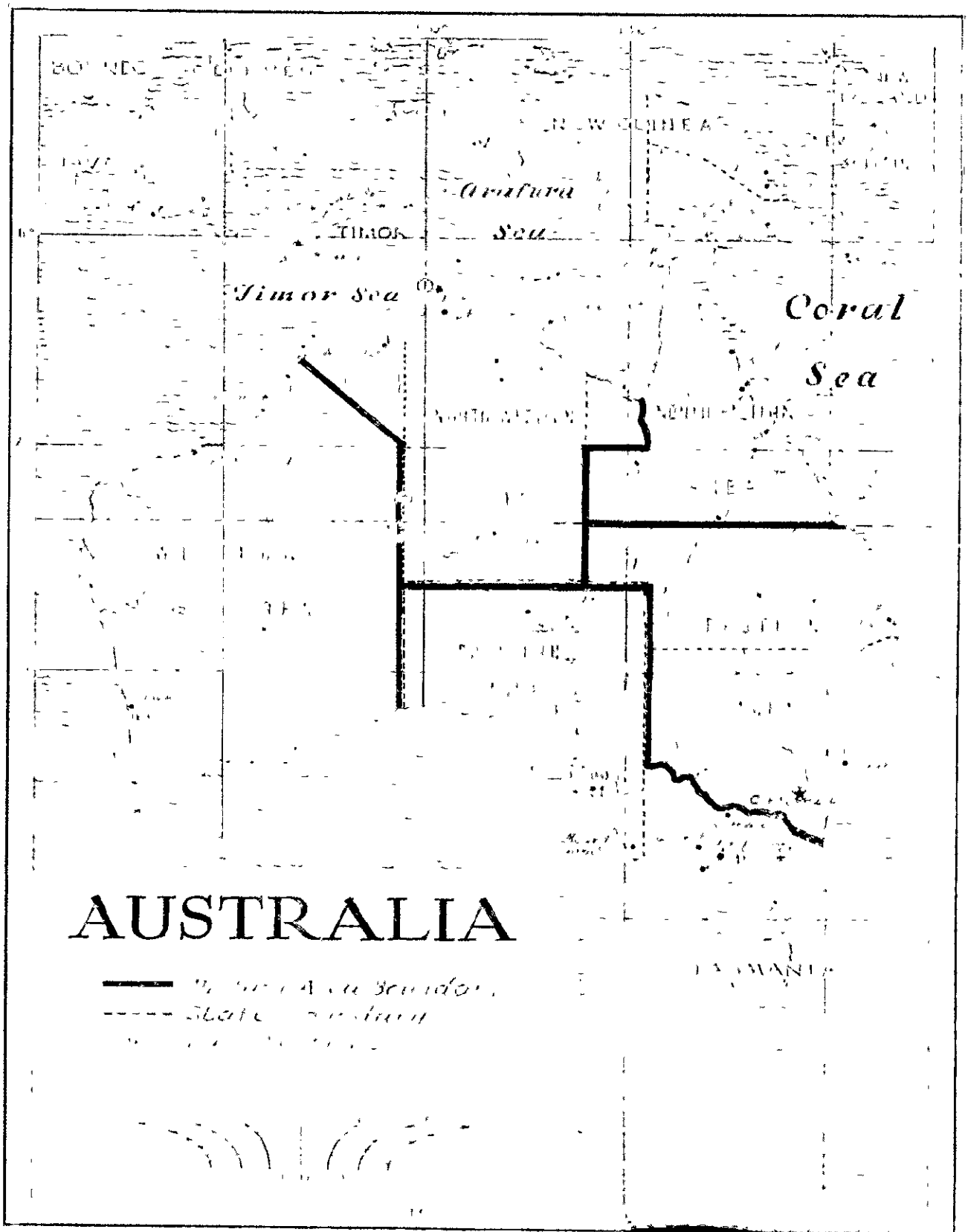

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as late as midsummer of 1942 no improvement could be noted in the situation.

Even if the two air forces in Australia could have retained their integrity through separate commands, the Americans would still have been dependent upon the Australians for their communications. This necessary dependence upon certain RAAF facilities and procedures greatly endangered the identity of the American air units. For example, every tactical mission was assigned to the American fliers on the blank forms of the RAAF, and similarly every report of operations was made to Allied headquarters through the channels of the RAAF on their blank forms. Since these forms provided for no reference to the United States other than the types of planes used, the identity of the American air forces was not preserved.[20] In the opinion of General Richardson, "a historian examining these records would never know that the Americans ever participated in these operations," despite the fact that the U. S. air units were doing 95 per cent of the fighting in Australia.[21]

Thus, from the very outset the position of the Americans in the Allied Air Forces was not exactly what might have been wished, but in the pressure of events any arrangement had to suffice. It was obviously not the desire of General Brett or of any of the American commanding officers to have their units subjected to RAAF control; it may not have been the desire of the RAAF, but under the circumstances no other arrangement was possible.

In spite of the difficulties occasioned by the joint operation of the two air forces, the Allied organization was an improvement over the

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former situation when there was no coordination of effort and no centralized control of operations. The situation called for certain deviations, however, from the typical air force organization. In the first place, it was discovered that the group organization was not well fitted for the kind of warfare expected in the Southwest Pacific, chiefly because of its lack of flexibility. An attempt was made to preserve the integrity of the groups by locating their respective squadrons in the same area. For example, the 43d and 38th Bombardment Groups (less two squadrons) were placed in the Northwestern Area, and the 19th, 22d, and 3d Bombardment Groups were placed in the Northeastern Area. Similarly, each pursuit group, upon receipt of its equipment, was put into operation as a unit. All the groups took with them their attached organizations, such as ordnance platoons and medical detachments.

It was soon found, however, that the squadrons of the various groups could not remain together as a unit. Tactical demands forced the shifting of squadrons from place to place, with the Area Headquarters directing the movements. Area Headquarters thus became a small bomber command, since it controlled all the reconnaissance and striking force in the area. A lower echelon of the area command was the Fighter Sector Control Unit, which controlled all the pursuit units in combat and also all antiaircraft fire in a given area. When the tactical situation at Port Moresby demanded more aerial reinforcements, two squadrons of the 3d Bombardment Group moved to Port Moresby and rotated approximately every two weeks with the remaining two squadrons at Charters Towers. Similarly, after the RAAF pursuit units at Port Moresby were almost completely used up in combat operations,

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they were replaced in April by two American squadrons from Townsville. Also at Townsville were two additional pursuit squadrons of the RAAF, and two more American squadrons were moved in to replace those which had gone to Port Moresby. These moves resulted in the following situation: at Port Moresby there was an RAAF sector control unit with two American squadrons; at Townsville, an RAAF sector control unit with two American squadrons and two RAAF squadrons; at Sydney, an American group less two squadrons; and at Brisbane, an American group less two squadrons. Inasmuch as each American group had its own interceptor control equipment and organization, the RAAF control units were subsequently withdrawn.[22]

No stretch of the imagination is needed to visualize the place of the various group headquarters in all this movement and shifting of squadrons under the static area command. Even though the American units continued to maintain their group headquarters, the latter organizations were virtually out of the picture insofar as usefulness was concerned.[23] Obviously, under the circumstances, the Air Corps commanders in Australia could not think in terms of the group as the basic unit for tactical employment. The peculiar tactical situation, demanding a high degree of mobility among the air units, thus called for further revision in the traditional organization of an air force. Since the groups could not maintain their integrity with the expected forward movement of the squadrons, there was need for an air force command of some kind which would remain in an area so long as combat units were

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there and then would leap-frog with the advancing units. To meet this demand, General Brett created Air Command No. 1, under Brig. Gen. Albert L. Sneed at Darwin, and Air Command No. 2, under Brig. Gen. Martin F. Scanlon at Townsville. Created as flexible units, these commands were capable of taking over a sector headquarters or a bombing unit, or both, as the situation determined.[24]

The shortage of qualified personnel, which was the chief determining factor of the American position in the Allied Air Forces command, was not limited to staff and higher echelon needs but it extended down to the smallest unit. The lack of experienced officers and enlisted men had a direct effect upon the operational efficiency of combat units, yet the situation seemed to be one for which there was no immediate remedy.[25] According to information available at Headquarters, AAF, at the beginning of April the experience level of air officers assigned to the Southwest Pacific Area was in excess of the authorized allotment. In view of this fact, it was stated with finality that no further action would be taken on sending additional experienced officers from the United States to Australia.[26] Some relief, however, was later promised for the shortages of personnel (without regard to experience), but the augmentation of forces in this theater was to begin only at such time when the action would not be detrimental to forces in other theaters and to the training program in the United States.[27]

In general, the personnel shortages resulted from two main causes, one organizational and the other operational. In the first place, some of the air units were dispatched from the United States before being

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brought up to full strength. The 2d Materiel Squadron, for example, was up to full strength several days before departure from Selfridge Field, Mich.; but on the day before sailing from the United States, 108 trained men were transferred to other units. When the squadron arrived in Australia, it was, of course, lacking 108 men for whom no replacements were immediately available.[28] Shortages of personnel, in the second place, occurred as a result of casualties, flying fatigue, and dengue fever. The 11th Replacement Depot was set up at Camp Murphy (near Melbourne) to take care of attrition, but it was recognized that an indefinite period of time would elapse before the depot could be maintained at a level sufficient to equal the attrition.[29]

While a serious shortage of combat crews, in general, existed among the medium and light bombardment groups in Australia as of 8 May 1942, perhaps the most acute shortage of all flying personnel was among the co-pilots--a situation which General Brett described as "a crying need."[30] Officers who left the United States as co-pilots rapidly developed into first pilots, and by the middle of May the necessity had arisen for considering the use of RAAF co-pilots, where possible.[31] While such a plan would offer a certain amount of relief, according to Col. R. E. Rice, chief of personnel for the Army Air Forces in the Southwest Pacific Area, the organization of an intermediate headquarters in conjunction with the RAAF would place an additional strain on the supply of officer personnel and, in the absence of both administrative personnel and technicians, would mean the use of pilot personnel.[32] Limited use, however, was eventually made of RAAF co-pilots, partly as a means of

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filling the need for co-pilots in the U. S. forces in Australia and partly as a means of assisting in the RAAF training program.[33] One of the more obvious disadvantages in such a plan lay in the differences between Australian and American enunciation, which made interplane phone communication extremely difficult.[34] Fortunately, the increase in the shipment of co-pilots from the United States by midsummer made possible more satisfactory arrangements.[35]

The shortage of personnel affected not only the organization of the staff and combat units of the Allied Air Forces, but also the establishment of an adequate aircraft warning service in Australia. Although a network of alert "coast watchers" was being set up in anticipation of enemy moves against the island continent, the actual number of aircraft warning units was hardly adequate for the defense of so large an area. The 694th and 699th companies, totaling 20 officers and 375 enlisted men, were the only aircraft warning units in Australia.[36] Upon their arrival in the first week of March, each of these units had only two officers and five enlisted men who were technically trained. According to General MacArthur, the remaining personnel were largely unqualified for such service because of their lack of training, and some of the over-age officers were "inadequately educated."[37] The 694th Company, less one platoon, was located at Townsville, while the 699th Company, less one platoon, was placed at Perth, an important seaport on the opposite side of the continent.[38] The remaining two platoons were located at Brisbane. A period of more than two months, however, had to elapse before these units could be brought to an effective state of operation, and even during the month

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of May the units were operating with only partially trained, minimum crews.

Thus, it would seem that during the early months of war the American and Australian air forces were destined to struggle constantly against the dual handicaps of insufficient personnel and an unusual tactical situation. These factors might well be considered the chief determining influences in the organization of the Allied Air Forces in Australia and more particularly in the position occupied by the American forces. Only when those factors were eventually changed did the Allied Air Forces undergo any major change. Until that time, the organization existed substantially as it was set up.

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CHAPTER VI

ORGANIZATION OF SUPPLY AND MAINTENANCE SERVICES

Concurrent with the organization of the Allied command and of the American combat units in Australia, a system of supply and maintenance services was evolved from the confused and cumbersome procedures which characterized the first few months of the war. Logically, the arrival of combat units should have been preceded by a staff of officers who were familiar with the peculiarities of the continent of Australia and who would make arrangements with the government for the use of dock, warehouse, and transportation facilities; select suitable airdrome, camp, and depot sites; and make housing and messing arrangements. Similarly, combat units should have been preceded by the necessary supply and maintenance personnel and by equipment necessary for the assembly of aircraft.[1] Actually, of course, the reverse was the case in Australia, with the result that AAF units had to learn their supply and maintenance lessons from bitter experience.

It might be expected that after five months of war the system of supply from the United States to Australia would be fairly well established. Much of the earlier confusion had been eliminated, but the situation was far from what the American commanders in Australia desired. Organizations were still arriving without their equipment, thus delaying the combat readiness of the troops. Commenting on this condition in early May, General Brett stated that "Even at the sacrifice of some tonnage space, an organization and its equipment should

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move in the same convoy."[2] The Air Service Command concurred with this statement, but unit loading was still found impracticable, inasmuch as an attempt was made to ship personnel largely in convoys, while equipment could go without a convoy.[3]

Even after its arrival in Australia, some of the equipment--aircraft, in particular--was in no condition to be used. Deck-loaded material was damaged by the corrosive action of salt spray, and some of the pursuit planes were found to have further damage when they were unloaded. General Brett, reporting these conditions on 1 May, suggested that deck-loaded equipment be sprayed to prevent corrosion; and the Air Service Command immediately issued instructions that "every possible precaution" should be taken to protect such equipment. As for the poor condition of some of the P-39's when they were received in Australia, the explanation lay in the fact that they were taken directly from maneuvers and hurriedly prepared for shipping without depot inspection before crating. While the forces in Australia had to suffer temporarily from these conditions, the result was the establishment of an Air Service Command policy which was to benefit the Army Air Forces in all theaters of operation. The Air Service Command strongly recommended the adoption of a policy that except in cases of extreme emergency, airplanes with any appreciable flying time would not be shipped or flown to combat forces; and further that the headquarters responsible for the movement of airplanes should be instructed that (if possible) when the movement of older airplanes became necessary, headquarters, Air Service Command would be informed in time to permit depot inspection or its equivalent.

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Approval of this recommendation was given by the Commanding General, Army Air Forces, on 12 June 1942.[4]

Some of the equipment consigned to the Southwest Pacific, however, did not reach its destination—either damaged or undamaged. In the latter part of May, General Royce reported in a personal letter to General Harmon, Chief of the Air Staff, that some of the airplanes and supplies designated for his use were being taken off the cargo vessels at intermediate stops in the South Pacific islands, seriously handicapping his planned operations. Finally taking action on 3 July 1942, the AAF requested that the Commanding General, Services of Supply take such measures as he deemed appropriate to insure, insofar as Services of Supply was able, that military equipment destined for Australia would not be removed from cargo vessels at intermediate points.[5] In this and similar ways, policies were gradually established for a more satisfactory system of shipping to the AAF units in Australia.

Action was likewise taken "at the other end of the line," for the procedure at Australian ports was still somewhat confused. At the beginning of April the U. S. forces in Australia were attempting to operate six base ports with 165 inexperienced officers and such enlisted personnel as technical units could temporarily detach.[6] In the congested harbors many ships frequently had to move out before they could be entirely unloaded and then had to make their way to other ports, where the equipment was dumped on the wharf and left waiting for someone to claim it. Recognizing the sheer stupidity in such procedures, the Australian government on 23 April drew up regulations creating a Central

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Cargo Control Committee in each state of the Commonwealth, in order to prevent harbor congestion and to expedite the loading and unloading of ships. Extensive powers were delegated to the committees, which were authorized to control all cargo movements, direct the removal of cargo from any wharf, arrange for its disposal without the owner's consent, take possession of, or sell the goods.[7] While such wide powers were desirable—perhaps even necessary—to clear the harbor congestion, the American forces in time came to resent somewhat the Australian attempt to supervise the unloading of their vessels.[8] Some of this feeling might have been avoided if the Americans had been represented on the committees. During May it was announced that Sir Herbert Gepp would head the Central Committee and that the Australian military forces were cooperating with the regular wharf laborers and transport drivers.[9]

In the same month certain important administrative changes in the Commonwealth resulted in the appearance of three new councils: the Allied Supply Council, the Australian Food Council, and the Allied Works Council. The first body was to act primarily as a coordinating, planning, and advisory group with the power to recommend certain executive action to Prime Minister Curtin, who was a link with General MacArthur. The body was also to serve as a clearing house for matters pertaining to the actual and potential availability of supplies from Australia, and as a medium through which the Commonwealth government would approach General MacArthur in regard to the priority of supplies to be allotted from the United States. Members of the group were to include the chairman of the Allied Supply Committee, four Australian Ministers, and a representative of the United States government.[10]

In order to coordinate food production with requirements, the Allied Supply Council was requested to submit estimates of food requirements to the newly-formed Australian Food Council, whose duties, as defined by Supply Minister Beasley, were: (1) to achieve a planned food economy for Australia in order to meet military and civilian needs, (2) to maintain exports to meet Britain's food demands, and (3) to achieve a planned economy which would limit seasonal fluctuations and reduce the element of chance to a minimum. A third body, the Allied Works Council, was formed during the month of May to work in conjunction with the military forces on vital construction projects, such as airdromes, camps, and roads. The sum of one million pounds ($3,230,000) was stated to have been allocated for the manufacture and acquisition of road-making equipment to meet the needs of the American and Australian forces.[11]

While steps were being taken in America and Australia to eliminate the obstacles in the way of a smoothly-functioning shipping program, and while action was being initiated by the Commonwealth government to alleviate the supply and maintenance problems in general, air transportation to Australia—as well as on the continent itself—began to assume even greater importance than it had in previous months. With the South Pacific route accommodating a steadily increasing amount of traffic, and with the possibility of enemy attack still a constant threat, plans were made for the construction of an alternate air route from Hawaii to Australia, under the supervision of the Commanding General, Hawaiian Department. By the latter part of April, the necessary preliminaries had been completed and concurred in by the Commander of the Pacific Ocean Area.[12] By the end of June the sum of three million dollars

had been authorized for the construction, supply, and equipment of the alternate route, but at this time no reports had been received by the Commanding General, Army Air Forces, on the status of construction at any of the bases.[13]

Meanwhile, the regular route—providing the only means of aerial flight to Australia—was used by the Ferrying Command as extensively as the available planes would allow in order to carry passengers and urgently needed cargo to Australia. Operating on the schedule of one airplane per week, two LB-30's were assigned by the middle of April to carry out regular flights from San Francisco to Australia—a modest beginning, to be sure, but more planes were to be assigned as they became available.[14] To receive and dispatch passengers and cargo at the Australian terminal, Major Dupuy, control officer in the Ferrying Command, was assigned to Amberley Airport with two officers and seven enlisted men. General Brett was notified of this arrangement on 30 April and also was informed that after reporting to him, Major Dupuy would operate under the Commanding General, U. S. Army Forces in Australia, who was in command of all matters pertaining to non-tactical air transportation.[15]

Regular flights were needed for carrying mail almost as much as for transporting passengers and certain supplies. The men on the island garrisons dotting the ferry route, along with the American forces in Australia, were greatly in need of a regular mail service; at Canton and Palmyra, for example, it was reported on 19 April that no personal mail had been received since early February. In general, the mail service between Hawaii and Australia was described as "terrible," with

large accumulations of soldiers' air mail having to wait several weeks at Honolulu before being shipped.[16] Definite signs of improvement were seen by 12 May, when the War Department informed General MacArthur of its proposal to inaugurate air mail service to Australia on a weekly basis, at least, and at the same time to set up facilities in Australia for microfilm service, equipment for which was already en route. Because of limited cargo space, however, the trans-Pacific air mail service had to be confined to essential official mail and to a limited number of personal letters not exceeding one-half ounce in weight.[17]

Putting its plans into action, the Ferrying Command by the middle of May had adopted a regular schedule of flights from the United States to Australia, using Liberator aircraft especially rebuilt for the run and utilizing personnel with Pacific operational experience. Efforts were being made to provide daily round-trip flights, and the service was to be militarized and put into operation at an early date.[18]

Even with its ambitious plans, however, the Ferrying Command could not meet the tremendous demands for its service in the Pacific. A month later, with only five Liberators at its disposal for the run to Australia, the Command found cargo and passengers piling up along the route. The situation was further aggravated by the diversion of some of the Command personnel to a project with higher priority, thus disrupting the regularly scheduled flights to Australia. At Hamilton Field, Calif., for example, there were 30,000 pounds of cargo and 25 passengers with priority ratings, awaiting transportation to Honolulu and Australia. Furthermore, at Honolulu there were 100,000 pounds of cargo and 126 passengers with priority ratings, awaiting transportation to

Australia.[19] Obviously, the situation in regard to ferrying service left much to be desired, but it is possible that some of the cargo which was marked for air delivery was not urgently needed, for even after six months of war the Army Air Forces still had no established method of indicating priorities on certain special items.[20]

The shortage of transport planes for the Ferrying Command had its counterpart in the number of such planes available to the U. S. air units in Australia. Of the 11 C-56's which had been purchased in March from the Dutch government, 10 were out of commission in early May, awaiting engine overhaul and spare parts. Since the required parts were not available in Australia, they had to be ordered from the United States; but a period of approximately three months had to pass before the parts could be forwarded.[21]

In addition to the C-56's, the 21st and 22d Transport Squadrons were supplied with 2 C-47's, 4 C-39's, 3 C-53's, 2 B-18's, and 1 B-17C. In early May the squadrons were averaging a total of only seven transport planes in commission daily--a pathetically small number in comparison with the number actually needed in Australia.[22] The planes were required not only for transporting urgently needed supplies and perishable foodstuffs[23] from the ports in southern Australia to the forces in the Northeastern and Northwestern areas, but also for moving the troops themselves into forward areas. In the latter part of May the opportunity presented itself for the tactical employment of air transport. All available transports were diverted from their normal function of delivery of priority parts and equipment to the air units in forward areas and were temporarily engaged in moving armed troops within the

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forward combat zone. While the movement was expected to be completed within three or four days, an additional strain was placed on the transports since the troops would have to be supplied by air.[24] The two transport squadrons then, operating with fewer planes than one squadron ordinarily would require, performed the dual functions of a troop carrier and a ferrying service.

These increased tactical demands added impetus to General MacArthur's request for immediate shipment of an additional transport squadron of 13 aircraft, complete with personnel and equipment. Because of a critical shortage of such planes and engines, however, the War Department could not comply with the request immediately, nor could it promise any relief in the near future.[25] But the need was fully recognized, and plans were made for eventual reinforcement of the transport squadrons in Australia. General Brett, in his report of 8 May, had recommended the activation of two complete groups of four squadrons each, with 13 planes in each squadron, making a total of 104 transports.[26] It was to be more than six months, however, before this request could be filled. By the end of July the activation of two groups was authorized for Australia—one scheduled for November and one for December.[27]

In the meantime, in accordance with a directive from General Arnold on 3 July, Australia was given first priority (after the Troop Carrier Command and the Ferrying Command) in the reassignment of transports other than those allocated in the directive.[28] As a result of this reassignment, 10 DC-3 type planes were available and were ordered to Sacramento Air Depot for reinforcement of floors, removal of seats, and installation of folding benches and long-range tanks.[29] By 3 September,

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eight of the planes had been modified and had departed for Australia; the two remaining were expected to depart within a week. In addition, 10 C-60's--originally scheduled for the British and the Dutch--were scheduled for ferrying to the Southwest Pacific Area as soon as the necessary modifications were completed, which would provide a total of 52 transports in Australia by early fall--exactly half the number of planes requested in the spring of 1942.[30] For more than six months, therefore, the Allied Air Forces had to depend upon the 21st and 22d Transport Squadrons--always inadequately equipped--for the major portion of air supply and movement of troops.

Though the lack of transport planes constituted a handicap, the necessary mobility of the air forces in Australia determined the pattern for the organization of supply and maintenance services. The chief innovation was the divorce of air base groups from their original assignments to tactical units and the consequent assumption of an area responsibility by these groups. Before this reassignment was made, however, the various service and maintenance units of the American air forces in Australia were organized under a new command. On 27 April the United States Army Air Services were created as an integral part of the Allied Air Forces with Maj. Gen. Hush B. Lincoln as commander. Included in this new organization were all air depot and air base groups.[31]

As was the case with the combat units, the service units were faced with the problems of an insufficient number of personnel, a shortage of adequately trained personnel, and an insufficient number of units to meet the operational demands. In some instances, personnel had to

be drawn from tactical units—as the only source—to create service units for immediate use. In addition, a considerable drain on the available enlisted men was caused by the necessity for staffing base sections, servicing details, and other activities for which the existing tables of organization made no provision.[32] The level of experience, moreover, of the majority of supply and maintenance personnel was particularly low. The engineering officers of technical units, according to General Brett, were "almost without exception inexperienced" and lacked the proper knowledge to "train the maintenance crews or inculcate a proper appreciation of their responsibilities."[33]

As a partial answer to the problem of inexperienced personnel, plans were made in March at Headquarters, AAF, to send a sufficient number of competent civilian personnel to overhaul 50 aircraft engines per month, with replacement of the civilians by qualified military personnel to be effected when the latter became available. Although General Brett agreed to this arrangement, he reiterated that according to past experience it was unsatisfactory to mix civilian and military personnel in a war theater. Past experience evidently prevailed over the immediate need, for plans were changed and General Arnold notified General Brett that qualified enlisted men would be sent instead of civilians, though it was not known when the former would be available.[34]

While there was no wholesale shipment of civilian technical specialists to Australia, a small number of factory representatives, especially qualified to supervise work on certain types of equipment, found a real need for their services in the air depot and materiel units. In addition to their advisory and supervisory duties, they managed in most

cases to train numbers of inexperienced men assigned to the units. The status of the factory representatives, however, was never certain, and the men met with various kinds of receptions upon their arrival in Australia. When Headquarters, AAF, in May requested additional trained specialists from the Sperry Gyroscope Company, the company was reluctant to send out more men until their status was clarified. The experience of one of their expert turret engineers in Java and Australia had indicated that some form of military status was imperative in order for the men to be of maximum service and in order for them to have a certain amount of protection. A semi-official status, such as that enjoyed by correspondents with the armed forces, was suggested, and General Harmon--as Chief of the Air Staff--stated that such a standing would be provided.[35]

Apparently there was no immediate clarification of the situation, for one of the specialists from the Curtiss-Wright Corporation, who arrived in Australia on 8 July 1942, had considerable difficulty in establishing himself with the Army Air Services. He reported that "they didn't seem to know what factory representatives were."[36] Finally assigned to the 22d Bombardment Group at Reid River, near Townsville, he found that there were no propeller repair shops and no facilities for propeller overhaul in Australia. Later, working with the 8th Air Base Group at Port Moresby, he helped set up a small propeller repair shop, which consisted of "a couple of benches and a few hand tools under some cocoanut trees."[37] Other factory representatives in Australia were performing similar services and were proving to be a valuable addition to the [redacted] number of qualified military personnel.

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As air operations increased in the Southwest Pacific Area, the actual number of authorized service and air depot units was found to be inadequate. By the middle of April the 1st Aviation Squadron (Provisional) had been activated and stationed at Laverton Airdrome, for the purpose of servicing transient aircraft and the aircraft at Allied Headquarters in Melbourne.[38] The squadron was being supplied with 30 officers and 200 enlisted men from personnel then in Australia, when it was recommended by War Organization and Movement, at Headquarters, AAF, that the squadron be designated the 370th Materiel Squadron (Reduced).[39] General Brett, concurring with this recommendation, soon initiated action which resulted in the inactivation of the 1st Aviation Squadron (Provisional) and the activation of the 370th Material Squadron (Reduced) on 1 May, with the same number of personnel as originally planned.[40] All of this seemingly unnecessary paper work was necessitated by the fact that—apparently unknown to the air forces in Australia—the title of "Aviation Squadron" had been given to units activated in the United States for a different purpose; consequently, a different name had to be assigned to the new squadron in Australia.[41] In addition to the 370th Materiel Squadron, there were eight other similarly-titled units in the Southwest Pacific Area, with the combined personnel of the nine squadrons on 8 May totaling 93 officers and 2,249 enlisted men.[42]

The 4th Air Depot Group, dividing its 41 officers and 617 enlisted men between three widely separated locations, was attempting to carry out functions which normally would require three such groups.[43] To supplement this group—the only one of its kind in Australia—General Brett on 28 April requested authority to activate an additional group.

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He was authorized by radio on 1 May to activate the Headquarters and Headquarters Squadron, 81st Air Depot Group, the 81st Repair Squadron, and the 81st Supply Squadron, using personnel and equipment already in Australia. Five days later General Brett outlined the need for a third air depot group, but the request could not be filled until later in the year.[44]

The 4th Air Depot Group by the end of April was operating at Footscray, Victoria, a central supply depot which controlled the issue of all air force supplies, and in addition the group was operating a branch supply depot at Brisbane and also at Wagga Wagga, New South Wales, where a major repair depot was to be temporarily established. Work was also in progress on a permanent repair and supply depot at Tocumwal. Under the supervision of the group the aircraft erection facilities at Amberley and Geelong were to continue in operation, with personnel of the 2d Materiel Squadron assigned to these depots.[45]

Having only the one air depot group at its disposal at the end of April, the Army Air Services had to resort to the use of the six air base groups as additional branch supply depots. In accordance with its policy as stated in Circular Letter 42-1, the Army Air Services assigned air base groups to certain areas "to function as advanced air branch depots to render general service to all tactical units in the specified area." The groups, therefore, had to be able to service any and all types of aircraft. For example, the 35th Air Base Group, assigned to the Townsville area and stationed at Charters Towers, had to be able to service the A-20's, A-24's, and B-25's of the 3d Bombardment Group, the B-26's of the 22d Bombardment Group, the B-17's of

the 19th Bombardment Group, the P-39's of the 8th Pursuit Group, the P-400's of the 35th Pursuit Group, and any of the odd assortment of planes used by the transport squadrons.

A similar versatility had to be developed by the 22d Air Base Group stationed at Archerfield in the Brisbane area, by the 36th Group stationed at Ballarat in the Melbourne area, by the 8th Group stationed at Mascot in the Sydney area, and by the 46th Group stationed at Daly Waters in the Darwin area. The 45th Air Base Group, stationed at Charleville, Queensland, was not assigned to a specific area, since it was the reception unit for all aircraft which were ferried from the United States to Australia and was responsible for the initial inspection and maintenance prior to delivery of the aircraft to tactical units. These assignments left only the Adelaide and Perth areas (Base Sections 5 and 6, respectively) without an air base group, but air operations were limited in these areas. Five small servicing details were assigned to the Adelaide area, and two were assigned to the Perth area. In the absence of an air base group, any tactical organizations which might be assigned to these areas were to requisition their supplies from the depot at Footscray. Tactical organizations in other areas were to requisition their supplies from the air base group serving the respective areas.[46]

Thus, dissociated from any previously-held connection with tactical organizations, the air base groups in Australia were given the mammoth task of rendering a general repair, maintenance, and technical supply service for all tactical units in the particular area to which the groups were assigned, and, in principle, the groups functioned as if

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the area command in Australia were a base command in the United States. The hope was expressed in the latter part of April that pending the availability of additional personnel, the air base groups might be able to coordinate all matters pertaining to technical supply and also make such repairs as their limited personnel and facilities would permit, including the installation of new engines.[47]

The official integration of supply and maintenance units under one command did not, of course, immediately insure a flawlessly operating organization. While efforts were being made to set up an automatic supply system from the United States to Australia (with the fullest approval of the Army Air Services),[48] efforts were also being made in Australia to establish satisfactory procedures for the requisitioning of supplies. The chief obstacle in the way of the latter was the absence of stock lists among combat units. Parts which were requisitioned by units in Port Moresby, for example, could not be readily sent from depots in Australia, since the requisitioning unit used the manufacturers' part numbers and the depots used only their own stock numbers. It was not unusual for a six-month period to pass before certain items were forwarded from depots.[49] In view of such conditions, it is not surprising that almost complete dependence was placed on salvage for the supply of spare parts.

In addition to supplying spare parts and other technical items, the supply units in Australia had another major concern--the task of providing aviation gasoline and oil. General supervision was exercised by aviation petroleum officers at headquarters in Melbourne, but the

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actual handling of the fuel and lubricating oil was, naturally, within the province of both service and tactical units.[50] Perhaps the shipment of no other item from the United States to Australia caused quite so much duplication of effort as did the supply of aviation fuel. From the beginning of the war, the need for such fuel in Australia had been keenly felt by the air forces. A survey of the situation early in January had revealed that the stocks of 100-octane gasoline in Australia were relatively small and not located strategically. Furthermore, most of the storage capacity was in the southern part of the continent.[51] Bulk shipments from the United States thus had to be unloaded at southern ports, while shipments in drums could go to ports nearer the location of tactical units.

It was the location, rather than the capacity, of the storage which caused the greatest difficulty in supplying the air units in Australia.[52] Rail shipment from the southern part of the continent to the tactical units in the north was almost out of the question, for every change in railroad gauge meant the pumping of fuel from one tank car into another. Transshipment therefore had to be made largely via water, but the situation called for an enormous number of fuel drums. Early in March the Air Service Command was endeavoring to collect 100,000 heavy galvanized drums from available Air Corps stocks for immediate shipment to Australia.[53] It was estimated that beginning about 25 March, 15,000 drums could be made available every two weeks.[54]

Before sufficient stores of gasoline could be sent from the United States, the air units in Australia had to use fuel which was available locally—part of which had been sent from the Netherlands East Indies.

It was soon discovered, however, that the high aromatic content of the gasoline caused rapid deterioration of the aircraft tanks. American production of fuel tanks and of other mechanical parts which would withstand the aromatics was begun.[55] In the meantime, while the units in Australia were suffering the deterioration of aircraft tanks and other essential parts, research and experimentation resulted in a workable solution to the problem. It was found that the 20 per cent aromatic content of Australian fuel could be reduced by blending it with any proportion of American gasoline without harmful effects.[56]

The requests for aviation fuel by the forces in Australia went through several different channels and resulted in considerable confusion and duplication. During the first few months of the Pacific war the requirements of the RAAF were handled largely through London and the British Petroleum Board or through lend-lease from the United States. In addition, certain representatives of American fuel companies in Australia frequently cabled their New York offices the estimated requirements of the RAAF, sometimes including those of the American forces in Australia, and requested action. Through the British Petroleum Mission in Washington, the Office of the Petroleum Coordinator, Foreign Division, received estimates of fuel requirements in Australia, which often included American requirements and which resulted in the diversion to Australia of certain lend-lease shipments destined for England.[57] In addition, the Chief of the Air Corps was directing the supply of fuel to the American air units in Australia, based on their requests made directly to headquarters. To add to the confusion, these requests sometimes included the needs of the RAAF.

In February it had been pointed out that such duplication of effort would undoubtedly cause "a serious drain on the present acute shortage of supplies, inefficient use of cargo space, and concentration of several months' supplies in an area with limited storage facilities.[58] To coordinate these efforts the War Department made plans to establish a Joint Aviation Petroleum Coordinating Committee in Australia, which, in liaison with the Allied Supply Council, was to control the reception, storage, allocation, and distribution of aviation fuel. The committee was also to make monthly reports on stock levels to the Air Munitions Assignment Committee in Washington and to the Petroleum Department in London. These two agencies, working in coordination, would then direct the allocation of fuel and advise their respective commands as to the details of the allocation and shipment.[59] Until the committee could be set up, the Air Service Command coordinated conflicting reports of gasoline requirements as received from Australia with reports received through London by the representatives of the British Petroleum Mission in Washington, the medium of coordination being the Petroleum Products Allocation Committee.[60]

Even by midsummer, however, there was still a certain amount of duplication of effort. Information received informally from the British Petroleum Mission by the AAF in July indicated that the Mission was placing requisitions with the Navy for the procurement and shipment of aviation oil to Australia under lend-lease and, furthermore, that the volume was in the same proportion as the volume of oil being sent by the Air Service Command in lend-lease shipments to Australia.[61] Investigation led to confirmation of the fact that there was a

duplication in the supply of aviation oil. Since a sufficient amount of oil was being sent to the Allied forces in Australia under lend-lease agreements through the requisitions of the British Petroleum Mission, the AAF on 8 August notified the British Petroleum Representative in Washington that it would immediately discontinue shipments of aviation oil to Australia.[62] Thus, after eight months of war, the last wrinkles were smoothed out of the fuel supply situation and a workable system was in operation, with committees in Washington, London, and Melbourne coordinating their efforts. The problems entailed in delivering the fuel to tactical units, however, did not disappear, though they were lessened somewhat by the gradual development of more orderly procedures.

Another service which was vital to air operations in the Southwest Pacific was the gathering and disseminating of weather information. Here, again, there was some duplication of effort until the American and Australian units coordinated the work of their respective forces. General Brett in March had requested that 12 base type weather stations be provided for the air forces in Australia, and 12 units of equipment accordingly were packed and held in readiness by the Signal Corps.[63]

By the first of April the Director of Weather, at Headquarters, AAF, had worked out a plan for weather service in the Southwest Pacific, based upon the military requirements for weather service there and in adjoining areas, the limited number of technically trained personnel available, the requirements of other theaters of operation, and a study of the Civil Meteorological Service in Australia. The plan included the activation of a weather squadron at McClellan Field, Calif.,

which would proceed to Australia as a unit and then disperse to 12 base stations. Each base was to have one officer and 15 enlisted men.[64] In accordance with the plan, the activation of the 15th Weather Squadron (Regional Control) was authorized on 10 April, after Maj. Gen. Dwight D. Eisenhower, Assistant Chief of Staff, had directed on 1 April that as soon as practicable one squadron (regional) headquarters and the necessary cadres for 12 base stations be provided for the Australian area.[65] On 15 April, Maj. James Tweddell was notified that he had been designated as regional control officer and that the detailed plan for weather service was being forwarded to him in Australia.[66]

In the meantime, the U. S. Army Air Services in Australia had a total of 10 officers and 76 enlisted men who were acting as weather observers and forecasters at 19 locations throughout the continent.[67] In addition, the RAAF had a fully organized meteorological service composed of Australian Army personnel and serving the Army, Navy, and RAAF. Organized as an air force command under a group captain in the RAAF, the service was composed of 120 technically trained forecasting officers and a number of trained observers, with additional men who would be in training until December 1942. General Brett reported on 14 May that the plan as drawn up by the Director of Weather, at Headquarters, AAF, could not accurately be based on the former Civil Meteorological Service in Australia, since the details of this service were no longer applicable to the organization then in existence. To supplement the projected 15th Weather Squadron, General Brett recommended that 57 radio operators be sent to Australia, since the contemplated 19 American stations would

require radio equipment and personnel for the interception of Australian synoptic broadcasts. Teletype equipment was requested for communications between the satellite stations and the forecasting centers.[68]

With both the RAAF and the Army Air Services operating weather services, plans were made in Australia for coordinating the units under Allied headquarters. The plans were not officially carried out until June. Under the reorganization the weather staff officer at headquarters, Army Air Services, became deputy director of Meteorological Services, with direct control of the American personnel and equipment through the normal administrative channels of the Army Air Services. The assistant director (RAAF) functioned similarly in respect to RAAF meteorological personnel through the normal Australian administrative channels. The field staffs were divided according to the Australian area system, with the area meteorological officer (either AAF or RAAF) at each area headquarters in command of meteorological service staffs within his area and responsible for providing meteorological services at the Area Combined Headquarters.[69]

By 14 July both the Northwestern and Northeastern Area Meteorological Services had been set up, with two officers of the Army Air Services acting as area meteorological officers. Six stations were operating in the Northwestern Area and 20 were in the Northeastern Area, in addition to the two headquarters.[70] In the meantime, the 15th Weather Squadron, which had been activated in the United States, was being built up to strength. After sailing on 22 June, the squadron arrived in Australia on 27 July, to bring substantial reinforcements for the 10 officers and 82 enlisted men of the Army Air Services who were acting

as weather observers and forecasters in the Northwestern and Northeastern areas.[71]

In connection with its responsibility for maintenance, supply, weather, and other services prerequisite for the effective operation of an air force in Australia, the Army Air Services played a large part in the development and maintenance of suitable airdromes and landing fields in the Southwest Pacific Area. The entire program of air base projects was delayed by the lack of proper tools and equipment, the scarcity of local labor, and the lack of sufficient engineering aviation battalions.[72] The 808th was the only such battalion in Australia. Composed of 23 officers and 816 enlisted men, the battalion in May was engaged in constructing airdromes at Katherine, Northern Territory.[73]

In the latter part of March, a month before the organization of the Army Air Services, a survey of the air base situation had been somewhat discouraging.[74] The existing facilities were so unsatisfactory—especially for heavy bombardment aircraft—and the demands for additional bases were so great that an early beginning of extensive operations was almost out of the question. With a comparatively small force of bombers to cover the expansive areas in Australia, General Brett had to devise a plan of air bases which would facilitate the movement of forces from one section of the continent to another. Since there was the constant threat of enemy attack from both the northwest and northeast, airdromes were being built so that each of these areas could be reinforced by the total number of units assigned to the other area. Such a plan, in brief, entailed the operation of the air

echelon of a squadron from its ground echelon and the organization of a system of airfields and bases for each squadron in both areas.[75]

Under this system of alternate airdromes the air base groups had definite responsibilities. According to the plan as reported by General Brett on 8 May, each combat unit in the Northeastern Area, for example, would be definitely assigned an alternate airdrome in the Northwestern Area. In order for a unit to begin operations immediately upon arrival at its alternate field, the area air base group was given the responsibility of preparing and maintaining the airdrome. Upon receipt of word that the unit was moving in, a "maintenance task force" would proceed at once to the alternate field and would be equipped and prepared to maintain the visiting air echelon for a period of two weeks. All movements and the handling of ammunition, fuel, spare parts, and other necessary supplies, were coordinated in conformity with this general plan. The operation of bombardment aircraft, of course, involved the use of advanced airdromes, most of which had been selected and were either in operation or under construction at the beginning of May.[76]

In addition to those in the advanced zone and in the Northeastern and Northwestern areas, airdromes were also being constructed in the Western, Southern, and Eastern areas--more specifically, behind the industrial centers of Perth, Adelaide, Melbourne, Sydney, and Brisbane, in order to accommodate bombardment aircraft in the event of enemy attack on such centers. The plan of defense also included the strategic location of fields for light bombardment and pursuit aircraft. In the Darwin and Townsville areas, for example, a series of pursuit

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airdromes had been prepared within a 60-mile radius of the towns. Behind these fields were being prepared the light bombardment fields. Beyond this line the heavy bombardment fields were located. But all of the fields were being constructed so as to handle the heaviest type of aircraft, with 5,000 feet of graveled runways being the minimum requirement.[77]

It was expected, upon the completion of all projected bases and advanced airdromes, and the installation of the desired equipment and personnel, that all of the bombardment groups could be moved to any one area upon 24 hours' notice and could begin operations immediately. In addition, the number and location of the airdromes would make possible the accommodation of reinforcements of from 10 to 15 bombardment groups.[78] This was the ideal situation, of course; it was the goal toward which the Allied Air Forces were working in the spring of 1942, but many more months were required for the completion of all the airdromes, the installation of the equipment, and the accumulation of personnel trained for operating the fields. Unquestionably, the peculiar mold of organization for supply and maintenance services in the Southwest Pacific Area was determined largely by the necessary mobility of the air forces; and, although the system did not function perfectly, it nevertheless provided the foundation for more extensive air operations.

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CHAPTER VII

OPERATIONAL EXPERIENCE

In the spring of 1942 the Allied forces in the South and Southwest Pacific, still in the process of organization and establishment, constituted only a potential—not an actual—threat to the enemy. The reinforcement of New Zealand, New Caledonia, the New Hebrides, and the Fiji Islands, as well as Australia, was a part of the Allied strategy of preparing bases for the launching of strong offensive moves against the Japanese. If the enemy had any one main objective, it was to prevent this potentiality from developing into a reality. The first step in carrying out such an objective involved an attempt to cut the lines of communication between the United States and Australia by occupying the islands to the northeast and east of Australia.

With the southward advance of the enemy, it became increasingly apparent that the newly-established boundary between the South and Southwest Pacific areas provided a tactical disadvantage for the Allied commanders. Since the natural line of enemy advance was not encompassed in one area or the other, the situation demanded a high degree of coordination between the two Allied commanders, General MacArthur in the Southwest Pacific and Admiral Ghormley in the South Pacific. Even before the formal establishment of the two areas, however, the American forces in Australia had cooperated in the transshipment of the task force sent from the United States to New Caledonia

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in February. Small numbers of troops under General MacArthur's command, including certain air force units, were to be sent to several island garrisons to the east of Australia during the spring of 1942.

Because of the importance of New Caledonia on the right flank of any defense against an enemy advance toward southeast Australia, General MacArthur was requested by General Marshall in the latter part of April to take immediate steps to provide air support for the Army forces on New Caledonia, under the command of Brig. Gen. Alexander M. Patch.[1] One squadron of the 38th Bombardment Group (M), then in Australia, was designated for transfer to General Patch's command, but the flying echelon of the squadron was still in training in the United States and was not expected to be sent to the South Pacific until the first of June or until its training was completed and its full equipment was supplied.[2] In the meantime, aerial protection for the forces on New Caledonia had to be limited to whatever assistance the Allied Air Forces, concentrated on the east coast of Australia, could provide. In the opinion of General MacArthur, it was too late--as well as too dangerous--to make any direct reinforcement attempt from Australia, in view of the enemy concentrations to the north.[3] Action was expedited, however, in preparing the ground echelon of the bombardment squadron for transfer to New Caledonia; and on 17 May approximately 208 men comprising the 69th Squadron of the 38th Bombardment Group, with its attached 4th Platoon of the 445th Ordnance Company (Aviation), sailed from Brisbane, carrying their unit equipment with them.[4]

Included in the same shipment was the ground echelon of the 70th

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Squadron, 38th Bombardment Group, with its attached Headquarters Section of the 445th Ordnance Company (Aviation), destined for reinforcement of the American garrison in the Fiji Islands.[5] The Fijis were being used as an aircraft staging area and as a naval anchorage. Because of their importance as a link between Australia and the United States, these islands were subject to enemy raids as well as to attacks by major forces. New Zealand had accepted responsibility for the defense of Fiji soon after the beginning of the war in Europe and by May 1942 had stationed approximately 10,000 troops on Viti Levu. At this time the total U. S. Army forces there consisted of 25 pursuit planes and 600 men, including personnel for operation and maintenance of airdromes at Nandi.[6]

To provide for the relief of the New Zealand forces and to insure the continued holding of these strategic islands, the United States on 13 May assumed responsibility for their defense and immediately initiated action to send strong reinforcements to the islands. Under the joint Army-Navy plan approximately 15,000 men of the 37th Division were to begin movement from the west coast of the United States in a six-vessel convoy about 17 May. Also scheduled for eventual shipment to the Fijis were 1,600 Army service troops, Naval forces totaling 1,800 (1,500 for air base detail, including personnel for one aircraft carrier group and for 25 VPB seaplanes, and 300 for local defense of ships and installations), and the flying echelon of the 70th Bombardment Squadron (which was expected to arrive during July).[7]

With the gradual establishment of strong American forces in New

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Caledonia, the New Hebrides, and the Fiji Islands, the prospects of holding the lines of communication between Australia and the United States--and consequently the outlook for the forces in Australia--became much brighter. Only by holding these islands could the Americans be assured of the continued use of the South Pacific ferry route. To make the Allied position even more certain, however, a joint Army-Navy plan was instituted for reinforcing Tongatabu, 500 miles southwest of Samoa and southernmost island of the Tonga group. So long as the line New Caledonia-Fiji-Samoa was held, it was improbable that Tongatabu would be attacked by a major enemy force; but the base could be of extreme strategic importance as an alternate staging point on the South Pacific ferry route, as a fuel base and protected anchorage on the supply line between the United States and the Southwest Pacific Area, and as an outpost preventing enemy attacks from the south on the Fijis and Samoa.[8] It was therefore planned that Army troops totaling 292 officers, 6,189 enlisted men, and 52 nurses, and Naval forces[9] totaling 83 officers and 1,685 enlisted men would sail from the United States about 6 April, while air force units totaling 58 officers and 606 enlisted men were to be taken from the American forces in Australia and dispatched in order to arrive at Tongatabu by 15 May. These air force units were to be accompanied by 25 P-40E's and equipment and supplies sufficient for 30 days' operation.[10]

While the Americans were thus strengthening their lines to the Southwest Pacific Area, the Japanese were intensifying their efforts throughout the area, pouring more reinforcements into certain of their positions

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in the Netherlands East Indies, on the northeastern coast of New Guinea, on New Britain, and in the northern Solomons.[11] Japanese planes were constantly patrolling around Broome and Darwin and were observed as far inland as Alice Springs. Enemy submarine and air patrols were also reported off Sydney, Melbourne, Tasmania, Adelaide, and Perth.[12]

Prematurely, but nevertheless indicative of the trend of events, Foreign Minister Tego on 23 April was reported as telling his people to "tighten belts" in anticipation of the Allied counter-offensive.[13] The Allied Air Forces in the Southwest Pacific, however, were in no position to begin an offensive; as a matter of fact, they were barely able to provide the necessary aerial defense of Australia and of the strategic base at Port Moresby. Before any offensive could be launched, the Allies had to develop a system of air intelligence which would reveal every enemy move in the waters around Australia and in the Bismarck Archipelago. In the absence of photographic squadrons, the 40th Reconnaissance Squadron of the 19th Bombardment Group, operating out of Townsville, had performed most of the photographic and reconnaissance work for the American and Australian forces and also for the naval task forces in that area.[14] B-24's, with their greater range, would have been much more suitable than the B-17's for proper reconnaissance of the vast areas surrounding Australia, but the former planes were not immediately available to the forces in the Southwest Pacific.[15]

The need for properly equipped photographic squadrons had been

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urgent since the days of the fighting in Java, but such units were only in the training stage in the United States. Shortly after the outbreak of war the Director of Photography at Headquarters, AAF, upon his recommendation, was given 100 P-38's which were to be modified by the installation of cameras. A training program was set up at Colorado Springs, and the advance flight of the first unit to be ready for operations was sent to Australia.[16] Flight "A" of the 8th Photographic Squadron was ordered to San Francisco port of embarkation on 26 February and left the United States during the week of 11 March.[17] Four F-4's (P-38E's modified with cameras and two additional 75-gallon tanks) were shipped to Australia, and after erection they were sent to the Townsville area where Flight "A", after arriving on 7 April, was preparing for operations.[18]

Within nine days from the time of its arrival the 8th Photographic Squadron was in operation;[19] but, for a unit which eventually was to prove of inestimable value to the Allied Air Forces, the squadron had a decidedly unpromising and inauspicious beginning. After 10 days the unit had not made one successful photographic flight. One P-38 was missing in flight, another had crashed in a forced landing after the failure of an engine, and the other two planes were constantly having carburetor and electrical trouble.[20] Furthermore, the 75-gallon tanks were hardly sufficient for providing the long range necessary in the Southwest Pacific Area. Tanks of the 150-gallon droppable type were being developed in the United States, but it was not known when they would be perfected and made available.[21]

The situation resolved itself into virtually "a one-man show,"

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with Maj. Karl Polifka taking his F-4, "Faintin' Floozie," on almost daily flights from Townsville to Port Moresby (approximately 620 nautical miles) and then to Rabaul and back to Townsville, a round trip of approximately 2,266 miles. Flight "A" had to operate alone until it was joined on 27 July by the remainder of the 8th Squadron, which had arrived at Brisbane on 16 July after sailing from the United States on 22 June. For more than three months, then, Flight "A", under the command of Major Polifka, carried out daily reconnaissance flights, which included the routine morning "milk run" to Rabaul and the photographing of every enemy airdrome along the northern coast of New Guinea.[22] Photo interpretation detachments immediately disseminated the information gained from these photographs, which, of course, were more accurate than any pilot's observations could be.[23] In addition to the regular photographing of enemy airdromes and enemy movements, Flight "A" also undertook the systematic trimetrogon mapping of New Britain and New Guinea--a long-range project which began with certain priority areas.[24] Flying alone and unarmed in the face of threatened and actual enemy interception, the pilots of the 8th Photographic Squadron became the eyes of the forces in Australia and carried out their routine missions with monotonous regularity--missions which were not publicised but which nevertheless were indispensable to the combat units in the Southwest Pacific.

The growing need for photographic units in all theaters led to a reorganization of reconnaissance aviation in the Army Air Forces.

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On 9 April all existing reconnaissance squadrons were redesignated as bombardment squadrons and assigned as the fourth bombardment squadron of their respective groups, and the photographic section in each reconnaissance squadron was to be transferred to the group headquarters. Each air force was to be assigned a photographic group, consisting of one mapping squadron, two photographic squadrons, and a group headquarters squadron. This expanded program called for the activation of six photographic groups between 1 July and 31 December 1942, but it was not until December 1943 that the 8th Photographic Squadron was assigned to the 6th Photographic Group in Australia.[25]

Under the reorganization the 18th Reconnaissance Squadron, of the 22d Bombardment Group (M) at Townsville, became the 408th Bombardment Squadron (M); the 15th Reconnaissance Squadron, of the 38th Bombardment Group (M) at Ballarat, became the 405th Bombardment Squadron (M); the 13th Reconnaissance Squadron of the 43d Bombardment Group (H) at Laverton, became the 403d Bombardment Squadron (H); and the 40th Reconnaissance Squadron--the famous "Kangaroo Squadron"--of the 19th Bombardment Group, became the 435th Bombardment Squadron (H).[26] All heavy bombardment squadrons in combat condition, however, continued to fly patrol and reconnaissance missions, supplementing the work of the 8th Photographic Squadron.

Allied aerial reconnaissance during the first week of May was responsible for the discovery of a formidable Japanese fleet in the Coral Sea--a discovery which led to a decisive air and naval battle

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and resulted in a major set-back for the Japanese forces. On 4 May a sizable enemy force moved into the port of Tulagi in the southeastern Solomons and quickly overcame the small Allied forces. Allied aircraft, however, in an attack on the Japanese naval force, sank a light cruiser, two destroyers, four gunboats, and a supply ship.[27] Having secured their flank position as a preliminary step toward a larger operation, the Japanese began their next move westward through the Coral Sea. Here, on 6 May, planes of the 435th Bombardment Squadron, on armed reconnaissance missions out of Port Moresby, first contacted units of the enemy fleet.[28] Moving in seven groups, rather than in one, the large fleet was reported to consist of 2 aircraft carriers, 7 cruisers, 17 destroyers, 16 unidentified warships, 2 submarines, 1 submarine tender, and 21 transport ships.[29]

On the basis of information forwarded by reconnaissance units, Allied naval forces moved into the area and on 7 and 8 May were attacked by enemy planes in the vicinity of the Louisiade Archipelago. While 23 Japanese planes were being shot down in this area, Allied carrier-based planes and all the long-range aircraft which could be assembled on the northeast coast of Australia were engaged in bombing the main units of the Japanese fleet. This phase of the action resulted in the sinking of one enemy aircraft carrier and one heavy cruiser and the damaging of one additional ship of each type.[30] On 9 May the remaining enemy ships were observed withdrawing to the north. Throughout these operations Allied planes, topping-up at Port Moresby, continued to attack enemy shipping and installations along the northern

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New Guinea coast and succeeded in sinking additional ships. Besides the 19th Bombardment Group and some of the fighter squadrons, the 22d and 3d Bombardment Groups also participated. In addition to working out of Port Moresby against enemy naval and land targets, the 3d Group ran patrols from Charters Towers east toward New Caledonia from the first of May until the end of the Coral Sea action.[31]

The total enemy losses from this action, as reported on 18 May, included 1 aircraft carrier, 1 submarine, 1 heavy cruiser, 2 light cruisers, 2 destroyers, 4 gunboats, and 2 transports; in addition, an enemy aircraft carrier, submarine, light cruiser, and transport vessel were damaged and over 100 aircraft destroyed.[32] The American aircraft carrier Lexington was lost in the action, along with 1 tanker, 1 destroyer, and 66 planes.[33] Throughout the engagement there was no contact between the opposing naval units; the action was confined to contact between the Japanese and Allied air forces and between the air and naval forces.

Commenting on the part of the Allied Air Forces in the Coral Sea action, General MacArthur expressed the opinion that complete coordination was attained with the naval forces.[34] The coordination, however, seems to have been on the command rather than on the operational level, for some of the planes from the Allied Air Forces bombed certain American naval units largely because the airmen had no information as to the position of the units.[35] In addition to participating in the actual engagement, however, the land-based planes carried out extensive reconnaissance of the Solomons area from New Ireland southeastward to the eastern boundary of the Southwest Pacific Area; in addition

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armed patrols were flown along the New Guinea coast to the Louisiade Islands, thence westward to Port Moresby; in the Coral Sea area west of Tulagi; throughout the Bismarck Archipelago; across the mouth of the Gulf of Carpentaria; and in the Darwin area. Operations were hampered somewhat by unfavorable weather, by the great distances which had to be flown (necessitating the use of bomb bay tanks), by the absence of fighter protection for bombers, and by the unsuitability of high-altitude bombing against moving targets. Perhaps the chief operational lesson from the Coral Sea engagement was that high-altitude bombing by individual airplanes against moving targets was only partially effective and "not economic from the equipment standpoint." While this was a long-established principle in AAF technique and tactics, the small number of bombers which General MacArthur could put into the air at one time made pattern bombing practically impossible.[36]

Despite the reported coordination between the Allied Air Forces and the naval forces of the South Pacific Area during this engagement, the fact remained that the forces in Australia were hampered in any attempts to operate with naval forces, largely because of a lack of information on the location and plans of the latter. General Royce, in a personal letter to General Harmon on 25 May, summarized the situation:[37]

> We do not know where Naval vessels are, . . . what they contemplate doing, nor when; all we know is that sometimes, with only a few hours notice, we are asked to cooperate in some Naval operation. . . . our striking force is now located along the railroad line from Townsville to Glenurry. This necessitates flying the aircraft to Moresby for topping up before they can depart on the raid and flying that same distance back after the raid. This distance

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> varies from 600 to 800 miles. It means that we are using from 3 to 5 hours fuel each way before the airplane ever starts on a mission. This also means that the airplanes must be flown to Moresby so as to arrive at dusk the day before the start of any scheduled mission. It is frequently impossible, therefore, to comply with Navy requests as they do not give us enough time to get to the topping off on the previous evening.

It was believed at Headquarters, AAF, that the most appropriate remedy for this situation would be the enlarging of the Southwest Pacific Area to encompass the entire Melanesian group and to include the Santa Cruz Islands, the New Hebrides, New Caledonia, and New Zealand. Such a move seemed logical, inasmuch as any offensive operation from Australia against the islands to the north and northeast would require concurrent action against enemy installations in the lower Solomons and would thus involve action from the air force units based on New Caledonia and the New Hebrides.[38] No change was made, however, in the boundary lines of the South and Southwest Pacific, since this possibility had already been thoroughly discussed and in the opinion of OPD there was no chance of reopening the issue at that time. It was also believed inadvisable to have instructions issued to the Navy Department for closer coordination with the air units in Australia, since General Marshall was "handling the larger question of Army and Navy cooperation personally."[39]

The action in the Coral Sea had demonstrated--even if imperfectly--that the Allied forces in the two areas could operate together. The achievement of closer coordination was to be a matter of time. This Coral Sea action, representing the thwarting of a major enemy attempt

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to land invasion forces on the southern coast of New Guinea, had also emphasized the need for greater aerial strength in the Southwest Pacific Area. The enemy obviously was determined to take Port Moresby--the key to Allied defense of northern Australia and the stepping-stone for Allied offensive operations throughout the Bismarck Archipelago. The tempo of aerial operations centered on this pivotal point was rapidly increasing, for on eight of the 12 days preceeding 7 May the Japanese carried out heavy air attacks on Port Moresby. In the same period of 12 days, on the other hand, the Allies staged 12 raids on Japanese installations along the northern coast of New Guinea, centering their attention upon the airfields at Lae and Salamaua.

Rabaul, with its several Japanese airdromes and concentrations of shipping, was also receiving its share of attention. From the first all-American raid on Rabaul on 23 February, this enemy stronghold had been one of the most consistently bombed targets in the Southwest Pacific. For several months the 435th Squadron was the only unit in Australia equipped to carry out such attacks. Because of the great distances involved, the bombers had to fly without fighter protection. Typical of these attacks was the one announced by General MacArthur's headquarters on 5 May, when it was stated that Brig. Gen. Martin F. Scanlon had personally led a raid by B-17's which left Rabaul "strewn with blazing wreckage."[40] Actually, this mission, which took place on 4 May, was not executed as planned, for--as frequently happened--

weather interfered with the completion of the objective at Rabaul. On the return trip, however, Lae airdrome was attacked, with all bombs hitting the target area and leaving three enemy planes burning on the ground.[41]

On 5 May another flight took place in the Southwest Pacific, but this action received no publicity. It was a last desperate attempt to carry supplies into the Philippines by air. In a B-17 loaded with mortars, ammunition, and other supplies, Capt. Alvin J. Mueller and Lt. Paul E. Cool, of the 435th Squadron, flew to Valencia Field on Mindanao, hoping to evacuate more personnel after unloading the cargo. For three hours they circled the territory but could get no signal; after running into thunderstorms, the plane had to leave the area without landing. Most of the mortars were thrown out to lighten the plane, but the fliers were forced to land in a lagoon, where they were rescued by submarine on 10 May.[42] By this time the outnumbered, hungry, and exhausted forces under Lt. Gen. Jonathan Wainwright had surrendered to the Japanese after 28 days of fiery siege.[43] The reconquest of the Philippines thus became an even more remote possibility. The immediate task at hand was the halting of the Japanese advance through New Guinea, New Britain, and the Solomons, and the holding of Australia as a base for future offensive operations.

While no attempt can be made here to give even a partial account of Allied air operations during the spring and early summer of 1942, a few facts can be reviewed to show somewhat the nature and extent of operations, as well as the performance of material and men in the Southwest Pacific Area. For the most part, the American units of the

Allied Air Forces were slow in reaching a stage of combat readiness, either because of the lack of planes and facilities or because of the lack of flying personnel. The 43d Bombardment Group (H) and the 38th Bombardment Group (M), for example, had only their ground echelons throughout this period. The first combat crews of the 43d Group did not begin to arrive until July, and--according to Maj. C. H. Diehl, commanding officer--the group was not able to begin combat operations until August.[44]

The air echelon of the 38th Group was originally scheduled to move to Australia shortly after the ground echelon, which left the United States on 31 January.[45] At the last minute orders were changed, moving the 201 officers and 198 enlisted men comprising the combat crews of the group (69th, 70th, and 71st Bombardment Squadrons and 15th Reconnaissance Squadron) from San Francisco port of embarkation to Patterson Field, Ohio, for an intensive training period of approximately one month before proceeding to Australia.[46] Four days after these orders were issued, they were amended to include only 171 officers and 57 enlisted men, with each crew consisting of one officer pilot, one officer co-pilot, one officer navigator, and one enlisted crew chief. The remaining members of the combat crews were to move to Australia in compliance with the original instructions. On 30 March, however, it was further ordered that the remaining combat crew members be unloaded at once and moved to Patterson Field for temporary duty.[47]

In the meantime, the combat personnel who had already arrived

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at Patterson Field were having their troubles with the B-26. Fundamental defects in the design of the plane and the resulting maintenance problems were rapidly weakening the pilots' faith in their planes. Col. Robert D. Knapp, who commanded the 38th Group from its activation date until it reached the port of embarkation, was of the opinion that production of the B-26 should be stopped unless its maintenance and flying characteristics could be improved. In one three-day period in March the 38th Group had seven accidents with the B-26; and, according to Colonel Knapp, the combat crews were becoming so "jittery" from the many accidents among well-trained pilots that they had difficulty in relaxing while flying and were thus more likely to make fatal mistakes.[48]

The 38th Group, accidents and jittery nerves notwithstanding, continued with its training, which on 6 April was expected to be completed by the middle of May.[49] Further delays, however, were to ensue. On 12 April, AAF approval was given to recommendations made by a special board of officers who had conducted a formal inquiry into the B-26 dilemma. In accordance with the findings, all B-26's in the United States were grounded, pending specific release for flying and under such restrictions as might be issued by the Materiel Command. The 57 B-26's then being used by the 38th Group at Patterson Field were to be modified at the earliest practicable date, incorporating all the changes recommended by the special board.[50]

The 38th Group continued its medium bomber training in B-25's and the date for movement to Australia was set for June. Orders were issued, in the meantime, for 87 enlisted men of the group to enter gunnery training schools on 16 May.[51] On 18 May the combat crews

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of the 69th and 70th Squadrons were relieved from assignment to the forces in Australia and were designated for eventual movement to New Caledonia and the Fiji Islands, leaving only the air echelons of Headquarters and Headquarters Squadron, the 71st Bombardment Squadron, and the 15th Reconnaissance Squadron (redesignated the 405th Bombardment Squadron) to be sent to Australia. The air echelon of Headquarters and Headquarters Squadron, after being ordered to San Francisco on 28 June, sailed on 21 July.[52] On 2 August half of the 71st Squadron departed for Australia in eight B-25C's, with the remaining eight planes and crews scheduled to depart the following day. The 405th Squadron, with 16 B-25C's, was ordered from Patterson Field and was scheduled to depart from San Francisco about 7 August.[53] Thus, insofar as combat operations are concerned, both the 38th Bombardment Group (M) and the 43d Bombardment Group (H) can be disregarded for their usefulness to the forces in Australia during the spring and early summer of 1942.

The other medium bombardment group in Australia, the 22d, by the latter part of April was equipped with 80 B-26's and 12 B-25's.[54] Stationed in the Townsville area and composed of the 2d, 19th, 33d, and 408th Bombardment Squadrons, the group was reported by General Brett in early May as "doing well in combat," but the planes were unable to function with one engine gone and, in addition, certain mechanical restrictions forced the planes to operate at low altitudes.[55] Equipped with the original model B-26, the first squadron of the group started operations against Japanese targets in northern New Guinea in the early part of April.[56] [redacted]

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In addition to these land objectives, the group was preparing to operate against naval targets. Since the B-26 was the only Army plane in the Southwest Pacific equipped to carry torpedoes, one squadron of the group was in training for torpedo work.[57] In accordance with arrangements completed by the Army Air Forces with the Navy Department on 17 March, 14 naval officer pilots and nine enlisted pilots, then in Australia, were to be attached to the B-26 group in order to assist in training the crews in the use of torpedoes. The Navy was also to attach technical experts to the 22d Group.[58]

The success of the B-26 against the enemy was attributed by one group member to the fact that most of the crews were well acquainted with the peculiarities of the plane; during the practice maneuvers in Louisiana the men had accumulated a considerable amount of flying time, and the ground echelon had learned how to service the planes under difficult circumstances. The initial success of the B-26 in operations was also partly due to the fact that it was a new type of aircraft to the Japanese fliers, who had to experiment with various angles of approach before finding one which they believed to be advantageous. Seasoned pilots were enthusiastic about the speed and maneuverability of the B-26; in later models heavier armament was installed, giving the plane added protection.[59] Because of the maintenance problem, however, and other difficulties encountered in the operation of the plane, by August of 1942 no more B-26's were scheduled to be sent to the Southwest Pacific;[60] but the 22d Bombardment Group had nevertheless established a record for

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itself in B-26 operations against the Japanese.[61]

The other medium bombardment type in this theater--the B-25--was being used extensively by the 3d Bombardment Group (L), along with its dwindling supply of A-24's. This group, after absorbing the remnants of the 27th Bombardment Group (L) in March, had been able to carry out its first mission on 6 April--a successful attack on the landing strip at Gasmata, New Britain--although some of the more seasoned pilots of the former 27th Group had begun to carry out missions from Port Moresby on 1 April, with their A-24's escorted by the P-40's of the 75 Fighter Squadron (RAAF). By the middle of the month the group had flown its new B-25's to the Philippines for the two-day attack on enemy shipping and installations. Composed of the 8th, 13th, 89th, and 90th Squadrons and stationed at Charters Towers, the group performed numerous reconnaissance, patrol and attack missions out of Port Moresby, sometimes with fighter escort but more ofte unescorted.[62]

According to the experience of the 3d Group, the B-25 proved to be a satisfactory combat plane, its chief disadvantage being the lack of compromise between bomb load and fuel.[63] Modifications were being made in the United States, however, which improved the combat value of the B-25; and the B-25C's which were ready for ferrying in July were equipped with torpedo attachments.[64] Less satisfactory was the A-24 dive bomber, which had too short a range and was especially vulnerable to attack.[65] Since the plane was originally designed for use on an aircraft carrier, little effort was being made in the

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United States to make it suitable as a land-based plane.[66]

When no longer available from the United States, the A-24 was replaced by the A-20A, 42 of which were scheduled for shipment to Australia during March.[67] Considerable difficulty was encountered by the 3d Bombardment Group in getting the A-20's into operation. The two fundamental weaknesses of the plane were insufficient range and insufficient forward firing power. In May the group began to make modifications which eventually eliminated the weaknesses of the plane. Work was started on an experimental basis at Charters Towers to add four .50-cal. guns to the four .30-cal. guns which were already installed in the nose of the plane. Before the experiment could be completed, shops were set up at Amberley Field to make the installations. The range of the A-20 was increased by the use of two 450-gallon bomb bay tanks. A period of approximately three months had to pass before the planes could get into operation, for in addition to the time required for modifications, much time was consumed in waiting for the arrival of necessary parts.[68] Members of the 3d Bombardment Group succinctly described this exasperating situation as follows: "No guns, and finally guns but no solenoids, solenoids and no brackets, brackets and no chargers, and so on."[69] In the meantime, pilots were being trained in the use of the new guns and in the general handling of the A-20.

Like the 22d and 3d Bombardment Groups, the 19th Bombardment Group was located in the Townsville area and, except for the 435th

Squadron, was somewhat slow in getting into operation. After reorganizing at Melbourne, the 28th, 30th and 93d Squadrons had completed their move to Cloncurry in Queensland by the latter part of April, although advance units of these squadrons were carrying out a few patrol missions by the middle of the month.[70] Topping-up at Horn Island or Port Moresby, the B-17's on bombing missions were frequently unable to hit their target because of unfavorable weather, a condition which could not be ascertained before a satisfactory system of meteorological service was established. According to General Brett, up until May the group had been prevented from making a good record because of the lack of spare parts and tools and because of the "burned out" condition of the combat crews who had participated in the Philippine and Java action.[71] In the face of these difficulites, the 19th Group carried out almost daily patrol or bombing missions, despite the fact that some of the squadrons were able at times to get only one plane into the air. In May the 93d Squadron and part of the 28th Squadron moved to Longreach, while the 30th Squadron remained at Cloncurry and the 435th Squadron was still at Garbut Field, Townsville. The units remained substantially in these locations until 24 July, when the entire group --with the exception of the 435th Squadron--moved to Mareeba in northern Queensland. Throughout this period the 19th Group carried the entire heavy bombardment burden in the Southwest Pacific Area and, through several group and numerous individual citations, became one of the most honored units of the Army Air Forces.[72]

The three American fighter groups, along with the 76 Group of the RAAF, were engaged in defensive operations, protective cover

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duties, and attack missions.[73] A study of the operational experience, needs, and losses of these groups, made early in May, provides some revealing statistics on the condition of these units and on the effects of their operations.[74] By this time the groups, as a whole, were equipped with their allotted number of aircraft, including a reserve of 50 percent. More specifically, the 8th Fighter Group had 89 P-39's; the 35th Group had 70 P-400's; the 49th Group had 70 P-40's; and the 76 Group (RAAF) had 81 P-40's, making a total of 310 fighter planes. This number, with the 130 aircraft in storage, assembly, or en route, made a total of 440, the exact number required for 100 per cent T/BA and 50 per cent reserve for the four groups. The Coral Sea action, occurring at the time these figures were being compiled, was expected to cause depletion of all reserve fighter planes by the first of June.

Operational losses were unusually high. During the 120 days prior to 8 May, there was a loss of 399 fighter aircraft, or an average of more than 99 per month. Certain qualifying factors should be taken into consideration, however. In the first place, 30 per cent of these losses were sustained in the ferrying of planes and can be attributed to the inexperience of the pilots. In the second place, the period included the Java operations, when unusually high losses were suffered because of the lack of bases and of supply, repair, and maintenance facilities. According to statistics compiled by the

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British on their operational losses, seven aircraft per month per fighter squadron operating 25 planes was the average--a figure which was believed to represent more accurately the loss under normal combat conditions. On this basis, the four fighter groups in the Southwest Pacific Area would require a total monthly replacement of 84 planes.

While the three American groups were up to their authorized strength in aircraft, they were below strength in personnel--both officer and enlisted. There was a total shortage of 104 pilots and 454 enlisted men. In addition, three fighter sector headquarters, then undergoing reorganization, would require 25 more officers qualified in fighter control and intercept plotting, making a total shortage of 129 pilots. The casualty rate called for an average monthly replacement of four pilots per squadron, or a total of 48 pilots.[75] The actual casualty rate was 57, rather than 48, but because of the Java operations this figure was felt to be slightly higher than it would otherwise have been. The fighter units then in combat areas were suffering a monthly casualty rate of 63 enlisted men per squadron, including both fatalities and hospitalization. It was found that approximately 25 per cent of this number would be returned to duty within 30 days, thus leaving a monthly replacement figure of 45 enlisted men per squadron, or an estimated total of 180 enlisted replacements for each fighter group in a combat area.

In addition to the specific numbers required to bring the fighter units up to authorized strength, certain other factors were found to be necessary in order to reduce losses and to maintain the highest morale, training, and combat efficiency. Many of the losses had resulted from the necessity of using inexperienced personnel. Since the

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squadrons arrived in the theater with only cadre strength, they were filled up with inexperienced personnel; and the pressure of the enemy did not allow time for sufficient training for combat. Hence, it was considered essential that all personnel be thoroughly trained before joining the fighter units.[76] It was further recommended that a recreational center for pilots be established in the zone of the interior, since the operations in the Southwest Pacific Area had "definitely proven that a pilot left in the combat area for any length of time is a casualty."[77] Ideally, an entire unit would be relieved from the combat zone after 30 days of intensive action. Actually, the limited number of fighter units which were ready for operations in the spring of 1942 did not allow for the immediate establishment of a rotation system in this theater. A final recommendation as a result of the study of fighter groups was that a ferry command of experienced pilots be provided for ferrying aircraft from the assembly point to the combat zone.

While the fighter units, as a whole, had to operate under unfavorable conditions, the groups nevertheless turned in creditable performances against the Japanese. The 49th Fighter Group, commanded by Col. Paul B. Wurtsmith, achieved notable success against the enemy in the Darwin area. From 7 April until 23 August (the date of General Royce's departure from the theater) the group downed 64 enemy aircraft, with a loss of only 16 P-40's.[78] According to General Royce, credit should be given the 49th Group for twice this number, for many more Japanese planes were undoubtedly lost in

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the 500-mile over-water flight back to their base, as a result of mechanical failures, lack of fuel, and damages sustained in combat.

The 49th Group had been the first of the three American fighter groups in Australia to get into operations, moving into the Darwin area in mid-March. From 17 March to 5 May, the group operated from several landing strips, using the standard type of interceptor control, against Japanese T-97 type bombers and navy Zero fighters. During this period, maintenance procedures were established and tactics against the enemy were worked out. Part of the success of the group was undoubtedly the result of careful maintenance. For example, every third night all guns were dropped and completely stripped, oiled, and polished; gun failure was thus reduced to a minimum. Furthermore, all belted ammunition was unbelted each night and each round was oiled, polished, and rebelted; also all gun openings were carefully sealed as a protection against dust and sand.[79]

The frequent enemy air attacks on Darwin gave the group ample opportunity to develop optimum tactics. One of the most successful engagements with the enemy occurred on 25 April, when Allied pilots--with no loss to themselves--shot down 11 out of 33 planes which attacked Darwin. One squadron of the 49th Group accounted for 10 of the 11 planes in this fourteenth raid on Darwin.[80] The tactics which were developed in such interceptions were determined largely

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by the characteristics of the P-40. Because of its slow rate of climb and inability to operate at high levels, the P-40 had to be used in hit-and-run tactics against enemy fighters. On all encounters with bombers the P-40's were climbing to meet the enemy and were therefore in a poor position to attack the bombers; in many interceptions the fighters found Japanese bombers at 30,000 feet, 5,000 feet above the operational level of the P-40.[81] Attempts at interception were thus not always successful.

The 75 Fighter Squadron (RAAF) was having a similar experience with the P-40. Operating out of Port Moresby, the squadron by 11 May had destroyed approximately 50 enemy aircraft, with a loss of only 15 P-40's and four pilots as a result of enemy action. All P-40 squadrons in this theater--including those provisional squadrons operating during the Java campaign--had maintained an average of three to four enemy aircraft downed for every P-40 lost, but the pilots were always operating against superior odds and in a fighter plane which could not always reach the level of enemy aircraft. At medium altitudes, 10,000 to 18,000 feet, the P-40 was estimated to be 40 to 50 miles faster than the Zero fighter and was considered an excellent anti-bombardment fighter; above 18,000 feet, however, the performance was sluggish. The rate of climb, moreover, was considered too slow at all altitudes, and the wing loading was too high to allow maneuvering with enemy fighters.[82]

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Similar difficulties were encountered with the P-39, although this plane was slightly later in getting into combat than the P-40. Two American fighter squadrons moved into Port Moresby in late April to relieve the RAAF units which had been literally used up in combat.[83] On 30 April and 1 May the P-39's of these two squadrons received their baptism of fire in combat with the Japanese. Lt. Col. Boyd D. "Buzz" Wagner, who had distinguished himself during the early days of the war in the Philippines, participated in this action and forwarded to the Commanding General of the Allied Air Forces a full report which represented the consensus of the pilots participating in the two missions.[84] The report is of more than passing interest, for it reveals not only the actual details of the encounters, but also the reactions of the pilots after their first combat, and their conclusions as to their own planes and those of the enemy.

According to Colonel Wagner, 13 P-39's took off from Port Moresby on 30 April for a ground strafing mission against Lae airdrome, 180 miles north. In order to avoid detection the planes made the approach to Lae from 50 miles out at sea at a height of approximately 100 feet. At about 20 miles out, four planes were sent ahead for the purpose of engaging the enemy security patrol over the airdrome. The enemy patrol was drawn off to the east of the airdrome, and the P-39's encountered no air resistance during the strafing. From the sea approach the fighters, flying in 3-3-plane element, strafed a line of 13 to 15 enemy bombers, meeting only inaccurate gunfire and antiaircraft fire during the attack. Several Zeros then appeared, attacking four P-39's from

[redacted]

above. Immediately dropping the belly tanks and opening the throttles, the pilots of the P-39's began to pull away from the enemy planes. Then more Zeros appeared, making a total of 12 or 13 altogether. The entire formation of strafing P-39's turned back, since the four planes were hopelessly outnumbered. The result was a fierce low-altitude dogfight (between 50 and 1,000 feet) which continued about 30 miles down the coast and then back again. Four Zeros and three P-39's were shot down, but all three pilots of the latter were safe upon landing--either parachuting or crash-landing on the beach. The Zeros went down in flames, indicating the lack of leakproof gasoline tanks.[85]

On the following day 12 P-39's intercepted a formation of 10 enemy 97-type bombers, escorted by 8 Zeros. The P-39's, in two waves of 7 and 5, attacked the bombers head-on and shot down 3 before the Zeros entered the fight. Two Zeros were then shot down by cannon fire in head-on attacks, and one P-39 was shot down in flames.

On both days the Japanese fighter-pilot teamwork was described as excellent. Apparently flying in a three-ship stagger formation, the second plane kept a distance of about 100 yards behind the leader, while the third plane stayed the same distance behind the second. The flights were ragged, with all planes except the leader weaving loosely. Very definite tactics were followed in attacks on a single P-39, when all Zeros except one (which attacked from the rear) placed themselves on either side, even with and slightly above the P-39, in an attempt to "box" the plane. First one Zero and then another would get into

position behind the P-39, firing intermittent bursts for about 10 seconds, then zooming up to either side to be replaced by the most forward plane on that side. The firing was inaccurate especially at long range, while the P-39 was "roughly slipping and skidding violently" in evasive tactics.

The reactions of the P-39 pilots after their first engagement with the enemy were remarkably alike. Most of the pilots vividly remembered their first and last "shots," but few could accurately recall what occurred in the interim. Psychologically, the effects of this initial action were "consistent--a deep feeling of the seriousness of fighter combat, and a keen anticipation for the next combat mission." All the pilots, moreover, were "impressed with a thorough respect and admiration of the flying qualities of the Zero fighters."

The pilots also made some discoveries about their own planes. It was already known, of course, that the P-39, like the P-40, was not able to perform effectively above 18,000 feet and that its rate of climb was slow. The 37-mm. cannon was found to be an extremely desirable weapon, but "bugs" still had to be eliminated; stoppages in air were frequent and it was difficult to reload and recharge during combat because of the high loading and charging forces.[86] In performance against enemy aircraft in the two engagements on 30 April and 1 May, the P-39 was described as excellent and as approximately 10 per cent better than the P-40 in every respect except maneuverability. The greatest weakness of the P-39 was felt to be in the lack of rear armorplate protection for the engine, which increased the vulnerability of the plane. All the P-39's shot down "were hit in the engine and

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coolant system."[87] It was further discovered that the hydraulic propellors threw oil on the windshield, causing poor forward visibility. Immediate attempts to stop the oil leakage by the installation of a new type of gasket were only partially successful. Other cases of malfunctioning were found in the landing gear, nose gear, and radio equipment.[88]

Always fighting with the knowledge that their aircraft could not compete with the enemy at high altitudes, the fighter pilots in the Southwest Pacific nevertheless used their weapons to the best advantage. By the end of May the planes had made much progress in wresting air superiority from the Japanese over Port Moresby, although rarely more than 20 planes could be put into the sky at one time.[89] By this time General Scanlon, heading Air Command No. 2, had moved to Port Moresby and had somewhat revised the use of the fighter planes. He had abandoned the P-39 strafing raids on Lae and Salamaua airdromes, because of losses which were considered excessive in the early attacks on these objectives.[90] Escort missions to these objectives were also abandoned as impracticable (in view of the distance and the inadequate fuel capacity), thereby reducing the fighter operations to patrols and interception of enemy attacks in the vicinity of Port Moresby. Along with the concentration on aerial defense of Port Moresby, the ground defenses had been considerably improved, as the enemy discovered on 25 May. The Japanese had radioed their promise to attack Port Moresby on

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this date and they advised Allied evacuation. Attacking as had been promised, the Japanese met searchlight batteries for the first time, along with heavy antiaircraft fire, in contrast with the situation several months before when there was no antiaircraft defense and when enemy planes could spend hours in selecting choice targets.[91]

The fighter squadrons at Port Moresby, however, had been operating under the most exacting conditions. The 35th Squadron (of the 8th Fighter Group), less two flights, was based at Twelve Mile Airdrome (12 miles from Port Moresby), while the 36th Squadron of the same group, with two flights of the 35th Squadron, was based at Seven Mile Airdrome. Attached to each squadron was one flight of P-400's and pilots from the 39th and 40th Squadrons of the 35th Fighter Group.[92] Many of the pilots had been flying three to six hours a day on operational missions for periods in excess of one week, without relief. Each squadron had only 26 pilots (although the T/O called for a minimum of 35) and at the end of May was able to keep only 18 to 20 aircraft in commission. Both squadrons were controlled by "Visual from a ground alert status," and on every alert all available aircraft were put into the air, since it was considered too dangerous to leave planes on the ground during enemy raids. While such action may have protected the planes, it placed a terrific strain on the fliers, for sickness often reduced the number of available pilots to the point that every pilot was on the alert 12 hours every day. The result, of course, was fatigue and undue tension. The ground personnel, while believed adequate, also suffered from general fatigue as a result of the type and intensity of operations.

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An organizational problem was entailed in the fact that no provision had been made for a tactical headquarters to coordinate the work of the two squadrons. While General Scanlon was in command of all air units in the area, he had no fighter operational staff. A minimum staff, consisting of a supply officer, an operations officer, and four to six clerks, was not only desirable, but was essential. Absence of such a staff had resulted in uncoordinated action by the squadrons, through no fault of the squadron commanders; mutual agreement was simply a poor substitute for the proper coordination which could be provided by a higher headquarters. Briefing before missions was haphazard and was often relayed from one squadron to another. Especially needed was a supply officer, who could take care of the unloading, storing, and distributing of supplies--tasks which were then being performed by the already overworked ground crews. The total effect of this lack of organization and shortage of needed personnel was the lowering of efficiency and morale.

In the opinion of Lt. Col. Frederic H. Smith, Jr., not only did these conditions need to be rectified, but a definite plan was needed to rotate the six fighter squadrons then available for combat in this area. In the first place, it was recommended that the 39th and 40th Squadrons of the 35th Fighter Group (then at Townsville) relieve the 35th and 36th Squadrons, which in turn would relieve the 80th Squadron (of the 8th Group) at Brisbane and the 41st Squadron (of the 35th Group) at Sydney. The 80th and 41st Squadrons then in turn would proceed by rail to Townsville, arriving in time to replace

the 39th and 40th Squadrons on the day of their move to Port Moresby. While the exact details of these recommendations may not have been followed, the 35th and 36th Squadrons were eventually relieved of their assignment at Port Moresby and by early July they were stationed in the Townsville area. The 39th and 40th Squadrons, moreover, were at Port Moresby; the 80th and 41st Squadrons were both in the Brisbane area, the latter having moved from the Sydney area.[93]

While organizational problems--as they related to operations--were being worked out, requests were continually being made from the Southwest Pacific Area for the assignment of fighter aircraft which could equal the climbing power and operational altitudes of enemy aircraft. Japanese fighters had been quick to take advantage of the P-39 and P-40. In this regard, Colonel Wagner reported in the latter part of May that

> . . . there has seldom been an even fight between Japanese Zero type fighters and our own. Only by virtue of armor plate protection, leak-proof fuel tanks, and ruggedness of construction of our fighters, has there not been a great many more of our pilots killed and airplanes destroyed. Our fighter pilots have proven their courage and ability to fight continuously against superior odds and still maintain a very high morale. This high morale, however, has been with fighter pilots a forced one, with the knowledge that Japanese fighters would be just as high above tomorrow as they were today, and that the first enemy combat would be an attack from above out of the sun.[94]

At this time the P-38 and P-47 were the only U. S. planes in production which incorporated the features needed in the fighter planes in the Southwest Pacific Area, but commitments on these planes did not allow for any to go to this theater.[95] It cannot be concluded that the need for such planes was not recognized at Headquarters [redacted]

AAF, but rather the needs elsewhere were considered greater. Efforts were put forth to make some early provision for P-38's to go to the Southwest Pacific, but no arrangements could be worked out. The Director of Air Defense, for example, urgently recommended that a minimum of one group of P-38's be provided in Australia, without increasing the total number of groups assigned to that area. It was suggested that the P-38's be sent as replacements, at the rate of 65 per month. Once a total of 120 P-38's had been assigned, approximately one third of the 65 required each month for attrition could be P-38's. The Director of Air Defense believed that the assignment of P-38's to Australia was of sufficient importance to justify the assignment of P-39's--rather than P-38's--to one of the groups in the Western Defense Command.[96]

No relief, however, was immediately forthcoming for the fighter units in Australia. As stated in June, the contemplated employment of six P-38 groups in the Eighth Air Force, in conjunction with photographic requirements, left no surplus of this type of plane for use in Australia in the immediate future. A faint promise was held out in the highly provisional statement that P-38's might be available for use in Australia early in 1943 if 100 per cent of the production estimates were realized and if conversion of the British 322-61 model were effective.[97] Fortunately, however, arrangements were finally made for the beginning of a slow trickle of P-38's to Australia, starting with 25 in the month of July, with the same number allocated monthly for August, September, and October, and 10 for each of the succeeding months.[98] While these numbers were considerably below those recommended by the Director of Air Defense,

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they nevertheless were a token of the commitments which eventually would be increased as production and availability would allow.[99]

The whole problem of aircraft allocations and commitments, as well as replacements, was clouded with an aura of uncertainty during the early months of war. Replacements for the forces in the Southwest Pacific, for example, were affected by the urgency of the situation in other theaters. Similarly, as noted above, allocation of certain types of planes to the Southwest Pacific could not be made because of commitments to other theaters. As to priorities, of course, it was no secret that in Allied strategic plans the Pacific theater occupied a secondary role to the European theater.

Even with this established policy, however, certain operations in the South and Southwest Pacific demanded additional attention in the matter of aircraft allocations and replacements. In June and July, for example, the replacement of B-17's in the Southwest Pacific was considerably behind schedule, and the pending offensive to be launched by the forces in the South Pacific, supported by the forces under General MacArthur's command, was of sufficient importance to require special arrangements for facilitating the delivery of the heavy bombers.[100] Two B-17F's had already been deducted from commitments to the Southwest Pacific and assigned from July production to the South Pacific.[101] June and July attrition replacements amounted to 30 B-17's, but armament modifications and long-range tank installations on the last planes were not scheduled for completion until about 10 August. By using 10 B-17's which were then being modified, a total of [redacted] bers could be

made ready by the first of August, but the use of these 10 B-17's would delay the delivery of the final 10 planes for the 92d Bombardment Group, then at Bangor, Me., but scheduled for movement to England.[102]

General Arnold, however, was strongly opposed to such a plan, and he clearly stated his objections on 20 July.[103] In the first place, he reiterated that the South and Southwest Pacific did not comprise a major theater of operations. In the second place, by sending the B-17's to General MacArthur's forces as suggested in the plan, a group would be delayed in reaching England. In the third place, it was General Arnold's opinion that the 10 planes would be far better employed against targets in Germany than against objectives in the South and Southwest Pacific. Finally, General Arnold objected to the suggested solution of the problem because the constant change of plans for getting planes to the Eighth Air Force "gives everybody the idea that we have no major objective and are so uncertain of our mission that we vacillate with every new demand from any point of the compass."

The demand from the Southwest Pacific, however, was not a new one, nor was it unreasonable. It was merely the minimum number of B-17's which were necessary for replacements, and the General Staff felt that the situation called for positive action.[104] In spite of General Arnold's strong case, General McNarney, Deputy Chief of Staff, approved the plan for delivering the required number of heavy bomber replacements to the Southwest Pacific, and it was directed that the commitment resulting from such approval be regarded as "an immutable requirement."[105]

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Thus went the struggle at Headquarters, in apportioning the limited number of available aircraft among the theaters of operation. Perhaps no American or Allied commander had the desired—or even the necessary—air strength at his disposal during this period of the war; but until the production of aircraft could approximate the level of demand, the strength in most of the theaters could not be increased. In July the existing strength of aircraft in the Southwest Pacific was certainly insufficient for carrying out offensive operations and was barely sufficient to hold the Japanese to the line of their advancement and to prevent them from expanding in the Solomon Islands.[106] Because of the small number of bombers, only harassing operations could be carried out against enemy installations. In the words of General Brett, the Allied Air Forces were doing everything within their power "to pin the Jap to the ground and prevent his building up a force with which he could start offensive action. We hope, also, through these operations to deplete his forces in such a way that when we are ready to take up the offensive we will have so much less opposition."[107]

The number and type of aircraft available to forces in the Southwest Pacific, however, had a definite effect on the morale of the fliers. Bomber crews, for example, conscious of the inadequacy of the number of planes, felt that they were being needlessly sacrificed, since with a sufficient number "they would have complete mastery over the enemy in this area."[108] Because of the great distances which had to be flown before the bombers could reach enemy targets in New Britain and New Guinea, there could be no fighter protection—a situation for which a sufficient number of bombers would provide some compensation. By July

the casualty record of bomber crews was described as "large and constantly increasing."[109]

Fighter pilots, of course, were not entirely satisfied with the aircraft at their disposal. They had "a feeling of hopelessness in their inability to outclimb and out-maneuver the enemy."[110] Probably not one of the pilots, however, was willing to exchange his P-39 or P-40 for a plane exactly like the Zero, for the Japanese model sacrificed a certain amount of armament and protection for greater maneuverability. With the gradual supply of P-38's, the morale of fighter pilots was improved, for these planes could climb to the level of the enemy fighters. In addition, the twin-engine design was to give the pilots added security, for with one engine shot out the other engine could bring them home.

Other factors affected the morale of the men of the Army Air Forces in Australia. Many of the fliers had been in combat since the beginning of war and there had been little relief for them. The personnel shortages, as well as dengue fever and malaria, reduced the number of crews to a minimum, and relief of the crews either would have been impracticable or would have resulted in grounded aircraft.[111] With no definite policy on the relief of combat personnel, the men had nothing to look forward to. Efforts had been made by Headquarters, AAF, early in the spring to exchange some of the experienced crews for inexperienced ones, but American commanders in Australia felt that no exchange could be made because of the lack of training facilities in Australia and because of the urgent need for experienced personnel in that theater.[112]

By the end of July, however, arrangements were being made to permit the interchange of combat personnel among Australia, the South Pacific, and Hawaii, thus allowing personnel from the more active combat areas to have a tour of duty in a quieter area and, on the other hand, giving less experienced crews a chance to get into action.[113] The specific handling of individuals in the various theaters, of course, was a matter for the commanders concerned, but the hope was expressed at Headquarters, AAF, that Maj. Gen. Millard F. Harmon, new commander of Army Forces in the South Pacific, and Maj. Gen. George C. Kenney, shortly to replace General Brett, would be able "to overcome the objections previously raised by Gen. MacArthur to the exchange of Air Forces personnel."[114]

The feeling of futility on the part of fliers in the Southwest Pacific was further accentuated by the fact that promotions were slow in coming through. Many of the officer personnel who had been pilots, navigators, or bombardiers for more than six months were still second lieutenants.[115] These men were conscious of the fact that friends of theirs at home, who were "merely sitting on the ground or chasing submarines," were being promoted at a much faster rate.[116]

A third chief cause for complaint was the control exercised by the Australians. As the American air units increased in size and efficiency, they were able to depend less upon the Australians for certain basic services and they came to resent Australian control of their activities. General Richardson, on his tour in the Southwest Pacific in June and July, heard "reclamors and complaints" in regard

to this situation at every station he visited. He found that the system of organization which placed Americans directly under the command of the Australians was deeply resented by officers of all ranks.[117] There was no resentment of the Australians themselves, but merely of the system of control. Relations between the Australian and American forces, on the whole, were reported to be excellent; and American fliers had the utmost admiration and praise for the members of the RAAF, not only those who proved their combat worth at Port Moresby, but also those who trained as co-pilots with the American units.

Clearly, the time was ripe for a change in the organization—a change which would allow the American and Australian forces to retain their integrity and at the same time to coordinate their action. The 5th Air Force—a designation which had been given to the Far East Air Force on 5 February—still existed, but only on paper.[118] After some of those air units in the Philippines had been returned (on paper) to the United States, the designation "5th Air Force" was to be given to the American components of the Allied Air Forces, under a reorganisation in the late summer and fall of 1942. Until this time, however, the Allied Air Forces continued to operate under substantially the same organization which had been established in the spring of 1942.

Until he was relieved by Maj. Gen. George C. Kenney on 4 August 1942, General Brett had admirably commanded the air forces in Australia and had guided them through the painful but necessary period preliminary to extensive operations. Organizing the Allied Air Forces had not been an easy task, and it was to General Brett's credit that the forces

operated as smoothly as they did. The organization had served its purpose, and eventual changes were no reflection upon the early commanders. Those changes were to come about as a natural result of the growth of the American forces in Australia. Fighter and bomber commands, for example, were shortly to put in their appearance, as evidence of the expansion and reorganization of the air units in the Southwest Pacific. The operation of the American units as a separate air force during the spring and early summer of 1942 obviously had been outside the realm of practicability and possibility.

Not only the organizational picture, but the tactical situation was rapidly changing in the summer of 1942. Throughout the month of July plans were being completed for the beginning of the first offensive to be launched in the South Pacific Area. Admiral Ghormley flew to Australia on 7 July for a two-day meeting with General MacArthur, when plans were made for cooperative use of their respective forces.[119] With "D-Day" set for 7 August, the two forces were shortly to demonstrate—with landings in the Solomons and aerial operations throughout the general area—that the South and Southwest Pacific forces could achieve a high degree of coordination and that the Allies had finally passed the purely defensive stage of the war in this section of the Pacific.

In the meanwhile, the enemy was doing his share to change the tactical picture, for on 21 and 22 July heavy forces were landed near Buna, on the northern coast of New Guinea, and by the end of the week the Japanese had penetrated approximately 30 miles inland and were in contact with Allied patrols. At the same time, Allied forces in Australia were

generally looking toward a northward movement, with both the enemy and Allied forces seemingly converging upon the pivotal point of Port Moresby.

In keeping with the development of more extensive combat operations to the north, Allied headquarters moved from Melbourne to Brisbane on 20 July.[120] The 19th Bombardment Group was moving to Mareeba, farther north in Queensland. The squadrons of the 8th Fighter Group remaining in the Brisbane area were preparing to move to the Townsville area, while the remaining squadrons of the 35th Fighter Group were to join the units of that group already at Port Moresby. Furthermore, as the tempo of operations increased, the entire 8th Air Base Group was preparing to move to Port Moresby.[121] The Allied Air Forces were thus entering into a new phase of operations as well as of organization.[122]

Briefly, in retrospect, the problems which had developed in the organization of the Allied Air Forces were only those which could normally be expected in the establishment of a workable and mobile air force, but those problems had been accentuated by the great distance from the United States to Australia, by the peculiarities of the continent of Australia and surrounding territory, and by the demands of other theaters of operation and of the training program in the United States. From December 1941 to August 1942, the American forces in Australia had succeeded in building a foundation for the air force which eventually would be able to take the initiative in clearing the enemy from the Southwest Pacific Area. This early period was merely the prologue for the greater drama which shortly was to unfold, yet

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these eight months enveloped a microcosmic drama in themselves. The Allied Air Forces, in this period, had tasted the bitter drags of defeat and, on the other hand, they had experienced a few colorful but fleeting moments of triumph, with both extremes displayed against the somewhat drab but necessary background of erecting airdromes and facilities for operations, establishing a system of supply and maintenance services, and setting up organisational and operational procedures.

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GLOSSARY

AAF	Army Air Forces
AAFNEA	Allied Air Forces, Northeastern Area
AAFSAT	Army Air Forces School of Applied Tactics
AAG	Air Adjutant General
AC	Air Corps
AC/AS	Assistant Chief of Air Staff
ACFC	Air Corps Ferrying Command
AFAAP	AC/AS, A-1
AFABI	AC/AS, A-2
AFACT	AC/AS, A-3
AFADS	AC/AS, A-4
AFAFC	Ferrying Command
AFCAS	Chief of the Air Staff
AFCC	Air Force Combat Command
AFDAS	Deputy Chief of Air Staff
AFDMR	Director of Military Requirements
AFDOP	Director of Personnel
AFHHI	Historical Division, AC/AS, Intelligence
AFRAD	Director of Air Defense
AFRIT	Director of Individual Training
AFROM	Director of War Organization and Movement
AFTSC	Director of Communications
AG	The Adjutant General
AGWAR	The Adjutant General, War Department
ASC	Air Service Command
CG	Commanding General
CINC	Commander in Chief
G/C	Group Captain (RAAF)
GHQ	General Headquarters
GO	General Orders
MA	Military Attache
MILID	Military Intelligence Division, War Department
msg.	message (radiogram or cablegram)
NEI	Netherlands East Indies
OCAC	Office, Chief of the Air Corps
OCAR	AC/AS, Operations, Commitments, and Requirements
ONI	Office of Naval Intelligence
OPD	Operations Division, War Department General Staff
QMG	Quartermaster General
RAAF	Royal Australian Air Force
RDF	Radio Direction Finder
SO	Special Orders
SOS	Services of Supply
SWPA	Southwest Pacific Area
TAG	The Adjutant General
T/BA	Table of Basic Allowances
USAFIA	United States Army Forces in Australia
USAT	United States Army Transport
USNT	United States Navy Transport
W/C	Wing Commander (RAAF)
WD	War Department
WDGS	War Department General Staff
WPD	War Plans Division, War Department General Staff

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NOTES

Chapter I

1. "Biennial Report of the Chief of Staff of the United States Army, July 1, 1941 to June 30, 1943, to the Secretary of War."

2. Maj. Charles E. Shelton, "Our Pacific Sky-lane," Air Force, XXVI, No. 7 (July 1943), 10.

3. AG 580 (10-5-39)M-WPD, 12 Dec. 1940, cited in memo for Chief of Staff by WPD, 21 Feb. 1941, in AAG 600, Misc., East Indies. As early as 1934 Gen. Douglas MacArthur, while Chief of Staff, had suggested the possible necessity for getting airplanes to Hawaii and the Philippines. In explaining to the House Military Affairs Committee the development of the GHQ Air Force plan by the General Staff and the proposed use of the larger air force, General MacArthur stated that the planes were to be concentrated in the United States but that he contemplated the use of them in any emergency wherever it might be necessary, even in Panama or Hawaii. In fact, he stated, "I am not even so sure you could not get them over to the Philippines. You might have to do it in jumps--to Hawaii, Guam, and Luzon. But I would throw them to any place where necessity arose." Frank C. Waldrop, MacArthur on War, Appendix A, 410.

4. 3d Ind. [AG 580 (10-5-39)M-WPD, 12 Dec. 1940], OCAC to TAG, 3 Feb. 1941, in AAG 600, Misc., East Indies.

5. Ibid.

6. Memo for Chief of Staff by WPD, 21 Feb. 1941, in AAG 600, Misc., East Indies.

7. 3d Ind., OCAC to TAG, 3 Feb. 1941.

8. Memo for Surgeon General by Sec. of Air Staff, 1 Dec. 1941, in AAG 361 B, Air Routes.

9. R&R, OCAC, Intelligence, to A-2, 15 Oct. 1941, in AAG 000-800, Misc., Australia.

10. Memo for Sec. of War by Chief, AAF, 26 Nov. 1941, in AAG 312.1 B, Classes of Correspondence; memo for Surgeon General by Sec. of Air Staff, 1 Dec. 1941, in AAG 361 B, Air Routes.

11. R&R, Operations Div. to Communications Div., 12 Dec. 1941; R&R, Chief of Air Staff to OCAC, 15 Dec. 1941, in AAG 361 B, Air Routes.

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12. Arnold to Brereton, AF #1/253, 15 Jan. 42.

13. Fellers to TAG, #638, 22 Jan. 42.

14. Memo for Sec., General Staff, by Chief of Air Staff, 5 Feb. 1942, in AG 580.81 (12-26-41), sec. 1.

15. Adams to CG, USAFIA, Melbourne, AF #2/241, 14 Feb. 42.

16. Adams to CG, USAFIA, Melbourne, #328, 16 Feb. 42; memo for Col. Mosley, Foreign Div., ACFC, by Brig. Gen. Robert Olds, 13 Feb. 1942, in Air AG 686, Southern Ferry Route.

17. Brett to TAG, #465, 3 Mar. 42.

18. Emmons to TAG, #1434, 28 Dec. 41.

19. Emmons to AGO, #1567, 6 Jan. 42; Adams to Emmons, #904, 7 Jan. 42; Emmons to TAG, #2371, 20 Feb. 42; Shelton, "Our Pacific Sky-lane," 10.

20. The following summary of conditions en route, taken from a report of a trans-Pacific ferry pilot, will give some indication of the status by the end of January 1942:

Palmyra Island had a runway of 5,000 by 300 feet, with clear approaches in all weather and with three usable revetments. Night landing facilities were inadequate (only flare pots were available). Other facilities were: a homing station, a Navy meteorological station, minor repair facilities, adequate 100 octane gasoline and 120 aviation oil, housing and messing facilities for 30 officers and 150 enlisted men, and adequate food stores.

Complete information was lacking on the airdrome at Christmas Island, but with a runway of 5,000 feet it was considered suitable for heavy bombers. Palmyra was preferable to Christmas Island, since the latter had no homing devices.

Canton Island had a runway 5,000 by 150 feet, with clear approaches in all weather; revetments were incomplete. While the stores of gasoline and oil were adequate, servicing was slow because of inadequate pumping facilities. Night landings were hazardous because of the absence of lighting. Housing was available for 2 officers and 25 enlisted men; there were adequate food stores and a homing station, but there were no repair facilities and no communications between points on the island.

On Viti Levu Island, in the Fijis, there was a runway 5,000 by 150 feet, good in all weather, with clear approaches; revetments were under construction. Night landings were not recommended due to the narrow runway and the construction in progress, but an auxiliary lighting system could be used for night take-off. Only minor repair facilities were available. Communications were provided by the standard Navy set-up, while excellent weather

information was provided via telephone by the Royal New Zealand Air Force station at Suva.

The airdrome 25 miles northwest of Noumea, New Caledonia, had a runway 5,000 by 150 feet, usable in all weather, with rolling and somewhat rough surface. There were no revetments, no lighting facilities, and no repair facilities. The supply of aviation gasoline and oil was limited to the Pan American stores; servicing was slow—by hand pump only. Excellent weather information was obtainable from the RAAF station at Noumea. Barnes to TAG, #126, 29 Jan. 42.

21. Shelton, "Our Pacific Sky-lane," 11.

22. Even as late as May 1942 the lack of protection at Christmas and Canton Islands continued to be a source of amazement to ferry pilots. The few fighter planes in commission at Christmas Island could not have defended that island successfully. Canton, with no fighter aircraft and very few antiaircraft guns, was almost totally defenseless, and, in the words of one pilot, "Everyone going through wonders why." R&R, AFAFC to AFABI, 13 June 1942, in AAG 000-800, Misc., East Indies.

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Chapter II

1. On 7 November 1941 WPD announced its plan for expediting the reinforcement of the Philippines as follows: (1) there was to be no change in movements prior to 1 December 1941, and all shipping was to be used to capacity in the transportation of supplies; (2) movements scheduled for later than 17 December were to be included with these during the period 1-17 December. By 18 November, however, the pressure of events had resulted in the Quartermaster General's chartering and hasty conversion of six commercial steamships in order to insure that all troops scheduled for movement to the Philippines would embark not later than 8 December 1941. WDGS Disposition Form, G-4 to TAG, 8 Nov. 1941; WDGS Disposition Form, G-4 to QMG, 18 Nov. 1941, in AG 370.5 (8-1-41), pt. 2.

2. Inal. 1, H&R, Chief of Air Corps to Chief of AAF, 8 Dec. 1941, in AAG 452.1, Assignment of Airplanes.

3. Redesignated from the Philippine Department Air Force on 28 October 1941, by AG 320.2 (10-20-41), 28 Oct. 1941, in AAG 320.2 C, Strength of Organizations. On 5 February 1942 the Far East Air Force was redesignated the 5th Air Force, an action which involved no change in the "present assignment of units." AG 320.2 (1-27-42)MR-M-AAF/A-1, 5 Feb. 1942, in AAG 312.1 C, AGO Letters.

4. "435th Overseas," 19, in history [collection] of the 19th Bombardment Group, in AFIHI files.

5. Two other crews who later served with the 88th Reconnaissance Squadron had a similar experience at Pearl Harbor. In addition, a seventh crew of the 88th had arrived at Oahu a few days before the attack; during the raid two of its members were killed and five were wounded. Ibid., 19-20.

6. Ibid., 24; history of the 19th Bombardment Group; Maj. Gen. Julian F. Barnes, "Report of Organization and Activities of U. S. Army Forces in Australia" [Barnes Report]. The latter document is on file at Headquarters, Army Service Forces, but a secondary source, rather than the original report, was used for the present study.

7. Barnes Report; A-2 Summary Files, 7 Dec. 1941, 6; memo for Chief of Staff by [Brig.] Gen. Carl Spaatz, 17 Dec. 1941, in Air AG 370.5, sec. 1.

8. The organization was effected in accordance with GO #2, Task Force, South Pacific. History of the 19th Bombardment Group.

9. Barnes Report; A-2 Summary Files, 9 Dec. 1941, 41.

[redacted]

10. "435th Overseas," 24; history of the 19th Bombardment Group; Barnes Report; Merle-Smith to MILID, #36, 14 Dec. 41.

11. Claggett to Chief of Staff, msg. delivered to WPD by Comdr. Harris, Australian Navy, 23 Dec. 41; Brett to TAG, #1015, 23 Dec. 41; Barnes Report.

12. History of the 19th Bombardment Group.

13. By 11 December, headquarters for the Army Air Forces in Australia had been established at Townsville, in accordance with General MacArthur's instructions. As reported by Capt. Floyd J. Pell, this headquarters was "prepared to handle all operations and matters pertaining to U. S. aircraft and Air Corps personnel within Australia," but all such activities were being coordinated with the RAAF. Ltr., Capt. Floyd J. Pell, U. S. Army Air Force Hq., Townsville, to Chief of the Air Corps, 11 Dec. 1941, in Air AG 320.2, Australia.

14. MacArthur to AGWAR, unnumbered msg., 25 Dec. 41; history of the 27th Bombardment Group, in AFIHI files.

15. Ibid.; MacArthur to AGWAR, unnumbered msg., 25 Dec. 41; MacArthur to AGO, unnumbered msg., 28 Dec. 41; Brereton to TAG, Navy msg. 289425, 4 Jan. 42. In addition to the 14 B-17's, the following aircraft were reported evacuated from the Philippines to Australia by 31 December: 3 B-18's, 1 C-39, and 2 requisitioned bi-motored Beechcraft. Evacuated personnel included 16 officers and 8 enlisted men from Headquarters, Far East Air Force; 20 pilots from the 27th Bombardment Group, 83 officers and 1 enlisted man from the 24th Pursuit Group, 50 officers and 92 enlisted men from the 19th Bombardment Group. Brereton to TAG, Navy msg. 300630, 31 Dec. 41.

16. MacArthur to TAG, #41, 23 Dec. 41.

17. Barnes Report. General Brett left Soerabaja for Darwin on 31 December. Bandoeng, NEI, to WD, #4, 1 Jan. 42.

18. Barnes Report.

19. Marshall to Brett, unnumbered msg., 8 Jan. 42; Brett to Chief of Staff, NR #36, 2 Jan. 42; Merle-Smith to MILID, #9, 5 Jan. 42.

20. Sec. of War to Brett, #51, 12 Jan. 42; Brett to AG, #1, 9 Feb. 42.

21. Brereton to Marshall, Navy msg.161515, 16 Jan. 42.

22. Barnes to AG, #130, 29 Jan. 42.

23. History of the 27th Bombardment Group. Part of the ground echelon of the 7th Bombardment Group, after working on the erection of aircraft in Australia, sailed from Brisbane on the President Polk on 16 January 1942, with the U.S.S. Houston escorting. Although attacked by submarines in the Arafura Sea, the vessels safely arrived at Java, where the ground crews served throughout the remainder of the Java campaign. History of the 19th Bombardment Group.

24. "Report of the 17th Pursuit Squadron (Provisional), Activity in Java," in Records Branch, AG/AS, Intelligence.

25. B&R, A-1 to AFCC, 15 Dec. 1941, and B&R, A-1 to AFCC, 17 Dec. 1941, in Air AG 370.5, sec. 1; SO #180, Hq., 4th AF, Hamilton Field, Calif., 17 Dec. 1941, in AFIHI files; personnel report, USAAF, SWPA, to CG, USAAF, 13 May 1942, in AAG 385, Special, Brett Report; interview with Col. William Lane, Jr., 15 May 1944. In addition to the Polk, the following ships were scheduled to bring air reinforcements to Australia in the latter part of January: the Coolidge with 70 P-40's and crews and 5 cargo planes and crews; the Mormacsun (Moore Mackey), with 55 P-40's and crews; and the Stolin with 55 P-40's and no crews. Memo for Chief of Staff by Gen. Carl Spaatz, 17 Dec. 1941, in Air AG 370.5, sec. 1. The destination of the Stolin was later changed to Canton Island, and the ship was scheduled to sail from the west coast with 25 P-39D's on 29 January. B&R, A-3 to A-4, 14 Jan. 1942, in AAG 400, Misc., Australia.

26. Claggett to AG, unnumbered msg., 9 Jan. 42; history of the 27th Bombardment Group. The missing parts for the A-24's were started on their way from the United States, via air and water, by the middle of January; but, of course, by the time of their arrival in Australia, the opportunity for getting the planes into the Philippines had passed. AGO to Barnes, #112, 15 Jan. 42.

27. History of the 27th Bombardment Group.

28. Ibid.

29. These units were reported by General Barnes to have arrived in Australia on 1 February. Col. R. E. Rice, Chief of Personnel, Allied Air Forces, reported on 13 May 1942, however, that all these units (except the 808th Engineers) arrived on 12 January. In all probability, this latter report refers only to the advance units which sailed on the President Polk and debarked at Brisbane on 12 January. Barnes to TAG, #241, 14 Feb. 41; AG 370.5 (12-19-41) MSC-C-M, 19 Dec. 1941; AG 370.5 (12-26-41)MSC-C-M, 26 Dec. 1941; personnel report, USAAF, SWPA, to CG, USAAF, 13 May 1942, in AAG 385, Special, Brett Report; history of the 4th Air Depot Group.

[redacted]

30. Brett to Marshall, #27, 17 Feb. 42. Reloading of the convoy at Fremantle was necessary because certain equipment had to be sent to Java.

31. The following units were shipped to India: Hq. and Hq. Sq. 7th Bombardment Gp., 9th Bombardment Sq., 88th Reconnaissance Sq., 36th Signal Pl. (AB); Hq. and Hq. Sq. 51st Pursuit Gp., 16th, 25th, and 27th Pursuit Sqs., and 682d Ord. Co. (Avn. Pursuit); Hq. and Hq. Sq. 35th Pursuit Gp., 35th Interceptor Control Sq.; Hq. and Hq. Sq. 51st Air Base Gp., 43d Signal Pl. (AB), 54th Materiel Sq. with attached Decon. Det. 7th Chem. Co., Det. 3d QM Co. (Sup. Avn.), 59th Materiel Sq. with attached Decon. Det. 7th Chem. Co., 711 Ord. Co. (Avn.) AB (the last two named units being part of the 45th AB Gp.), Det. 4th QM Co. (Sup. Avn.), Weather Det., 729 Ord. Co. (Avn.) 686th Ord. Co. (Pursuit), Co. H 31st QM (Truck) less one Pl., Co. B 89th QM Bn. (LM). Melbourne to AGO, #339, 25 Feb. 42.

32. AG 370.5 (1-7-42)MSC-C-M, 7 Jan. 1942; AG 370.5 (1-9-42) MSC-C-C, 13 Jan. 1942, in Unit Records Br., AC/AS, OC&R; Brett to TAG, #586, 10 Mar. 42; interview with Lt. Cols. John C. Marchant and Harold Brown, 24 May 1944; history of the 36th Fighter Squadron, in AFHRI files; Maj. Gen. George H. Brett, "Report of Air Operations in Australia" (Brett Report), Summary F, in AAG 385, Special, Australia. The Brett Report was transmitted to General Arnold by letter dated 16 May 1942 and was brought to Headquarters, AAF, by Lt. Col. John K. Gowan, Jr., a member of General Brett's staff. The report—which dealt in considerable detail with such matters as organization, personnel, material, and attrition—was distributed to the various interested offices at Headquarters. Colonel Gowan, in numerous conferences with members of the Air Staff, supplemented and clarified the data. The report is divided into 13 "Summaries," lettered A to R, inclusive, followed by an 11-page synopsis of "Specific Requests and Recommendations from General Brett." Incl. 1, R&R, AFDAS to Gen. Perrin, 21 Aug. 1942, in AAG 000-800, Misc., Australia.

33. "435th Overseas," 2, 5; history of the 19th Bombardment Group; memo for Chief, AAF by Col. H. S. Vandenberg, 16 Feb. 1942, in AC/AS, Plans. Of the 12 crews, 6 were from the original 88th Reconnaissance Squadron, 5 from the 22d Bombardment Squadron, and 1 from the 38th Reconnaissance Squadron. Interview with Col. Richard H. Carmichael and members of the 19th Bombardment Group, 5 Dec. 1942.

34. Operations Order #1, Hq., Southern Bomber Command, 16 Feb. 1942, in history of the 435th Bombardment Squadron.

35. "435th Overseas," 6. [redacted]

36. Ibid.; history of the 19th Bombardment Group.

37. Telegram from Prime Minister of Australia to Prime Minister of the United Kingdom (undated), incl. 1, ltr., Australian Legation in Washington, D. C., to Gen. George C. Marshall, 27 Jan. 1942, in AG 580.81 (12-26-41), sec. 1.

38. George Johnston, The Toughest Fighting in the World, 29; South West Pacific, May 1943, 5-6.

39. Johnston, The Toughest Fighting in the World, 4.

40. Ibid., 8-9.

41. Of interest in connection with this attack is the report "from a reliable source" early in February that the Portuguese General Staff was advised by the Japanese Military Attache in Lisbon of the Japanese plan to invade Darwin in the last few days of February. The London War Office, however, considered this report to have been put out deliberately by the Japanese in order to draw Allied attention away from the more likely attacks on Sumatra and Java. Memo (unaddressed) by Intelligence, R.A.F. Delegation, British Embassy Annex, Washington, D. C., 12 Feb. 1942, in Records Br., AG/A3, Intelligence.

42. MA Report, taken from RAAF Intelligence Summary #112, 26 Feb. 1942, in ibid.; A-2 Summary Files, 26 Feb. 1942, 488; Merle-Smith to MILID, #78, 20 Feb. 42.

43. Ibid.

44. Brett to Marshall, #2, 21 Feb. 42.

45. Brett to Marshall, Navy msg. OPX01775, 20 Feb. 42.

46. Alusnob Columbo 1946 to AGWAR, Navy msg. 2635, 26 Feb. 42.

47. "The Java Sea Campaign," ONI Combat Narratives, 44-45; Brereton to Arnold, unnumbered msg., 6 Mar. 42.

48. Brett to AGWAR, #326, 24 Feb. 42.

49. Memo for TAG by Asst. Chief of Staff, 1 Mar. 42, in AG 580.81 (12-26-41), sec. 1.

50. A-2 Summary Files, 6 Mar. 1942, 529; "The Java Sea Campaign," 45-46.

51. History of the 435th Squadron; diary of Maj. Paul E. Cool, 16, in AFIHI files; Brett to AG, #482, 4 Mar. 42.

52. Ltr., TAG to Chief of Armored Force, 9 Apr. 1942; Adams to CG, USAFIA, #226, 30 Jan. 42.

53. Memo for TAG by Sec. of War, 26 Feb. 1942, in [redacted]

Chapter III

1. "Survey of Australia," 1, 5, 19, in Records Br., AC/AS, Intelligence.

2. Ibid., 1, 5.

3. Ibid., 1.

4. Royce (London) to War Dept., #1371, 16 Dec. 41.

5. Telegram from Prime Minister of Australia to Prime Minister of the United Kingdom, incl. 1, ltr., Australian Legation in Washington, D. C., to Gen. George C. Marshall, 27 Jan. 1942, in AG 580.81 (12-26-41), sec. 1; "Survey of Australia," 2.

6. South West Pacific, May 1943, 5.

7. In January 1942 Capt. P. G. Taylor of Australia gave out the following statement for publication: "Australia is now wide open to invasion owing to past policy of neglecting Australian defense to provide overseas forces and equipment." Memo for Col. Craig, Jan. 1942, in AC/AS, Plans.

8. AG 370.5 (1-7-42)MSC-C-M, 7 Jan. 1942; AG 370.5 (1-16-42)MSC-C-M, 16 Jan. 1942; memo for Chief of Staff by A-3, 16 Jan. 1942; AG 370.5 (1-20-42)MSC-C-M, 21 Jan. 1942, in Unit Records Br., AC/AS, OC&R.

9. Memo for Chief of Staff by A-3, 16 Jan. 1942, in ibid. This instance caused A-3 to question the War Department policy on foreign service for colored troops. Pointing out that, in addition to the situation in Australia, the State Department had directed that no colored troops be sent to Panama or to Liberia for a permanent change of station, A-3 requested that the question be submitted to the President for a decision, since it appeared that "white troops would be sent out of the United States to foreign stations and that the colored troops would remain in the United States for the defense of this country. It is believed that this is neither the intention nor the spirit of the Promulgation of the President in this period of an unlimited National Emergency." Ibid.

10. Barnes to AG, #153, 2 Feb. 42.

11. Col. Karl F. Baldwin, MA Report, 4 Aug. 1942, in Records Br., AC/AS, Intelligence.

12. R&R, AFDAS to AFAAP, 4 Apr. 1942, in AAG 300.6, Memoranda. For a full statement of War Department policy (in spring, 1942) on the use of colored troops in theaters of operations, see ltr., TAG to CG, AAF, 13 May 1942, in AAG 381 F, War Plans.

13. Brett to G-2, #15, 8 Jan. 42.

[redacted]

14. Brett to MILID, #CR 105 37, 2 Jan. 42.

15. Brett Report, Summary J.

16. Memo for Chief of Staff by Maj. Gen. Robert C. Richardson, Jr., Report No. 5 [Richardson Report], 9 July 1942, in AAG 000-800, Misc., Australia.

17. Australia, 4.08 miles of railways per 1,000 population; Canada 4.43; British Isles, 0.47. Encyclopaedia Britannica, 14th ed., II, 732.

18. In 1937 the state governments owned about 25,000 miles of railway, while the Commonwealth government owned only about 2,000 miles. Ibid.

19. "Survey of Australia," 185.

20. Ibid.

21. A-2 Summary Files, 2 Feb. 1942, 351.

22. Interview with Capt. J. C. Lemmon, 29 June 1943.

23. Interview with Clarence Von Heke, G-2 Report, 5 Apr. 1942. According to General Royce, "Australian freight cars have been known to break under the weight of one of our Army's prime movers." Maj. Gen. Ralph Royce, "Combat Notes from Down Under," Air Force, XXVI, No. 1 (Jan. 1943), 15.

24. Brett Report, Summary K.

25. Royce, "Combat Notes from Down Under," 15.

26. "Survey of Australia," 17; A-2 Summary Files, 2 Feb. 1942, 351; Brett Report, Summary K. Early in January 1942 General Brett requested that as many trucks as possible and any narrow gauge rolling stock available in the United States be sent to Australia, and that certain items of equipment (such as dredges) be sent for rebuilding the highways. Brett to AGO, #6, 7 Jan. 42.

27. Encyclopaedia Britannica, 14th ed., II, 733. Some indication of the part which aviation played in pre-war Australia can be seen in the fact that in 1936-37 civil aviation planes flew 8,000,000 miles, carrying 102,000 passengers, 822,000 pounds of cargo, and 168,000 pounds of mail, with a loss of only 19 killed and 14 injured. Ibid.

28. Royce, "Combat Notes from Down Under," 15; "Survey of Australia," 18.

29. Brett to ACWAR, #11, 15 Jan. 42.

[redacted]

30. South West Pacific, June 1943, 13.

31. AG 334.8 (1-3-42), 3 Feb. 1942, in AAG 000-800, Misc., Australia.

32. On 1 February 1942 the following supply levels were approved and were to be established at the earliest practicable date:
(1) 90 days of supplies of all kinds other than ammunition and aircraft operating and maintenance supplies for the United States Army Forces in Australia and the ABDA area (excluding the Philippines);
(2) five months of supplies for aircraft for all United States Army aircraft assigned to the Australian and ABDA areas (excluding the Philippines);
(3) five months' supply of bombs, ammunition, and pyrotechnics for all United States Army aircraft assigned to the above areas (less the Philippines). AG 400 (1-31-42)MSC-D-M, 1 Feb. 1942, in AAG 400, Misc., Australia.

33. Melbourne to AG, unnumbered msg., 9 Jan. 42; Adams to CG, USAFIA, AF #1/129, 15 Jan. 42.

34. Maj. Earl C. Stewart, MA Report, 12 Aug. 1942, in Records Br., AC/AS, Intelligence. Major Stewart gives the following description of a typical workday in the life of a stevedore: "He appears on the dock and ready for work between 8:45 and 9:00 a.m. although his pay actually starts at 8:00 o'clock. Under the contract the men are permitted regular rest periods during the day called 'Smoke-hos.' By the time the men get out of the hold, brew their tea, smoke as much as they care to, three quarters of an hour has elapsed. Lunchtime officially begins at 12:00 noon but the men have deserted their work by 11:45 and do not actually engage themselves again until 1:15 p.m. or 1:30 p.m. The universal hour for actually quitting at the end of the day is 35 minutes before the shift officially ends and the time up to which they are paid."

35. Ibid.

36. Ibid.

37. This entire account of the 8th Pursuit Group is related by 1st Lt. Leonard B. Storm, AC, S-4, Office of the Material Officer, 8th Pursuit Group Headquarters, at Archerfield, Brisbane, in a letter to the Commanding Officer of the 8th Pursuit Group at Archerfield, 23 March 1942. Incl. 1, ltr., Lt. Col. F. H. Smith, Jr., to Director of Pursuit, Allied Air Forces, Melbourne, 30 May 1942, in AAG 385 D, Conducting Warfare.

38. Attempts to build up the supply of ammunition were met with the following reply by the Assistant Ordnance Officer of Base Section No. 3: "Lieutenant, I have been here three months and nothing has happened yet." Ibid.

39. This group, composed of the 39th, 40th, and 41st Pursuit Squadrons and the 31st Intercepter Control Squadron, was known originally as the 31st Pursuit Group; but on 15 January 1942 the 39th, 40th, and 41st Squadrons were relieved from assignment to this group and were reassigned to the 35th Group, replacing the 21st, 34th, and 70th Pursuit Squadrons which were relieved from the 35th Pursuit Group. Headquarters and Headquarters Squadron and the 35th Intercepter Control Squadron of the 35th Pursuit Group, remained in Australia until 22 February when they sailed in the convoy from Fremantle to India (see page 20). On 23 April 1942 Headquarters and Headquarters Squadron, 35th Pursuit Group, was transferred back to Australia, less personnel and equipment, to be formed from personnel available to the Commander of the Allied Air Forces. The purpose of these redesignations and transfers was, of course, the establishment of a complete 35th Pursuit Group in Australia. AG 370.5 (1-5-42)MR-M-AAF, 15 Jan. 1942, in Unit Records Br., AG/AS, OC&R.

40. Lt. R. M. Neal, AC, in an unaddressed, undated memo, gives this account of the 35th Pursuit Group. Incl. 2, ltr., Lt. Col. F. H. Smith, Jr., to Director of Pursuit, Allied Air Forces, Melbourne, 30 May 1942, in AAG 385 D, Conducting Warfare.

1. Brett to AG, #560, 9 Mar. 42.

2. See page 28.

3. "Early Raids in the Pacific Ocean," ONI Combat Narratives, 60; Brett to TAG, #540, 7 Mar. 42.

4. "Early Raids in the Pacific Ocean," 57, 62.

5. Report, 16 Mar. 1942, in Australia 9900-9960, Records Br., AC/AS, Intelligence. An estimate of the damage inflicted by the B-17's and the Hudsons included 1 near-miss on a cruiser, 1 near-miss on a large destroyer, 1 direct hit on each of 2 troop ships, 1 near-miss on each of 3 other troop ships, and 1 troop ship surrounded by 6 bombs and left burning. Ibid.

6. "Early Raids in the Pacific Ocean," 69-70.

7. Brett to AG, #608, 10 Mar. 42.

8. Ibid.

9. The Australians had made virtually no provision for the protection of Fremantle. Typical of the lack of coordination and planning at this time, a War Department directive had been issued for defense of Fremantle as a base for operations, but General Brett knew nothing of the directive until he began to receive urgent requests from Admiral Glassford for aircraft warning service, antiaircraft, and air protection for Fremantle. On 9 March, General Brett estimated that, beyond the 14 three-inch antiaircraft guns then installed in the vicinity of Fremantle, no assistance could be given before the end of March, when it was expected that 12 additional antiaircraft guns, 2 aircraft warning sets with a range of 150 miles, forty .50-cal. guns, 24 Beauforts, and 1 fighter squadron could be provided. Brett to ACWAR, #579, 9 Mar. 42.

10. Brett to AG, #510, 8 Mar. 42.

11. Memo for Maj. Gen. M. F. Harmon by War Plans IV, H-3, 10 Mar. 1942, in AC/AS, Plans.

12. Melbourne to TAG, #406, 1 Mar. 42. The Japanese raids on Broome and Wyndham on 3 March, of course, reduced these totals by four bombers. See page 27.

13. Brett to AG, #510, 8 Mar. 42.

14. Brett to AGO, #554, 8 Mar. 42. See pages 13 and 18.

15. Brett to AGO, #509, 5 Mar. 42. [redacted]

[redacted]

16. Brett to TAG, #586, 10 Mar. 42.

17. Interview with Col. John Davies, 9 Dec. 1942.

18. Brett to TAG, #586, 10 Mar. 42.

19. Brett to AG, #570, 9 Mar. 42.

20. Ulio to CG, USAFIA, AF #3/219, 11 Mar. 42. This squadron, originally composed of part of the 88th Reconnaissance and 22d Bombardment Squadrons of the 7th Group, was known successively as the 14th and the 40th Reconnaissance Squadrons, and finally as the 435th Bombardment Squadron of the 19th Bombardment Group. Other officers were: Capt. Robert E. Northcutt, executive; Capt. Clarence V. McCaulem, adjutant; Capt. John H. M. Smith, personnel officer and assistant adjutant; Capt. Jack W. Bleasdale, operations officer; Capt. Sam Maddux, Jr., assistant operations officer; Capt. Clarence E. McPherson, S-4; 2d Lt. Jack E. C. Dodd, assistant S-4; and 1st Lt. W. C. Taggart (who had arrived with the 7th Group ground personnel), chaplain.

21. History of the 19th Bombardment Group.

22. Ulio to CG, USAFIA, AF #3/219, 11 Mar. 42; AG 320.2 (4-23-42)MR-M-OPD, 4 May 1942.

23. History of the 19th Bombardment Group. Major Connally became commanding officer of the 19th Group in April. During the same month the group transferred its headquarters to Garbutt Field, Townsville. Ibid.

24. MacArthur to TAG, #70, 6 Apr. 42. The 22d and 11th Bombardment Squadrons were transferred, without personnel and equipment, to Columbia, S. C., on 4 May 1942. AG 320.2 (4-23-42)MR-M-OPD, 4 May 1942.

25. Brett to TAG, #601, 10 Mar. 42; Marshall to CG, USAFIA, #707, 16 Mar. 42; Brett to AG, #685, 14 Mar. 42.

26. The 43d Bombardment Group (H) was expected to arrive in Australia the latter part of March 1942, without aircraft and flying echelon.

27. This decision was reached by General Arnold and General Eisenhower in conference on 16 March 1942. Memo for Chief, AAF [CG, AAF] by Brig. Gen. Dwight D. Eisenhower, Asst. Chief of Staff, 18 Mar. 1942, in AAG 400, Misc., Australia; memo for WPD by Chief of Air Staff, 20 Mar. 1942, in AAG 381, Projects.

28. Marshall to CG, USAFIA, #707, 16 Mar. 42; Brett to AG, #1188, 27 Mar. 42.

[redacted]

29. Ulio to CG, USAFIA, #957, 29 Mar. 42.

30. The following is the allegation policy for air units in Australia, as approved by the /Combined/ Chiefs of Staff on 2 April 1942:

Type	On Hand	Authorized	En Route	Balance
Heavy Bombers	41	80 operational 40 reserve	5	5 ready to leave from West Coast. One per day for next 10 days. Two per day until 80 is reached.
B-25	12 (first 18 to go to the Dutch)	45	11	22 as soon as pilots can be furnished by Consolidated Co.
B-26	12	114 operational 57 reserve	67	35 additional as soon as planes and crews are available.
Light Bombers	47	57 operational 30 reserve	14	As fast as planes are available.
Pursuit	354 (some of these already allocated to RAAF)	320 operational 160 reserve	120 American and 18 P-40's of Dutch order.	No more for the present.

Memo for Gen. Harmon by Gen. Arnold, 2 Apr. 1942, in AAG 452.1 B, Allocation of Aircraft.

31. AFROM to CG, USAFIA, #1263, 13 Apr. 42.

32. History of the 19th Bombardment Group.

33. Ulio to CG, USAFIA, AAF RC #57, 16 Mar. 42. The 3d Bombardment Group (L) was sent to Australia complete with four squadrons, while the 27th Group was lacking one squadron, the 15th. Memo (unaddressed), 27 Mar. 42, in Unit Records Br., OC&R.

34. According to Colonel Davies, these were practically his "first instructions from America." Interview with Col. John H. Davies. 9 Dec. 1942.

35. Ibid. The 27th Bombardment Group, consisting of Headquarters and Headquarters Squadron, and the 16th, 17th, and 91st Squadrons, was transferred without personnel and equipment to Savannah (Ga.) Airport, on 4 May 1942. AG 320.2 (4-23-42)MR-M-GPD, 4 May 1942.

[redacted]

36. R&R, AFHQM to AAG, 11 Mar. 1942, in AAG 000-800, Misc., Australia.

37. Interview with Col. John H. Davies, 9 Dec. 1942; Brett Report, Summary G.

38. Brett to AGWAR, #693, 14 Mar. 42; Brett Report, Summary G.

39. In addition to these three pursuit groups, the 68th Pursuit Squadron was also in Australia, but it was scheduled for transfer to Tongatabu Island, with 25 P-40E's. Brett to AG, #780, 20 Mar. 42; memo for TAG by Asst. Chief of Staff, 23 Mar. 1942, in Unit Records Br., OC&R.

The 48 officers of the 21st and 34th Pursuit Squadrons who had arrived in Australia on 23 December 1941 on the Republic were relieved of their assignment to these squadrons and assigned to provisional squadrons which were sent to Java. The designations, 21st and 34th Pursuit Squadrons, belonging to those units in the Philippines, were transferred to Australia on 28 March 1942, where the squadrons were to be built up from equipment and personnel then in Australia, for eventual shipment to other island garrisons. On 4 May, however, these two squadrons were returned, less personnel and equipment, to the United States for reorganization, after the War Department was informed that the 48 officers originally assigned to the squadrons had been absorbed by other units. Memo for TAG by Brig. Gen. D. D. Eisenhower, Asst. Chief of Staff, 28 Mar. 1942; memo (unaddressed) on information obtained by telephone by Lt. Col. Benton, 21 Mar. 1942, in Unit Records Br., OC&R; CM-OUT-4702, WPD to USAFIA, #1458, 21 Apr. 42; AG 320.2 (4-23-42)MR-M-OPD, 4 May 1942.

40. Some indication of the seriousness of this shortage is given in the following figures. During March 1942 the total production of pursuit planes in the United States was scheduled to be about 685. Of these, 250 were to go to the British and 100 to the Russians, leaving a balance of only 335 to meet (1) the formation of 27 new groups requiring 2,160 planes, (2) attrition in the United States, and (3) the far greater attrition in Australia and Burma. Memo for Gen. Eisenhower by Gen. Arnold, 20 Mar. 1942, in AAG 452.1 F, Pursuit Aircraft.

Early in April the serious situation in India, along with the fact that General Brett had transferred 75 American P-40's to the RAAF, resulted in the decision of the British to divert 80 pursuit planes from the RAAF to their forces in India. CM-OUT-1383, WPD to CG, USAFIA, #1170, 8 Apr. 42.

41. Barnes to AGO, #304, 21 Feb. 42.

42. Allotment of grades and ratings was to be in accordance with T/O 1-357, 1 July 1941. AG 320.2 (2-25-42)MR-M-AAF/A-1, 7 Mar. 1942.

43. Brett to AG, #1016, 23 Mar. 42; Marshall to Supreme Commander, Melbourne, #1021, 31 Mar. 42 (CM-OUT-0174). The squadron was activated by GO #35, Hq. USAFIA, 3 Apr. 1942. CM-IN-4950, [redacted] to AGWAR, #1592, 18 May 42.

44. Brett to TAG, #644, 12 Mar. 1942; TAG to CG, USAFIA, #721, 17 Mar. 42.

45. Interview with Lt. Col. John K. Gowan, 22 Oct. 1942.

46. Brett to AG, #776, 20 Mar. 42.

47. Knilm agreed to the sale of these aircraft for approximately $530,000 and also the sale of 100 cases of spares on a cost-plus freight basis. This sale, however, was to be negotiated only on the condition that priority be given to the nine Lockheed Lodestars and nine DC-3's then on order by Knilm in the United States. These aircraft were to be used as dictated by the Dutch government in accordance with Allied tactical demands, in military or civil service between London and Lisbon or through the West Indies. Ibid.

The War Department, on 25 March, approved the leasing of the planes in Australia and also the purchase of the planes, provided the sale could be consummated without the conditional provision of accelerated delivery of the nine Lodestars and nine DC-3's. Ulio to CG, USAFIA, #883, 25 Mar. 42.

48. Brett to AG, #1016, 23 Mar. 42.

49. CM-OUT-0174, Marshall to Supreme Commander, Melbourne, #1021, 31 Mar. 42. The Director of War Organization and Movement recommended that General Brett's request be considered favorably only if a sufficient number of transport planes could be obtained from sources available to him, inasmuch as additional transport planes would not be available from the United States for several months. Memo for WPD by Dir., War Orgn. and Movement, 24 Mar. 1942, in AAG 320.2 D, Strength.

50. Brett to AGO, #1172, 30 Mar. 1942.

51. History of the 435th Bombardment Squadron.

52. Col. Carlos P. Romulo, I Saw the Fall of the Philippines, 228-229.

53. A week after the completion of this flight a similar flight into the Philippines was made by three B-17's of the same reconnaissance squadron, using three entirely different crews except for the navigators. This time the planes evacuated President Manual Quezon and his party of Philippine government officials. In spite of unusually bad weather, the planes made the flight successfully. History of the 435th Bombardment Squadron.

54. Ibid. General MacArthur's release of details on his journey to Australia was not entirely in keeping with the War Department desire for secrecy. On 1 April he was directed by the Commander in Chief to apply a rigorous censorship, not only on details of the flight from the Philippines, but also on news releases concerning the Pacific ferry route and convoy routes. The tightening of the Philippine

blockade and the continuous bombing of Fort Mills and Marivales, with practically all bombs falling in the water, suggested the fact that the Japanese were searching for speed boats. Memo for AG, directing radiogram to MacArthur, 1 Apr. 1942, in AAF Classified Msg. Center.

55. A-2 Summary Files, 18 Mar. 1942, 610. In the same week Dr. Herbert V. Evatt, Australian Minister for External Affairs, arrived in the United States, to urge the creation of a "Southwestern Pacific War Council" to sit in Washington, as the first step toward coordinating the United Nations' war effort. The ONI Weekly, No. 9 (25 Mar. 1942), 13.

56. Interview with Col. Harold R. Wells, 21 May 1943; history of the 63d Bombardment Squadron, in AFHRI files. The following advance units of the 43d Bombardment Group had arrived at Melbourne on 26 February in the convoy which was en route to New Caledonia with the U. S. task force under General Patch:

13th Recon. Sq. (H) Anal. Med.	2d Plat., Co. B, 89th QM Bn. L/M
Co. G, 30th QM Regt. Truck	7th Avn. Sq.

Memo for G-3 by AC/AS, A-3, 13 Jan. 1942, in Air AG 370.5, sec. 2.

57. Interview with Col. Harold R. Wells, 21 May 1943.

58. Interview with Maj. C. H. Diehl, Hq. II Bomber Command, 8 July 1943.

59. Brett to AGWAR, #792, 21 Mar. 42.

60. Included in this number were 3 C-47's, 5 C-53's, 4 Lockheed 12's, 9 C-56's, 140 P-40E's, 162 SB2A-1's, 48 A-20's, and 129 B-25's. In addition, 34 B-25's were en route; those using the Atlantic route were to be held in India. All these planes had been purchased in cash by the NEI government. Arnold to CG, USAFIA, #620, 10 Mar. 42.

61. Ibid.

62. Memo by MA, Netherlands Legation, 17 Mar. 1942, in AAG 353.9 D1, Training, General.

63. This agreement with General van Oyen was based on the understanding that the United States would place credit in kind to the Dutch government in the United States or would replace the planes either in Australia or in the United States, depending upon the desires of the Dutch government and the availability of aircraft. Brett to TAG, #1114, 27 Mar. 42.

64. Arnold to CG, USAFIA, #876, 25 Mar. 42; Brett to AGWAR, #AG182, 11 Apr. 42.

[redacted]

65. MacArthur to AGO, #AG59, 6 Apr. 42; Arnold to CG, USAFIA, #1205, 10 Apr. 42. The Dutch students immediately began their exodus from Australia to the United States, with 575 of the forces leaving Melbourne on 17 April. MacArthur to ACWAR, #303, 16 Apr. 42. The students were eventually located at Jackson (Miss.) Air Base, where a single air force was built up from the merger of the former Army and Navy air forces, under the command of General van Oyen. Instructed by veterans of the Indies fighting, the young Dutch students began their training motivated by the one purpose and hope of getting back into the battle of the Pacific as soon as possible. Capt. Robert B. Hotz, "We'll Go Back Some Day . . .," Air Force, XXV, No. 7 (Dec. 1942), 10.

66. The solution of the Dutch training problem in the United States suggested the possibility of relieving the congestion which existed in the training of Australian pilots. According to General MacArthur, if Australian training could be carried out in the United States, all of the manufacturing and repair facilities in Australia could be used for spare parts, and, in addition, approximately 20,000 trained technicians could be relieved for overhaul and maintenance work on combat aircraft. Because of expansion in the AAF training program, however, and the consequent shortage of training planes and instructors, the proposal for the training of Australians in the United States could not be considered further. MacArthur to AGO, #AG59, 6 Apr. 42; Arnold to CG, USAFIA, #1205, 10 Apr. 42.

67. No shipments were made of the NKI planes manufactured after 1 April 1942. By agreement with the Netherlands Purchasing Commission, delivery of the remainder of the planes on the NKI contract would be resumed when the Dutch pilots in the United States were ready for combat duty. At the end of May it was expected that the first contingent of B-25 crews would probably be ready for service in October 1942. Hq. AAF to CG, Allied Air Forces, Melbourne, #43, 30 May 42.

A total of 18 P-40's and a total of 45 B-25's were sent to Australia on the NKI contract, with 18 of the B-25's going to the Dutch. CM-OUT-1383, WPD to CG, USAFIA, #1170, 8 Apr. 42.

68. General MacArthur was notified on 3 April that the Australian and Dutch representatives in Washington had informally approved a directive outlining the scope of his command, but the contents of the directive had to be communicated to the respective governments for their approval before the formal directive could be issued. Marshall to CG, USAFIA, #1065, 3 Apr. 42.

69. MacArthur to Marshall, #59, 2 Apr. 42. On 14 April, Prime Minister John Curtin was sworn in as Minister of Defense in the Commonwealth government, the primary object being the facilitating of discussions with General MacArthur. The Minister was to submit to the Australian War Cabinet questions concerning the strength and organization of troops and appointments to service posts "after discussion, where appropriate, with General MacArthur." [redacted] 15 Apr. 1942, 10.

70. MacArthur to Marshall, #59, 2 Apr. 42.

71. History of the 435th Bombardment Squadron.

72. According to certain members of the 27th Bombardment Group, them merged with the 3d Group, the original plans for this flight to the Philippines called for 3 B-17's and 10 B-25's to land at Bataan and operate from there until the Japanese found their hiding place; with the fall of Bataan, however, the plans had to be changed and Mindanao was designated as the operating base. History of the 27th Bombardment Group.

73. MacArthur to TAG, #AG72, 6 Apr. 42.

74. History of the 27th Bombardment Group; history of the 435th Bombardment Squadron.

75. One of the B-25's was forced to remain at Darwin because of a damaged tire. Ibid.

The following is a partial list of participants in the mission: Brig. Gen. Ralph Royce, Lt. Col. John H. Davies, Maj. William G. Hipps, Capts. Frank P. Bostrom, David G. Rawls, Earl Sheggrud, Herman F. Lowery, and Lts. James R. Smith, Thomas P. Talley, James B. McAfee, Leland A. Walker, Gustave M. Heiss, Jr., Edwin C. Townsend, Howard B. West, Ronald D. Hubbard, James H. Meagan, Frank P. Bender, P. I. Gunn, and K. L. [?] Strickland. Lts. Ralph L. L. Schmidt and Richard R. Hiran were pilots of the B-25 which had to remain behind at Darwin.

The above list includes only a portion of the flying personnel. Unnamed, but contributing just as much to the success of the mission, were members of men in the ground crews. General Royce paid a tribute to these men when he stated: "In our April raid on the Philippines . . . I personally saw how vital they are to flying." Royce, "Combat Notes from Down Under," 40; history of the 435th Bombardment Squadron; history of the 27th Bombardment Group; interview with Capt. Earl Sheggrud, 23 Feb. 1943.

76. History of the 27th Bombardment Group. The B-25 piloted by Lt. James R. Smith and co-piloted by Lt. Thomas P. Talley was the first to lose formation. The pilots, realizing that darkness was rapidly approaching, let the plane down below the clouds. "They broke out over a harbor and were somewhat embarrassed to recognize the field ten miles to the north as Davao, strongest Japanese air base on Mindanao. . . . they wasted no time in doing a quick 180° vertical turn and making a fast trip back across the island on the tree tops. Natives on the ground, accustomed to enemy planes only, scattered for the bushes as they roared overhead." Ibid.

77. History of the 435th Bombardment Squadron; history of the 27th Bombardment Group.

[redacted]

78. Interview with Capt. Earl Sheggrud, 23 Feb. 1943; history of the 435th Bombardment Squadron.

79. History of the 27th Bombardment Group; history of the 435th Bombardment Squadron.

80. History of the 27th Bombardment Group.

81. One of the passengers was Lt. John D. Bulkeley, who had commanded the PT boat which took General MacArthur to Mindanao on the first leg of his journey to Australia. History of the 435th Bombardment Squadron; history of the 27th Bombardment Group.

82. Brett to AG, #AG428, 23 Apr. 42. The two B-17's, from 24,000 feet, dropped eight 600-lb. bombs with 1/10-second delay fuse, resulting in an estimated 25 per cent effectiveness against shipping; and from 29,000 feet, eight 600-lb. bombs with similar fuse, resulting in an estimated 60 per cent effectiveness against the target area.

The B-25's, from 10,000 feet, dropped twenty-five 500-lb. instantaneous fuse bombs, which were estimated as 25 per cent effective against docks and shipping; from 3,500 to 5,500 feet, one hundred 500-lb. bombs with 1/10-second delay fuse, which were estimated as 30 per cent effective against docks and shipping; from 2,000 feet, thirty-two 100-lb. instantaneous fuse bombs, which were estimated as 60 per cent effective against the target areas. On the basis of this experience the development of the armor-piercing type of bomb was recommended, since it was found that from low and medium altitudes the thin-case American bombs with 1/10-second delay fuse did not penetrate but merely broke up or exploded on contact.

In the opinion of General Brett, better results would have been obtained in these attacks if the crews had been trained to act as teams and if the men had been wholly familiar with the planes they had to fly. Ibid.

83. Romulo, I Saw the Fall of the Philippines, 304-5.

84. Ibid.

85. History of the 435th Bombardment Squadron.

86. MacArthur to TAG, #33, 18 Apr. 42.

87. Brett to AGWAR, #AG152, 10 Apr. 42.

[redacted]

Chapter V

1. New York Times, 19 Apr. 1942.

2. Ibid., 20 Apr. 1942.

3. Ibid. Commenting on the formation of his staff, General MacArthur stated on 20 April that local Dutch and Australian officers had been asked to participate, but to date only a limited number had been appointed because of important organizational problems confronting their own forces. Hq. USAFFE to AGWAR, #AG381, 20 Apr. 42.

4. "Directive to the Supreme Commander in the Southwest Pacific Area," in AFIHI files.

5. Ibid.

6. "Directive to the Commander in Chief of the Pacific Ocean Area," in ibid.

7. "The Landing in the Solomons," ONI Combat Narratives, 1.

8. CM-IN-0186, MacArthur to Marshall, #AG 558, 1 May 42.; CM-OUT-5249, WPD to USAFIA, #1499, 26 Apr. 42.

9. CM-IN-0186, MacArthur to Marshall, #AG 558, 1 May 42.

10. New York Times, 19 Apr. 1942.

11. General Brett assumed command under the authority in paragraph 3 b, GO #1, Gen. Hq., SWPA, Melbourne, Victoria, dated 18 Apr. 1942. GO #1, Hq., Allied Air Forces, SWPA, Melbourne, 20 Apr. 1942, in Air AG 320.2, Australia.

12. GO #4, Hq., Allied Air Forces, SWPA, Melbourne, 2 May 1942, in ibid.

13. Brett Report, Summary Q.

14. RAAF Organisation Memorandum #150, 19 Aug. 1942, "Boundaries of Areas," in Australia, 9900-9960, Records Br., AC/AS, Intelligence.

15. Richardson Report. The situation was no better for the American ground forces in Australia. Tactical command over these forces and even some of the administrative functions were taken over by the Australians. According to General Richardson after his visit to the continent, the Australian Army seemed "determined to get as firm a hold on the American Army as is possible, attempting to seize the right to supervise the unloading of American vessels and to arrange for all troop movements. The Australian administrators do not understand our organization and difficulties therefore ensue."

[redacted]

16. Brett to AG, #54, 19 Feb. 42.

17. Brett to AG, #24, 18 Feb. 42. As a result of observations and conversations with other American officers, General Brett on 21 February urged that if the United States decided to operate any theater of war, the government should insist that the theater be commanded and staffed by U. S. Army officers. With preparations being made for the dissolution of the ABDA Command, General Brett observed that a different attitude of aggressive action would have to be taken, eliminating the cumbersome and obstructive staff procedure. As Commander of the Allied Air Forces, General Brett was able to streamline the staff procedure, but he had no way of overcoming the shortage of suitable American officers. Brett to AGWAR #2, 21 Feb. 42.

18. Brett to AG, #AG 173, 10 Apr. 42.

19. Ibid.

20. According to General Richardson, the only indication of a record of American combat operations was found in the Air Intelligence Target Reports of the Northeastern Area. Memo for Lt. Gen. H. H. Arnold by Maj. Gen. Robert C. Richardson, Jr., 15 July 1942, in Air AG 320.2, Australia.

21. Richardson Report.

22. Maj. Gen. Ralph Royce, "Organization," incl. 1, memo for CG, AAF by WDGS, OPD, 7 Aug. 1942, in AAG 321.9 M, Organization of AC.

23. Ibid.

24. Brett Report, Summary H.

25. CM-IN-6753, GHQ, SWPA, to Chief of Staff, #AG 798, 24 May 42.

26. Arnold to CG, USAFIA, #1022, 1 Apr. 42.

27. CM-OUT-2150, Hq., AAF to CG, USAFIA, #1239, 12 Apr. 42.

28. Brett to AGWAR, #1353, 30 Apr. 42.

29. Brett Report, Summary F; CM-OUT-2150, Hq., AAF to CG, USAFIA, #1239, 12 Apr. 42.

30. Brett Report, Summary F. The shortages as reported by General Brett indicated the desirability of providing one and one half combat crews per bombardment airplane assigned to a tactical unit, but the limitations of the air crew training program in the United States and the requirements of commitments precluded the possibility of immediate attainment of this objective. As a result of General Brett's report, however, the Director of Bombardment recommended that an ultimate

strength of one and one half combat crews per bombardment airplane be attained by shipping a replacement crew for each replacement plane, instead of a 75% ratio of replacement crew to replacement plane.

As for the co-pilot shortage, it was noted in August 1942 that co-pilots were being furnished to the SWPA "as rapidly as available and as existing priorities permit." By this time a policy had been adopted at Headquarters, AAF, whereby experienced pilots in fairly inactive theaters would be replaced by less experienced pilots and thereby would become available for transfer to more active theaters. Incl. 1, R&R, AFDAS to Gen. Perrin, 21 Aug. 1942, in AAG 000-800, Misc., Australia.

31. Brett Report, Summaries B and F.

32. Personnel report, USAAF, SWPA, to CG, USAAF, 13 May 1942, in AAG 385, Special, Brett Report.

33. History of the 435th Bombardment Squadron. As the Australian officers progressed to first pilots, of course, they were returned to their own units.

34. Richardson Report.

35. By the middle of August 1942 substantial officer replacements, including 75 co-pilots, had been shipped to Australia since the date of General Brett's report and shipments were continuing. Incl. 1, R&R, AFDAS to Gen. Perrin, 21 Aug. 1942, in AAG 000-800, Misc., Australia.

36. According to the Director of Air Defense, Headquarters, AAF, it was "necessary to limit aircraft warning equipment and personnel in Australia because of the critical situation in both categories." R&R, AFRAD to AFTSC, 1 May 1942, in ibid.

37. GHQ, SWPA to AGWAR, #AG 648, 7 May 42.

38. Brett Report, Summary M.

39. GHQ, SWPA to AGWAR, #AG 648, 7 May 42.

Chapter VI

1. General Brett, in his report to General Arnold in May 1942, recommended that such a procedure be followed if the Army Air Forces contemplated operations in a theater similar to Australia. Brett Report, Summary L.

2. Ibid., Summary K.

3. Ltr., ASC to AC/AS, A-3, 1 July 1942, in AAG 385, Special, Brett Report.

4. Brett to AGWAR, #AG 548, 1 May 42; ltr., ASC to QMG, 5 May 1942, in AAG 400, Misc., Australia; ltr., ASC, Wright Field, to CG, ASC, 13 May 1942, in AAG 400.345 C, Allowance of Supplies.

5. Memo for CG, SOS, by AC/AS, Plans, 3 July 1942, in AAG 400, Misc., Australia.

6. Australia to AGWAR, #1228, 1 Apr. 42.

7. "Developments in the War Economies of Australia and New Zealand during May 1942," Board of Economic Warfare, 25 June 1942.

8. Richardson Report.

9. "Developments in the War Economies of Australia and New Zealand during May 1942."

10. Ibid.

11. Ibid.

12. Memo for Chief of Naval Operations by Chief of Staff, 19 June 1942, in AAG 361 C, Air Routes.

13. Ltr., Fiscal Officer, AAF to Chief of Engineers, 25 June 1942, in ibid.

14. Arnold to CG, USAFIA, #1344, 18 Apr. 42.

15. Arnold to USAFIA, #1564, 30 Apr. 42; SOS to Barnes, USAFIA, #1713, 13 May 42.

16. GHQ, SWPA, to MILID, #AG 502, 28 Apr. 42.

17. CM-OUT-2427, Ulio to CINC, SWPA, #60, 12 May 42.

18. Arnold to CINC, SWPA, #68, 14 May 42.

19. Ltr., AFAFC to CG, AAF, 17 June 1942, in AAG 452.1 C, Allocation of Aircraft. The project which was receiving "the very first priority" at this time was the movement of 11 B-17's and 26 B-26B's to New Caledonia and the Fiji Islands. R&R, AFHOM to AFAFC, 17 May 1942, in AAG 000-800, Misc., East Indies.

20. Ltr., Gen. Arnold to CG, ASC, copy transmitted by R&R, AFDAS to AFAFC, 6 June 1942, in AAG 312.1 D, Classes of Correspondence. According to General Arnold, what method there was in existence was much abused. At Goose Bay, for example, "a new G. I. can was observed marked 'Extra Priority, Air Cargo.' Upon opening the can it was found to contain a mop and some sweeping brushes. This is only indicative of the chaos and confusion which now exists." After remarking that reports of a similar nature had reached him from Australia, General Arnold directed that remedial action be taken. Ibid.

21. Brett Report, Summary D. Twenty-two engines were ordered from the Wright Aircraft Corporation, 11 of which were scheduled for shipment on or about 20 July and the remaining 11 on or about 5 August. Incl. 1, R&R, AFDAS to Gen. Perrin, 21 Aug. 1942, in AAG 000-800, Misc., Australia.

22. Brett Report, Summary D.

23. In view of the lack of refrigerated transportation for the preservation of fresh vegetables, meat, and fruit, air transportation was demanded for the delivery of these items to troops in the combat areas of Darwin, Horn Island, and Port Moresby. Ltr., Rush B. Lincoln, CG, U. S. Army Air Services, SWPA, to Chief, AAF [CG, AAF] 15 June 1942, in AAG 373 H, Flights, General.

24. CM-IN-7305, MacArthur to ACMAR, #CG 102562, 26 May 42.

25. Ibid; CM-OUT-6256, Marshall to CINC, SWPA, unnumbered msg., 29 May 42.

26. Brett Report, Summary D. According to General Brett, a 50-ton movement by air transport to Port Moresby took four days for completion; in his estimation the number of transport planes in Australia should be sufficient to complete such a movement in one day. Ibid.

27. Memo for Chief, AAF [CG, AAF] by Sec., General Staff, 4 Aug. 1942, in AAG 000-800, Misc., Australia.

28. R&R #3, AFACT to AFHOM, 8 July 1942, in AAG 452.1 C, Allocation of Aircraft.

29. Ibid. The 10 planes included 4 C-49's, 1 C-49A, 2 C-49B's, 2 C-50's, and 1 C-50C. R&R, AFHOM to AFACT, 20 July 1942, in AAG 400, Misc., Australia.

[redacted]

30. R&R #5, AFHOM to AFACT, 3 Sep. 1942, in AAG 452.1 C, Allocation of Aircraft; memo for Chief, AAF /CG, AAF/ by Sec., General Staff, 4 Aug. 1942, in AAG 000-800, Misc., Australia; R&R, AFACT to AFHOM, 2 July 1942, in AAG 400, Misc., Australia.

31. GO #2, Hq., Allied Air Forces, SWPA, 27 Apr. 1942, in Air AG 320.2, Australia. Personnel for Headquarters, U. S. Army Air Services, came from Headquarters, U. S. Army Air Forces under the Allied Air Forces, which had been formed on 18 April from the Air Section of U. S. Army Forces in Australia. History of the 4th Air Depot Group.

32. Brett Report, Summary F.

33. Ibid., Summary L.

34. Ulio to CG, USAFIA, #844, 23 Mar. 1942; Australia to AGWAR, #1138, 28 Mar. 42; Arnold to CG, USAFIA, #1108, 5 Apr. 42.

35. Ltr., Sperry Gyroscope Co., Inc., to AAF Civilian Personnel, 15 May 1942, in AAG 231, Misc., Titles, Employees.

36. Interview with Milton J. Getker, 28 July 1943, by ASC.

37. Ibid.

38. Australia to AGWAR, #AG 213, 12 Apr. 42.

39. AFHOM to CG, USAFIA, #1307, 15 Apr. 42.

40. Brett to TAG, #AG 423, 22 Apr. 42; GO #3, Hq., Allied Air Forces, SWPA, Melbourne, 1 May 1942, in Air AG 320.2, Australia.

41. AFHOM to CG, USAFIA, #1307, 15 Apr. 42.

42. Brett Report, Summary M.

43. Ibid.

44. War Organization and Movement recommended that a priority be established for shipment of the 27th Air Depot Group to Australia. The group was expected to be trained and available for transfer about the middle of August 1942. Memo for OPD by AFHOM, 21 May 1942, in AAG 000-800, Misc., Australia.

45. Brett Report, Circular Ltr. 43-1, 27 Apr. 1942.

46. Ibid.

47. This projected procedure was similar to the change which was then being made in the United States, whereby the Air Service Command became responsible for the maintenance and repair of aircraft on posts and stations, using the personnel of the supply, engineering, and materiel squadrons for that purpose. Ibid.

[redacted]

48. Inal. 1, in Ibid.

49. Interview with Clarence F. Barnes, 2 Sep. 1943, by ASC.

50. Interview with Maj. Lawrence E. Brown, 15 June 1943, by ASC.

51. Adams to CG, USAFIA, #1/51, 3 Jan. 42.

52. Australia had a storage capacity of approximately 10,000,000 gallons of gasoline by March 1942. Memo for Chief, AAF by Maj. Gen. Brehon B. Somervell, 3 Mar. 1942, in AAG 400, Misc., Australia.

53. 1st Ind. (ltr., ASC to AAG, 5 Mar. 42), Asst. AAG to ASC, 10 Mar. 1942, in AAG 000-800, Misc., Australia.

54. Ltr., ASC to Chief, AAF, 6 Mar. 1942, in Ibid.

55. Five per cent aromatic content was the maximum to be found in aviation gasoline in the United States, while in other parts of the world the amount was as high as 30 per cent. Adams to CG, USAFIA, #AF 1/55, 4 Jan. 42.

56. Ulio to CG, USAFIA, #653, 12 Mar. 42. A greater proportion of Far East fuel in the blending resulted in more protection against detonation at a high output. A greater proportion of American fuel, on the other hand, resulted in a slight increase in efficiency because of the greater heating value and less distortion of carbureter diaphragms.

57. Ltr., Asst. for Supply and Maintenance Services to AC/AS, 11 Feb. 1942, in AAG 400, Misc., Australia.

58. Ibid.

59. Similar committees were to be set up in England, the Middle East, New Zealand, and India. Ulio to USAFIA, #644, 11 Mar. 42; Ulio to CG, USAFIA, #1749, 14 May 42.

60. Ltr., ASC to Chief, AAF, 6 Mar. 1942, in AAG 000-800, Misc., Australia; BAR, AFASC to AFADS, 6 Apr. 1942, in AAG 400, Misc., Australia.

61. Ltr., Dir. of Base Services to ASC, Wright Field, 9 July 1942, in Ibid.

62. Ltr., Dir. of Base Services to Office of the British Petroleum Representative, 8 Aug. 1942, in Ibid. By the first of June the Munitions Assignment Board and the Combined Chiefs of Staff had agreed to splitting the requisitions for supplies to Australia between Great Britain and the United States. OPD had been opposed to this procedure because "it led to duplication on one hand and complete omission on the other." General MacArthur, however,

agreed to take every step to avoid such difficulties. "Report of Meeting of the General Council," 2 June 1942, in AAG 337 D, Conferences.

63. The equipment then being held in the Philadelphia Signal Depot which was originally scheduled for stations along the Pacific air routes was to be used in filling the quota of weather units for Australia. Ltr., Dir., Weather, AAF to Chief Signal Officer, 28 Mar. 1942, in AAG 000-800, Misc., Australia.

64. Ltr., Dir., Weather to CG, AAF, 1 Apr. 1942, in ibid.

65. Memo for OPD by War Orgs. and Movement, 18 Apr. 1942, in AAG 000-800, Misc., Australia; memo for CG, AAF by Maj. Gen. Dwight D. Eisenhower, Asst. Chief of Staff, 1 Apr. 1942, incl. 1, in ibid. The activation of the squadron was authorized by ltr., AG 320.2 (4-8-42)MR-M-AF, 10 Apr. 1942, as cited in ibid.

66. Arnold to CG, USAFIA, #1309, 15 Apr. 42. One of the undetermined features of the plan was in regard to the type and extent of communications which would be necessary in Australia. In May it was decided by the Director of Weather to withhold decision on the establishment of a weather teletype network in Australia until a representative from that office could go to Australia and make recommendations on the subject. Ltr., Dir. of Weather to Mr. E. R. Jacobsen, Commonwealth of Australia, War Supplies Procurement, Washington, D. C., 11 May 1942, in AAG 000-800, Misc., Australia.

67. Brett Report, Summary M.

68. CM-IN-3814, USAFIA to CG, USAAF, #AG 736, 14 May 42.

69. RAAF Organisational Memorandum #120, 3 June 1942, in Australia 9900-9600, Records Br., AG/AS, Intelligence.

70. "U.S.A.Air Corps Units in Australia" [Station List], 14 July 1942, in ibid.

71. Unit Records Br., OC&R.

72. Australia to AGO, #1093, 26 Mar. 42.

73. Brett Report, Summary M.

74. In the Northwestern Area, only the RAAF Airdrome at Darwin and Batchelor Field (southeast of Darwin) could be used by all types of aircraft. A heavy bombardment field at Daly Waters was under construction and could be used in dry weather. Sites for two similar fields had been selected at Kit Carson, about eight miles southeast of Katherine, and at Mataranka, about 75 miles southeast of Katherine, but construction had not been started. The Darwin Civil Airdrome could be used by pursuit planes, and a pursuit field 25 miles southeast of Darwin was under construction. [redacted]

[redacted]

In the Northeastern Area, only the RAAF field at Townsville and the field at Cloncurry were usable by heavy bombardment, although construction was continuing on the latter. Also under construction was a heavy bombardment field at Charters Towers. The site for a similar field had been selected at Torrens Creek, 50 miles east of Hughenden. A pursuit field at Woodstock, 23 miles south of Townsville, was being constructed by the 46th Engineers and was expected to be completed around the first of April. The site for a similar field had been selected and surveyed near Reid River, 45 miles south of Townsville.

Although some construction was still under way, pursuit ferry route stations at Coonadatta, Alice Springs, Daly Waters, Cloncurry, Townsville, Charleville, and Rockhampton were usable. Additional airdromes south of Darwin and north of Townsville were needed and sites had been selected, but construction was held up by the scarcity of labor and equipment. As for other areas of the continent, the RAAF fields at Lowood, Amberley, and Archerfield near Brisbane, at Narromine and Parkes about 200 miles northwest of Sydney, and at Richmond and Bankstown near Sydney were made available for American use, but even these fields were inadequate to meet the tactical demands. Australia to AGO, #1093, 26 Mar. 42.

75. Brett Report, Summary A.

76. Ibid., Summary M.

77. Ibid.

78. Ibid.

[redacted]

[redacted]

Chapter VII

1. CM-OUT-5181, Marshall to Necal, #50, 26 Apr. 42.

2. Ibid.

3. MacArthur to ACMAR, #NK 139, 27 Apr. 42.

4. Ibid; CHQ, SWPA to AG, #AG 752, 16 May 42 (CM-IN-4299).

5. Ibid.; Station List, 14 July 1942.

6. Incl. 1, ltr., Commander in Chief, U. S. Fleet, to CG, AAF, 13 May 1942, in AAG 000-800, Misc., Australia.

7. Ibid.

8. Incl. 1 (R&R, AFNOM to Tactical Sec., 17 Mar. 1942), Cominch File A 16-3 (00177), 12 Mar. 1942, in AAG 000-800, Misc., East Indies.

9. Naval construction forces were to be withdrawn upon completion of the base at Tongatabu. Ibid.

10. Marshall to CG, USAFIA, unnumbered msg., 16 Mar. 42. The following air force units were to be moved from Australia to Tongatabu:

	Officers	E.M.
1 Hq. Air Force Det.	2	10
1 Pursuit Sq. (incl. atchd. Med.)	42	218
1 Det. Materiel Sq.	4	50
1 Communications and Weather Det.	1	30
1 Plat. AC Int. Control Sq.	1	85
1 Sig. AW Reptg. Co. (2 SCR-270)	6	140
1 CWS Det.	0	4
1 Plat. Ord. Co. Avn. (Pur.)	1	23
1 Det. Ord. Co. Air Base	0	10
1 Sig. Plat. Air Base	1	36
Total	58	606

11. On 23 April, General MacArthur's headquarters announced that intrepid Netherlands and Australian troops were still fighting on Timor Island, keeping a foothold 300 miles north of Australia for the expected Allied counter-offensive. A-2 Summary Files, 23 Apr. 1942, 799.

12. Interview with Col. John K. Gowan, Jr., 22 Oct. 1942.

13. A-2 Summary Files, 23 Apr. 1942, 799.

14. History of the 19th Bombardment Group.

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15. General MacArthur on 10 April requested immediate shipment of 24 B-24's, complete with RDF equipment, for reconnaissance work in the Southwest Pacific. Of the several B-24's then in Australia, usually no more than one was reported to be in operational condition. MacArthur to AGWAR, #AG 174, 10 Apr. 42.

16. AAFSAT Air Room interview with Col. Minton W. Kaye, "Photographic Aviation," June 1943.

17. TAG to CG, USAFIA, #AF 3/181, 11 Mar. 42; Unit Records Br., OC&R.

18. Ibid.; Brett Report, Summary G.

19. AAFSAT Air Room interview with Col. Minton W. Kaye.

20. Brett Report, Summary G.

21. TAG to CG, USAFIA, #900, 27 Mar. 42.

22. "Southwest Pacific Reconnaissance," AFCIB, Bulletin No. 18 (Dec. 1943), 37; Unit Records Br., OC&R.

23. Interview with Maj. R. W. McDuffee, 1 July 1943.

24. New combat pilots frequently ran into difficulty in connection with reconnaissance of enemy shipping movements off New Guinea, where there were chains of small islands which, from 20,000 feet, resembled a convoy. New pilots would almost invariably report these islands as an enemy convoy, giving the exact tonnage of each "ship." When this incident occurred for the first time, a bombardment squadron was sent out to finish off the ships, which resulted only "in the General nearly finishing off the pilot." Such incidents also resulted in combat units' verifying their reports with the photographic squadron. "Southwest Pacific Reconnaissance," 37.

25. AG 320.2 (2-28-42)MR-M-AAF, 9 Apr. 1942, in AAG 312.1 I, AGO Letters; Unit Records Br., OC&R.

26. CM-OUT-473 (24 Apr. 42), WPD to USAFIA, #1465, 22 Apr. 42.

27. The O.N.I. Weekly, No. 16 (13 May 1942), 11.

28. Interview with 1st Lt. H. C. Hornbeck (undated).

29. The O.N.I. Weekly, No. 16 (13 May 1942), 12.

30. Ibid.

31. Maj. Dill B. Ellis, "We Introduced the Japs to the B-26," Air Force, XXVI, No. 8 (Aug. 1943), 31; history of the 27th Bombardment Group.

[redacted]

[redacted]

32. SWPA Intelligence Summary #1 (18 May 1942), 2.

33. Adm. Ernest J. King, "Report to Secretary of the Navy," in Washington Post, 25 Apr. 1944.

34. CM-IN-3622, Melbourne to Chief of Staff, #719, 13 May 42.

35. In regard to this action, Capt. Carey L. O'Brien, intelligence officer of the 19th Group, stated: ". . . it is a matter of record, and we have the photographs, that we bombed our own Navy in the Coral Sea, simply because we did not have the information necessary to give our combat crews the positions of our own ships. There were no identification signals set up. It was our policy to bomb first and identify later. We knew the Japs were in there--but not our Navy. After that, however, we began to get intelligence from our Navy." Interview with Col. Richard H. Carmichael and members of the 19th Bombardment Group, 5 Dec. 1942.

36. CM-IN-3622, Melbourne to Chief of Staff, #719, 13 May 42. Commenting on this lesson in technique, which was also reported as a discovery after the Battle of Midway in June, the Deputy Chief of Air Staff, on 23 July, stated that "The history of the employment of Air Forces to date in this war has included to a very large extent similar 'discoveries' confirming established and published principles and items of tactics and technique." It was therefore directed that action be taken "to direct all of our commanders to 'follow the book' unless there are good reasons for not doing so." RAR, AFDAS to AFACT, 23 July 1942, in AAG 321.9 L, Organization of Air Corps.

37. Memo for OPD by AC/AS, Plans, 1 July 1942, in AAG 381 4, War Plans.

38. Ibid. General Richardson, after a visit to the South and Southwest Pacific theaters in July of 1942, expressed a similar opinion; in fact, he recommended to the Chief of Staff that--for purely tactical reasons--New Caledonia and the New Hebrides be placed under the Commanding General, Southwest Pacific Area (provided there was no Australian control exercised over these islands), since it was "impossible to operate through the Solomons, New Guinea, and New Britain without coordinating the forces in these islands with those in Australia." Memo for Chief of Staff by Maj. Gen. Robert C. Richardson, Jr., 13 July 1942, in AAG 000-800, Misc., Australia.

39. Plans Division Digest, 27 June 1942, in AC/AS, Plans.

40. A-2 Summary Files, 6 May 1942, 848.

41. History of the 93d Bombardment Squadron.

42. History of the 19th Bombardment Group.

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43. A-2 Summary Files, 6 May 1942, 849.

44. Interview with Maj. C. H. Diehl, at Hq., II Bomber Command, 6 July 1943.

45. AG 370.5 (1-26-42)MSC-C, 26 Jan. 1942, in Unit Records Br., OC&R.

46. AG 370.5 (2-25-42)MSC-C-M, 26 Feb. 1942, in ibid.

47. AG 370.5 (3-1-42)MSC-C-M, 2 Mar. 1942; and AG 370.5 (3-30-42)MC-E-M, 30 Mar. 1942, in ibid.

48. Ltr., Col. Robert D. Knapp to CG, Third Bomber Command, MacDill Field, 23 Mar. 1942, in AAG 452.1 M, Bombers.

49. R&R, AFROM to AFRBS, 6 Apr. 1942, in AAG 373 M, Flights, General.

50. It was further ordered that no B-26's would be sent outside the continental limits of the United States except those which had been modified as recommended. Memo for CG, Materiel Command by Dir. of Military Requirements, 12 Apr. 1942, in AAG 452.1 A-2, Bombers.
By 24 July a total of 28 of these B-26's had been modified and sent to the Southwest Pacific Area. On this date nine more B-26's, previously assigned to the 38th Bombardment Group, were ordered released from the Third Air Force for delivery by Air Transport Command as replacement aircraft for forces in the Southwest Pacific. R&R, AFROM G-4 to AFRDB, 24 July 1942, in AAG 400, Misc., Australia.

51. R&R, AFRIT to AFDOP, 9 May 1942; R&R #2, AFDOP to AFRIT, 12 May 1942, in AAG 353.9 D2, Training, General.

52. AG 370.5 (5-17-42)MC-AF-M, 18 May 1942; AG 370.5 (6-11-42)MS-M, 11 June 1942; AG 370.5 (6-28-42)MS-E-M, 6 June 1942; all in Unit Records Br., OC&R.

53. Fifth Air Force files, in ibid.

54. Ltr., Hq., ASC to Chief, Field Services, ASC, 28 Apr. 1942, in AAG 400, Misc., Australia. Late in February the decision had been made by the Chief of the AAF to fly all B-26's to overseas destinations, contingent upon demonstrated performance and range. By the end of February approximately 85 of these planes destined for the forces in Australia had either been shipped as far as Hawaii or were being crated. It was directed that only 60 crated B-26's be sent to Hawaii and that the remainder of the crated planes be shipped to Australia as replacements. Memo for Chief of the Air Corps by Asst. AAG, 28 Feb. 1942, in AAG 452.1 A2, Bombers.

55. Brett Report, Summary G.

56. Interview with 2d Lt. J. P. Smith, 22 July 1943; Ellis, "He Introduced the Japs to the B-26." 31.

57. Arnold to CG, USAFIA, #1780, 16 May 42; Brett Report, Summary G.

58. Arnold to CG, USAFIA, #729, 17 Mar. 42.

59. Ellis, "We Introduced the Japs to the B-26," 31.

60. Incl. 1, R&R, AFDAS to Gen. Perrin, 21 Aug. 1942, in AAG 000-800, Misc., Australia.

61. According to Major Ellis, in the course of its operations during the spring and summer of 1942 and during the Papuan campaign, the 22d Bombardment Group "shot down more enemy aircraft than any other medium bomb group and now /August 1943/ stands, I believe, either third or fourth among all bomb groups in this respect." Ellis, "We Introduced the Japs to the B-26," 31.

62. History of the 27th Bombardment Group.

63. Brett Report, Summary A.

64. Arnold to CG, Allied Air Forces, #123, 22 June 42.

65. Interview with Col. John Davies, 9 Dec. 1942.

66. Incl. 1 (memo to Technical Executive, Wright Field, 3 Aug. 1942), in AAG 385, Special, Brett Report.

67. R&R, AFROM to AAG, 11 Mar. 1942, in AAG 000-800, Misc., Australia.

68. Interview with Col. John Davies, 9 Dec. 1942; history of the 27th Bombardment Group.

69. History of the 27th Bombardment Group.

70. On 27 March one flight of the 28th Squadron had been sent to Cunderdin, near Perth, for patrol work with LB-30's, remaining until 18 May before rejoining the squadron at Longreach. History of the 19th Bombardment Group.

71. Brett Report, Summary G.

72. History of the 28th Bombardment Squadron; history of the 19th Bombardment Group. By authority of SO #21, AAFNEA, 21 July 1942, the 435th Squadron was detached from the 19th Group and for approximately two months operated under direct control of Northeastern Area Headquarters of the Allied Air Forces and later under the V Bomber Command. On 24 September, by SO #32, Headquarters V Bomber Command, the squadron was returned to the 19th Bombardment Group for all purposes except operational control. Ibid.

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73. The redesignation of pursuit units to fighter units was directed on 15 May 1942. Memo for TAG by AFHOM, 15 May 1942, in AAG 321.9 M, Organization of Air Corps. Notified of the change on 26 May, General Brett reported that, effective 4 June 1942, all interceptor control squadrons, pursuit groups, and pursuit squadrons were redesignated "fighter." CBQ, SWPA, to CG, AAF, #Air 993, 6 June 42.

For the purpose of uniformity, the term "fighter" is used throughout this discussion, although the period covered begins prior to the date of redesignation.

74. All the statistics presented in the following discussion are taken from a letter to the CG, Allied Air Forces, by Lt. Col. O. L. Grover, Director of Pursuit, Hq., Allied Air Forces /about 8 May 1942/, in U. S. 9570, Airplanes--Fighter, Records Br., AC/AS, Intelligence.

75. The rate of replacement as eventually set up at Headquarters, AAF, was two less than this number. Eighty-nine fighter pilots were scheduled to go to Australia in July, 44 in August, and 46 per month thereafter, as replacements. Incl. 1, R&R, AFDAS to Gen. Perrin, 21 Aug. 1942, in AAG 000-800, Misc., Australia.

76. By August 1942, according to Headquarters, AAF, all pilots then being sent overseas had a minimum of 40 hours in combat planes. Ibid.

77. As a result of this recommendation, it was stated at Headquarters, AAF, that special service officers would be provided for a recreational center upon receipt of a requisition from General Brett. Ibid.

78. Royce, "Combat Notes from Down Under," 40.

79. Ltr., Lt. Col. Paul B. Wurtsmith to Deputy Chief of Staff, SWPA, 14 May 1942, in U. S. 9570, Records Br., AC/AS, Intelligence.

80. A-2 Summary Files, 27 Apr. 1942, 814.

81. Ltr., Lt. Col. Paul B. Wurtsmith to Deputy Chief of Staff, SWPA, 14 May 1942. Colonel Wurtsmith's letter includes the following combat data on the performance of the P-40E, compiled on the basis of the experience of the 49th Group between 17 March and 5 May 1942:

1. Range (full military load)	Flying Hours	Naut. Mi.	Statute Mi.
Normal gas load	3:00	555	640
50 gallon bellytank	5:00	782	812
100 " "	5:30	946	1088
150 " "	6:00	1070	1231

2. Oil Consumption: 3/4 quart per hour. [redacted]

[redacted]

[redacted]

3. Radius of Action from Base (30 min. combat at maximum radius at 15,000 ft. alt., 100 gal. per hour fuel consumption).

Normal gas load	170 statute miles
50 gallon bellytank	260 " "
100 " "	*400 " "
150 " "	*460 " "

*(This is not practical as it would necessitate combat with bellytanks attached to aircraft.)

The pilot flies out using the gasoline in his bellytank. As soon as he is engaged in combat he drops the tank. Thereafter flying must be done on the aircraft's normal capacity (148 gal.). Including a half hour combat at full throttle, this supply will allow a maximum of 350 miles from the base. It should be noted that the pilot would have 19 gallons left in the 100-gal. tank if he flew straight out from his base for 350 miles, which would allow 28 minutes of patrol duty at 5,000 feet. The 150-gal. tank would leave him 65 gallons, which would allow 78 minutes of patrol duty at 5,000 feet.

4. Bomb Load

Without bellytank	One 1000-lb. bomb
With bellytank	Six 50-lb. bombs

5. Ammunition

900 rounds of .50-cal. ammunition for six guns.

82. Ltr., Lt. Col. B. D. Wagner, Hq., Pursuit Section, Northeastern Area, to CG, Allied Air Forces, Air Command No. 2, Townsville, 11 May 1942, in U. S. 9570, Records Br., AG/AS, Intelligence.

83. "P-39's in New Guinea," AFCIB, Bulletin No. 11 (April-May,1943), 17; AAFSAT Air Room Interview with Lt. Col. John G. Pitchford, "Fighter Tactics and Organization in New Guinea," 16 July 1943, in AAFSAT Intelligence Report, Sep. 1943, Records Br., AG/AS, Intelligence.

84. Ltr., Lt. Col. B. D. Wagner, Hq., Third Fighter Sector Command, Townsville, to CG, USAFIA, Melbourne, 4 May 1942, in AAG 385 M, Conducting Warfare.

85. A more colorful description of this action is given by Robert Johnston, Australian war correspondent, in his account of the first year of fighting in New Guinea. He had interviewed "Buzz" Wagner for the complete story of the first P-39 action, but it was not until he had talked with other pilots of the squadron an hour later that he discovered "that Wagner himself had shot down all three of the Zeros which were destroyed!" Johnston, The Toughest Fighting in the World, 87-88.

86. In all cases observed, one cannon hit was all that was necessary to bring down an enemy aircraft. Most of the pilots, however, preferred to have two additional .50-cal. machine guns rather than the

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four .30-cal. wing guns. Ltr., Lt. Col. B. D. Wagner, Hq., Pursuit Section, Northeastern Area, 11 May 1942, to CG, Allied Air Forces, Air Command No. 2, Townsville, in U. S. 9570, Records Br., AC/AS, Intelligence.

87. By the end of June 1942, P-39's were being modified in accordance with certain recommendations as a result of action in the Southwest Pacific. A piece of armor plate, for example, was being installed immediately behind the engine; and, while it added 35 pounds to the weight of the plane, it was more than offset by the removal of certain non-essential items. By the further removal of items agreed upon as non-essential for the P-39 when used for local airdrome defense, approximately 1,000 pounds in weight could be removed from the standard D-1 plane with no adverse effect on the center of gravity and no reduction in pilot safety. Memo for Gen. Arnold by AFDMR, 29 June [1942], in AAG 385 E, Conducting Warfare.

88. The early record of the P-39 against enemy planes indicates that the American pilots learned to overcome some of the disadvantages of their aircraft, though there is no way of knowing how much better the record would have been, had the P-39's had the same climbing and altitude characteristics as the Zero. Information contained in cable messages from the Southwest Pacific Area for the period 4 May to 17 June shows that P-39's engaged enemy aircraft 33 times, with the following results:

P-39		Enemy (Zero)	
Shot down	46	Shot down	47
Damaged by action	16	Damaged by action	37
Crash landings	5	Probably lost	20
Forced landings	5		
	72		104

Ibid.

89. "P-39's in New Guinea," AFCIB, Bulletin No. 11 (April-May 1943), 17.

90. Ltr., Lt. Col. Frederic H. Smith, Jr., to Dir. of Pursuit, Allied Air Forces, Melbourne, 30 May 1942, in 385 B, Conducting Warfare.

91. New York Times, 28 May 1942.

92. Ltr., Lt. Col. Frederic H. Smith, Jr., to Dir. of Pursuit, Allied Air Forces, 30 May 1942. Pursuant to verbal instructions from the Director of Pursuit, Colonel Smith proceeded by military aircraft to Port Moresby on detached service, arriving on 23 May. His letter to the Director of Pursuit outlines his observations of conditions affecting the two fighter squadrons--observations which are here summarized in the ensuing paragraphs.

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93. Station List, 14 July 1942.

94. Ltr., Lt. Col. B. D. Wagner, Hq., Allied Air Forces, to Commander, Allied Air Forces, SWPA, 22 May 1942, in U. S. 9570, Records Br., AC/AS, Intelligence.

95. R&R, AFADS to AFDMR, 29 June 1942, in AAG 385, Special, Brett Report.

96. Memo for Chief of Air Staff by Dir. of Air Defense, 27 May 1942, in AAG 400, Misc., Australia.

97. R&R, AFACT to AFDMR, 23 June 1942, in ibid.

98. Memo for CG, ASC, by AC/AS, A-4, 11 July 1942, in ibid.

99. Fifty P-38's had reached Australia by the middle of September, along with 44 crews consisting of pilot, crew chief, and mechanic. The six remaining crews had been diverted to Maj. Gen. M. F. Harmon's forces in the South Pacific. R&R #12, AFRAD to AFCAS, 18 Sep. 1942, in ibid.

100. A total of 65 fighter planes, 14 heavy bombers, and 17 medium bombers, allocated for June replacements for General Brett's forces, still had not left the United States by the end of June as a result of previous commitments, modifications, and a lack of parts. These replacements did not get underway until July and August. The required number of fighter planes—65 P-39D-1's—left the factory on 5 July and departed by boat between 12 and 21 July. Modifications on 14 B-17's were completed by 31 July and were shortly started on their way to the Southwest Pacific. Seventeen B-25's were to be completed about 6 August, the planes which were allocated earlier having been taken by the air echelon of the 38th Bombardment Group. In addition, 11 A-24's were delivered from the factory to the modification center on 29 July. July replacements were, of course, behind schedule also. Much of the delay in satisfying commitments for heavy and medium bombers resulted from the priority given to the Middle East theater and from the modifications necessary before the aircraft could leave the United States. R&R, AFROM to AFDMR, 23 June 1942, in AAG 385, Special, Brett Report; R&R, AFROM G-3 to AFACT, 10 Aug. 1942, in AAG 400, Misc., Australia.

101. R&R, Gen. Harmon to AFACT, 13 July 1942, in ibid.

102. Memo for Gen. Arnold (unsigned), 19 July 1942, in ibid.

103. Memo for Gen. McNarney by Gen. Arnold, 20 July 1942, in ibid.

104. In view of the failure of the AAF to meet the delivery dates on these replacements as originally given to General MacArthur, the Deputy Chief of Air Staff suggested that A-3 "prepare and keep on hand [redacted] data which may be used in reply to the accusations [redacted] which are quite likely to ensue." R&R #3, AFDAS to A-3, 12 Aug. 1942, in ibid.

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105. R&R, AFACT to AFDAS, 21 July 1942, in ibid.

106. Richardson Report.

107. Ltr., Gen. Brett to Gen. Marshall, 4 July 1942, in AAG 385 M, Conducting Warfare.

108. Richardson Report.

109. Ibid.

110. Ibid.

111. Brett Report, Summary F.

112. Arnold to Brett, #775, 20 Mar. 1942; Brett to AG, #1003, 22 Mar. 1942; MacArthur to AGWAR, #AG 420, 22 Apr. 1942.

113. Memo for Chief, AAF [CG, AAF], by Sec., General Staff, 4 Aug. 1942, in AAG 000-800, Misc., Australia. See also WD ltr., "Exchange of Air Forces Personnel," 25 July 1942, and WD Circular #211, Sec. 6, 1 July 1942, which constitute a comprehensive plan for the exchange of AAF personnel.

114. R&R, AFAAP to AFCAS, 31 July 1942, in AAG 321.9 L, Organization of Air Corps. One of General Kenney's first moves in this connection was to make arrangements for the return to the United States of those crew members who had been in combat since the beginning of the war and who by this time were "burned out."

115. Interview with Col. Richard H. Carmichael and members of the 19th Bombardment Group, 5 Dec. 1942.

116. Interview with Col. Reginald F. C. Vance, 13 Oct. 1942.

117. Richardson Report.

118. See Chap. II, n. 3.

119. "The Landing in the Solomons," ONI Combat Narratives, 3.

120. SWPA to Chief of Staff, #C-117, 16 July 1942.

121. Station List, 14 July 1942.

122. For the history of this new phase, see forthcoming study on the Papuan Campaign, in AFHHI files.

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B I B L I O G R A P H Y

War Department Files

AAF Classified Files (cited AAG with decimal).
Most valuable for this study were the Brett Report and other volumes in the foreign files, although all of the files listed below were covered thoroughly and without exception contained pieces of correspondence pertinent to the subject under investigation.

000-800	Misc., Australia /includes the report by Maj. Gen. Robert C. Richardson, Jr., to Chief of Staff, 9 July 1942/
000-800	Misc., East Indies
000-800	Philippines
201	General George H. Brett
201	General Douglas C. MacArthur
201	General Ralph Royce
210.31 B 1	Assignment of Officers
210.31 C	Assignment of Officers
210.31 D	Assignment of Officers
231	Misc., Titles, Employees
300.6	Memoranda
312.1	Classes of Correspondence
312.1 B	Classes of Correspondence
312.1 D	Classes of Correspondence
312.1 A 2	AGO Letters
312.1 G	AGO Letters
312.1 J	AGO Letters
319.1 C	Reports, Misc.
319.1 D	Reports, Misc.
319.1 E 2	Reports, Misc.
319.1 F	Reports, Misc.
319.1-3	Daily Diary
320.2 C	Strength of Organizations
320.2 D	Strength of Organizations
320.2 E	Strength of Organizations
320.3 A	Tables of Organization
321.9 K	Organization of Air Corps
321.9 L	Organization of Air Corps
321.9 M	Organization of Air Corps
321.9-3 A	Groups
322	Misc., Staffs, Arms and Services
337 D	Conferences
353.9 D 1	Training, General
353.9 D 2	Training, General
361 B	Air Routes
361 C	Air Routes
370.5 E	Transfer of Troops
370.5 I	Transfer of Troops

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373 C	Flights, General
373 D	Flights, General
373 E	Flights, General
373.6 A	Ferry Crews
381	Projects
381 A	Defense of Airdromes
381 D	War Plans
381 F	War Plans
385	Special, Brett Report on Air Operations in Australia
385 D	Conducting Warfare
385 E	Conducting Warfare
400	Misc., Australia
400.174 A	Priorities
400.345 C	Allowance of Supplies
452.1	Assignment of Airplanes
452.1	Range of Aircraft
452.1 A 2	Bombers
452.1 B	Bombers
452.1 B	Allocation of Aircraft
452.1 C	Allocation of Aircraft
452.1 F	Pursuit Aircraft
600	Misc., East Indies
680.2 B	Visitors

The Adjutant General, Classified Files (cited AG with decimal):

370.5 (1-14-42)	Movement of Shipment 6814
370.5 (8-1-41) pt. 2	Reinforcements and Movement of Troops
580.81 (12-26-41) sec.1	

Office of the Air Adjutant General, Classified Files (cited Air AG with decimal):

320.2	Australia
370.5, sec. 1	
370.5, sec. 2	
686	Southern Ferry Route

Unit Records Branch, AC/AS, Operations, Commitments, and Requirements, Fifth Air Force Files.

These files were valuable for indicating troop movements and unit locations, changes of designation, and personnel strength.

Message Files.

Extensive use was made of cable and radio messages for the period December 1941-August 1942. All messages cited in this study are filed in the AAF Message Center and/or Archives, Historical Division, AC/AS, Intelligence. In addition, limited use was made of the A-2 Summary Files, also in the Archives of the Historical Division

Unit Histories and Diaries

All of the documents listed below are filed in the Archives of the Historical Division, AC/AS, Intelligence (cited AFHRI files). The histories, in general, cover the period from 7 December 1941 to 31 December 1942.

History of the 19th Bombardment Group (H), with the following attached:
- History of the 28th Bombardment Squadron
- History of the 30th Bombardment Squadron
- History of the 93d Bombardment Squadron
- History of the 435th Bombardment Squadron
- "435th Overseas"

History of the 27th Bombardment Group (L)
History of the 36th Fighter Squadron
History of the 63d Bombardment Squadron (H)
History of the 4th Air Depot Group

Cool, Maj. Paul E., excerpts from diary kept in Java and Australia, 1 January to 10 December 1942.

Knudson, Capt. Cecil C., diary kept in Java and Australia, 1 January to 27 December 1942.

McAfee, Lt. Col. James B., diary kept in the Philippine Islands, Java, and Australia, 1 November 1941 to 5 October 1942.

Orders

Special Orders No. 180, Headquarters, 4th Air Force, Hamilton Field, California, 17 December 1941.

General Orders, Headquarters, Allied Air Forces, Southwest Pacific Area, Melbourne, Australia:

No. 1	20 April 1942
No. 2	27 April 1942
No. 3	1 May 1942
No. 4	2 May 1942

Station Lists

"U. S. A. Air Corps Units in Australia," 8 May 1942.
"U. S. A. Air Corps Units in Australia," 14 July 1942.

Interviews

The following interviews, with exceptions as noted, were made in the office of the Assistant Chief of Air Staff, Intelligence, and are on file in the Records Branch, Collection Division, of that office. In

addition to the interview file of the Records Branch, certain volumes on Australia and the Southwest Pacific contained miscellaneous reports which were used in this study.

Baakee, Col. Charles, 12 May 1942.
Barnes, Clarence F., 2 September 1943.
Benner, Col. Donald W., 27 April 1943.
Brown, Lt. Col. Harold, 5 November 1943.
Brown, Maj. Lawrence S., 15 June 1943, by Air Service Command.
Carmichael, Col. Richard H., and members of the 19th Bombardment Group, 5 December 1942.
Cottage, Capt. Stanley, 23 February 1943.
Davies, Col. John, 9 December 1942.
Diehl, Maj. C. H., 8 July 1943, by Headquarters, II Bomber Command.
Eubank, Col. Eugene L., 2 July 1942.
Fisher, Maj. William P., (undated).
Galusha, Maj. Harry L., (undated).
Getker, Milton J., 28 July 1943, by Air Service Command.
Gowan, Lt. Col. John K., 22 October 1942.
Hornbeck, 1st Lt. H. C., (undated).
Kaye, Col. Milton W., June 1943, AAFSAT Air Room Interview, "Photographic Aviation."
Lane, Col. William, Jr., (typescript), 15 May 1944, filed in Archives, Historical Division, AC/AS, Intelligence.
Lemmon, Capt. J. C., 29 June 1943.
Marburg, Capt. Charles L., 3 November 1942.
Marchant, Lt. Cols. John C., and Brown, Harold, (typescript), 24 May 1944, filed in Archives, Historical Division, AC/AS, Intelligence.
McDuffee, Maj. R. W., 1 July 1943.
Pitchford, Lt. Col. John C., 16 July 1943, AAFSAT Air Room Interview, "Fighter Tactics and Organization in New Guinea."
Ray, Robert O., 27 October 1943, by Air Service Command.
Schaetzel, Col. George E., 29 November 1943, by Air Service Command.
Sheggrud, Capt. Karl, 23 February 1943.
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Appendix 1 - Boundaries of Pacific Ocean Areas

DIVIDING LINE BETWEEN INDIAN THEATER AND PACIFIC THEATER

From CAPE KAMI in the LUICHOW PENINSULA around the coast of the TONKIN GULF, INDO-CHINA, THAILAND, and MALAYA to SINGAPORE: from Singapore south to the north coast of SUMATRA, thence round the east coast of SUMATRA (leaving the SUNDA STRAIT to the eastward of the line) to a point on the coast of SUMATRA at Longitude 104° East, thence south to Latitude 08° South, thence southeasterly towards ONSLOW, AUSTRALIA, and on reaching Longitude 110° East, due south along that meridian. The PACIFIC THEATER extends eastward of this dividing line to the continents of NORTH and SOUTH AMERICA.

DEFINITION OF SOUTHWEST PACIFIC AREA

The westerly boundary of the SOUTHWEST PACIFIC Area is the westerly boundary of the PACIFIC Theater, the Area including necessary naval and air operational areas off the West Coast of AUSTRALIA. The north and east boundaries of the SOUTHWEST PACIFIC Area run as follows: From CAPE KAMI (LUICHOW PENINSULA) south to Latitude 20° North; thence east to Longitude 130° East; thence south to the Equator; thence east to Longitude 165° East; south to Latitude 10° South; southwesterly to Latitude 17° South, Longitude 160° East; thence south.

DEFINITION OF SOUTHEAST PACIFIC AREA

From the MEXICAN-GUATEMALA western boundary southwesterly to Latitude 11° North, Longitude 110° West; thence south.

DEFINITION OF THE PACIFIC OCEAN AREA

The PACIFIC OCEAN Area includes all of the PACIFIC Theater not included in the SOUTHWEST and SOUTHEAST PACIFIC Areas, and is subdivided into the:

NORTH PACIFIC AREA, North of Latitude 42° North;
CENTRAL PACIFIC AREA, between the Equator and Latitude 42° North;
SOUTH PACIFIC AREA, South of the Equator.

Incl., ltr of instructions to CG, U.S. Army Forces in the South Pacific Area, dated 7 July 1942, OPD 384 SPA (7-7-42), incl. effective 8 May 1942.

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[redacted]

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Appendix 2 - Duties of Staff, Allied Air Headquarters

CHIEF OF STAFF (C.O.S.).

1. Co-ordination of the general policy of the Commander.
2. Plans for the development and employment of Air Forces in war.
3. Selection of aircraft types and equipment to meet operational requirements.
4. Liaison with other Services and Departments concerning operations and intelligence.

ASSISTANT CHIEF OF STAFF (A.C.O.S. Tech.).

1. Requirements and information concerning technical maintenance and technical services in relation to the employment and technical movement of operational units.
2. Requirements and information concerning petrol, oil, munitions and pyrotechnics.
3. Special studies on technical supply matters.

ASSISTANT CHIEF OF STAFF (A.C.O.S. Adm.).

1. Co-ordination of administrative arrangements with operational requirements.
2. Requirements concerning aerodromes, accommodation, sustenance and essential services in relation to the employment and tactical movement of operational units.
3. Liaison with appropriate staff, R.A.A.F. Head-Quarters, and U.S.A.F.I.A. Headquarters.

SENIOR AIR STAFF OFFICER (S.A.S.O.).

1. Conduct of air operations and the issue of orders in regard thereto.
2. Fighting efficiency and operational training policy.
3. Schemes for ground defence.
4. Communication policy.
5. Intelligence.

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DIRECTOR OF OPERATIONS (D.Ops.).

1. Control and record of operations through the Operations Room.
2. Development and application of new methods in the tactical employment of aircraft.
3. Supervision of operational training.
4. Advice on matters relating to navigation and armament.
5. Liaison with other services in the tactical employment of aircraft allotted for co-operative duties.

OPERATIONS 1 - PURSUIT (Ops.1).

1. Organization of Fighter Sector Headquarters.
2. Fighter tactics development.
3. Collation and dissection of combat reports.
4. Issue of training instructions and tactical papers relating to fighter tactics.

OPERATIONS 2 - RECONNAISSANCE & STRIKING FORCES (Ops.2).

1. Employment of reconnaissance and striking aircraft.
2. Systems of operational control.
3. Employment of fighter aircraft in support of striking force.
4. Employment of tactical methods.
5. Photographic reconnaissance units.
6. Liaison with S.C.O. regarding aircraft codes.
7. Dissemination of information regarding new methods.

OPERATIONS 3 - ARMY SUPPORT (Ops.3).

1. Army co-operation policy.
2. Liaison with Army.
3. Development of new methods and dissemination of information.

[redacted]

OPERATIONS 4 - OPERATIONAL TRAINING (Ops.4).

1. Operational training units - Policy.

2. Liaison with other sections regarding dissemination of latest methods.

3. Liaison with personnel provisioning.

OPERATIONS 5 - ARMAMENT (Ops.5).

1. Advice on operational employment of armament equipment and weapons.

2. Advice on operational armament requirements and the introduction of new equipment.

3. Advice on the offensive employment of chemical warfare agents.

4. Liaison with other branches regarding supply and distribution of armament equipment, bombs, ammunition and pyrotechnics.

5. Supervision of armament training in operational units in collaboration with Ops. 4.

6. Provision of armament training facilities.

7. Analysis of the results of operations to assess the effectiveness of the weapons employed against particular targets.

8. Dissemination of new methods employment armament equipment.

9. Examination of combat reports, etc., in collaboration with other sections for the collection and issue of tactical information and for devising new tactical methods.

OPERATIONS 6 - NAVIGATION (Ops.6).

1. Navigation policy and advice.

2. Liaison with other branches regarding navigation equipment.

3. Procurement, correction and issue of maps and charts.

4. Coastal Air Pilots and Notices to Airmen.

5. Flying regulations and restrictions.

6. Production of publications in co-operation with the Navy.

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DIRECTOR OF INTELLIGENCE (D. of I.).

1. Advice on air intelligence matters.

2. Collection and dissemination of air intelligence.

3. Policy matters relating to internal security.

AIR INTELLIGENCE (1) - (AI.1).

Correspondence, administration, training, posting publications.

AIR INTELLIGENCE (2) - (AI.2).

Tactical information, target maps, photographic interpretation, enemy order of battle, examination of P.O.W. reports, silhouettes, etc.

AIR INTELLIGENCE (3) - (AI.3).

General security administration.

AIR INTELLIGENCE (4) - (AI.4).

Publicity censorship, unit censorship, censorship liaison with other Services.

AIR INTELLIGENCE (5) - (AI.5).

Wireless intelligence, "J" policy.

DIRECTOR OF DEFENCE (D. of D.).

1. Active and passive defence measures for the protection of service establishments.

2. Policy matters relating to the organization and direction of the Volunteer Air Observer Corps.

AIR DEFENCE 1 (AD.1).

1. Active defence measures including matters relating to gun defences, aerodrome defence units and balloon barrages.

2. Organization of Volunteer Air Observer Corps.

AIR DEFENCE 2 (AD.2).

Matters relating to passive defence measures, including camouflage, A.R.P. and Anti-Gas.

[redacted]

DIRECTOR OF COMMUNICATIONS (D. of C.).

1. Communication policy.
2. The organization and control of operational communications.
3. Liaison with Signals Staff of the Commander-in-Chief and other services including P.M.G.'s Department and Department of Civil Aviation.
4. Radar (R.D/F) organization.

COMMUNICATIONS 1 (C.1).

1. Air to ground communications organization.
2. Radio aids to navigation.
3. Visional signalling methods.
4. Frequency organization.
5. Liaison with Department of Civil Aviation on communication matters.

COMMUNICATIONS 3 (C.3).

1. Point to point communication organization.
2. Meteorological communication organization.
3. Liaison with Melbourne W/T Station.
4. Signal training standards.

COMMUNICATIONS 4 (C.4).

1. Co-ordination of Coding and Cyphering Systems.
2. Security measures including security systems for custody, mustering, etc.

COMMUNICATIONS 7 (C.7).

Radar (R.D/F) organization.

DIRECTOR OF PLANS (D. of P.).

1. Operational planning for the employment of the Allied Air Forces.

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[redacted] 197

2. Detailed planning in connection with current policy and operations.

3. Chiefs of Staff Committee projects as they affect the Air Force.

PLANS 1.

1. Preparation of plans for future operation of Allied Air Force.

2. Inter-Service planning.

3. Analysis of proposed operations.

PLANS 2.

Policy matters in relation to -

1. Quantity and location of fuel and ammunition reserves.

2. Location of operational, maintenance and supply units.

3. Strategic air routes.

4. Composition and equipment of operational units.

5. Replacement of personnel and equipment.

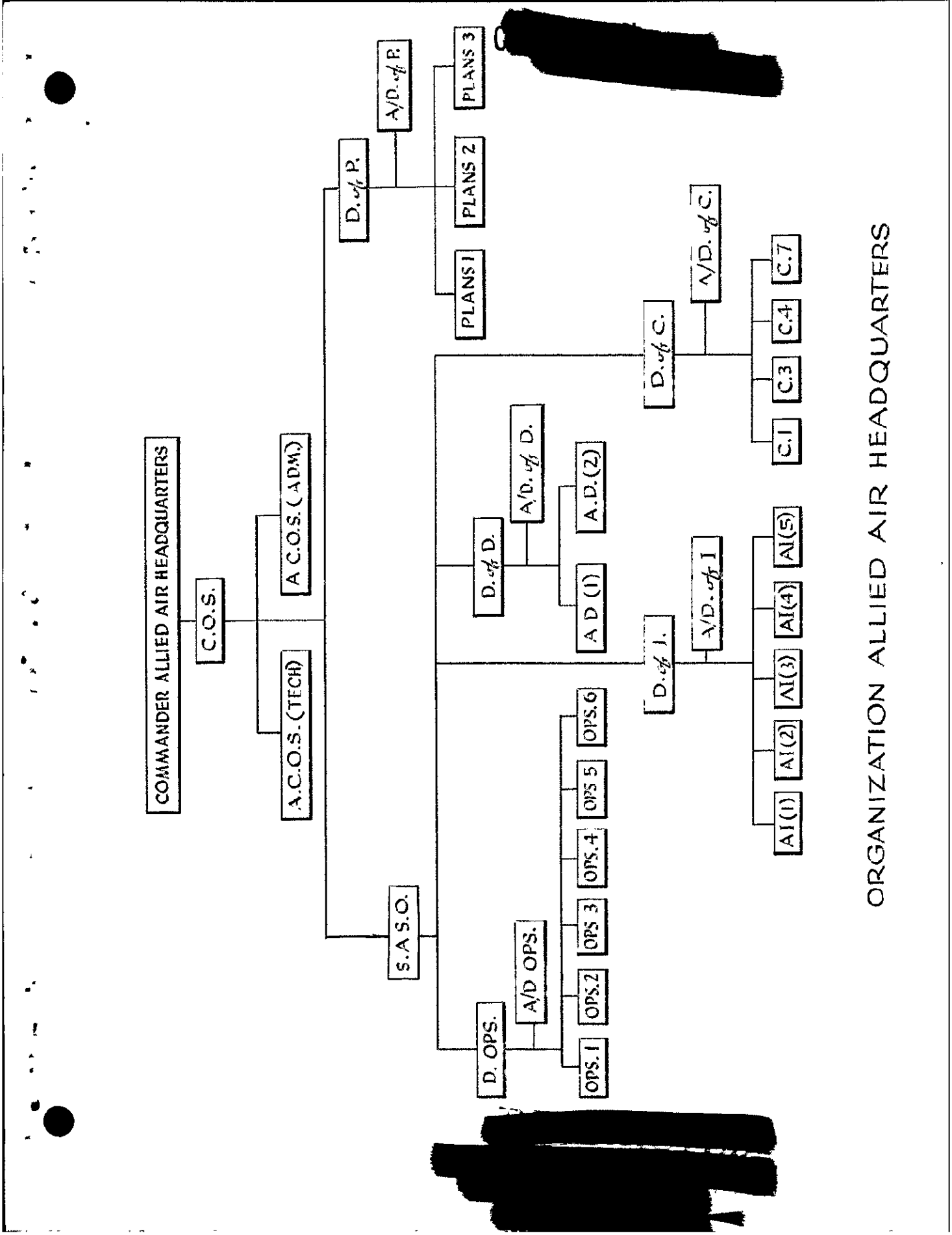
PLANS 3.

Study of Chiefs of Staff Committee projects from Air Force point of view.

9th May, 1942.

Brett Report, Summary Q.

[redacted]



ORGANIZATION ALLIED AIR HEADQUARTERS

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Appendix 3 - Operational Statistics

1st Ind.

HEADQUARTERS, Allied Air Forces, Office of the Commanding General, Melbourne, Victoria, 15 May, 1942. TO: Commanding General, United States Army Air Forces, Washington, D. C.

1. The statistics requested in par. 2a of basic letter relative to the combat life of various types of airplanes used in the Australian area are as follows:

a. Specific replacements per month necessary to maintain the present authorized units in Australia at their full Table of Organization strength based on actual conditions at the present time in the whole theatre of operations:

48 Pursuit Airplanes for 4 Groups (1-RAAF., 3-USAAF)
11 Light Bombardment Airplanes for One Group
15 Medium Bombardment Airplanes for Two Groups
9 Heavy Bombardment Airplanes for Two Groups

1. Average combat life of one Airplane

Pursuit Airplane 100 days
Light Bombardment Airplane 87 days
Medium Bombardment Airplane 110 days
Heavy Bombardment Airplane 116 days

b. Replacements per month necessary to maintain a unit at its Table of Organization strength based on conditions of no combat but operating on foreign soil. Equivalent to conditions in Australia except the Darwin and Moresby areas:

6 Pursuit Airplanes per Group
3 Light Bombardment Airplanes per Group
3 Medium Bombardment Airplanes per Group
2 Heavy Bombardment Airplanes per Group

1. Average life of one Airplane

Pursuit Airplane 200 days
Light Bombardment Airplane 273 days
Medium Bombardment Airplane 273 days
Heavy Bombardment Airplane 263 days

c. Replacements per month necessary to maintain a unit at its Table of Organization strength based on conditions of intermittent medium scale enemy attacks and fairly continuous unit operations. Equivalent to conditions in Darwin and Moresby areas:

[redacted]

49 Pursuit Airplanes per Group
16 Light Bombardment Airplanes per Group
11 Medium Bombardment Airplanes per Group
8 Heavy Bombardment Airplanes per Group

1. Average combat life of one Airplane.

Pursuit Airplane 23 days
Light Bombardment Airplane 32 days
Medium Bombardment Airplane 73 days
Heavy Bombardment Airplane 66 days

d. Replacements per month necessary to maintain a unit at its Table of Organization strength based on conditions of intensive combat with full scale daily enemy attacks. Equivalent to conditions that existed in Java:

192 Pursuit Airplanes per Group
120"" Light Bombardment Airplanes per Group
35"" Medium Bombardment Airplanes per Group
21 Heavy Bombardment Airplanes per Group

1. Average combat life of one Airplane

Pursuit Airplane 6 days
Light Bombardment Airplane 7 days
Medium Bombardment Airplane 23 days
Heavy Bombardment Airplane 23 days

e. All of the figures except those marked ("") represent the true loss factor under the conditions stated. The marked figures are estimates. No attempt has been made to calculate what difference adequate warning devices, more dispersal areas, or better conditions of maintenance would make.

2. The following data, pertinent to Ordnance, is submitted with reference to the information requested in basic letter:

a. Reference paragraph 2b.

1. B-17 type

100-lb bombs have been used against airplanes and personnel on airdromes.

300-lb bombs with one-tenth second delay fuse have been used against buildings, and hangars on airdromes.

500-lb and 600-lb bombs have been used on transports and armed cargo vessels in convoys and on cruisers.

[redacted]

[redacted]

1000-lb and 1100-lb bombs have been used on battleships and carriers.

To date the 500-lb bombs have been utilized to the utmost against targets which have been presented most often--convoys. In future operations, attacks undoubtedly will be concentrated against sea craft and airfields.

2. B-25 and B-26 types

500-lb bombs have been most frequently used with this type of aircraft. The targets against which these bombs have been used have been ships--destroyers, cargo vessels and transports.

3. A-24 type (dive bombers)

100-lb bombs and 500-lb bombs have been used against transports and cargo vessels.

4. Pursuit aircraft

So far no bombs have been dropped by pursuit aircraft operating from the Australian area.

b. Reference paragraph 2c.

1. B-17 type

Statistically B-17 airplanes have averaged better than 15 missions per month. Each mission was considered a bombing mission. Normally on reconnaissance missions airplanes of the 5th Bomber Command carried 1 bomb-bay tank and ½ load of bombs, to be used against targets of opportunity if presented.

2. B-25 and B-26 type

It is estimated that this type airplane has been operated on about 12 missions per month, all of which were bombing missions.

3. A-24 type (dive bombers)

It is estimated that this type airplane has been used on approximately 12 missions per month, all of which are bombing missions.

[redacted]

[redacted]

3. Recommendations.

a. It is believed that requirements set forth in paragraph 1g. of basic communication are essentially correct.

b. It is believed that for initial operations in any given area the figures given for mission rates in paragraph 1g. are low. Over a long period of operations, within a large theatre of operations, the figures set forth will no doubt hold true. However, it appears that in the early stages of an operation, targets will be presented which will make many more missions per month advisable. If these mission rates are used as one of the factors in determining initial supply, there may not be sufficient ammunition available for the required missions.

c. It is recommended that initial stockage be provided for missions as follows:

1. Heavy Bombardment

   15 missions per month, all of which will be bombing missions.

2. Medium Bombardment

   20 missions per month, all of which will be bombing missions.

3. Light Bombardment (includes dive bombers)

   30 missions per month, all of which will be bombing missions.

4. Transports

   No data available.

5. Amphibians

   No data available.

6. Pursuit (equipped to carry bombs)

   30 missions per month, 5 of which will be bombing missions.

d. The basic communication deals only with bombs. In regard to ammunition for aircraft machine guns and cannon for pursuit aircraft, it is felt that the expenditure factor of 35% which has been

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set for the Australian area, is very low for initial requirements, especially when combined with the mission factor of 20 missions per month for pursuit aircraft. For such type ammunition an expenditure factor of 100%, and a mission factor of 30 missions per month, does not seem excessive, especially when it is taken into consideration that operational training of new pilots must be carried out and ammunition must be expended for this purpose.

GEORGE H. BRETT,
Commander.

1st Ind. (basic ltr. not attached) in 201 Files of Lt. Gen. George H. Brett.

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Appendix 4 - Station List, 8 May 1942

U. S. A. AIR CORPS UNITS IN AUSTRALIA

(Note: x denotes base sections.)

ORGANIZATION	STATION		STRENGTH Off.		STRENGTH E.M.		TOTAL STRENGTH
Air Hq	HQUSAWPA	x4	90		130		220
3rd Bomb Group (L)							
Hq & Hq Sq	Charters Towers	x2	17	2a	211		
8th Bomb Sq	"	"	33		171		
13th Bomb Sq	"	"	27	5a	168	1a	
89th Bomb Sq	"	"	18		148		
90th Bomb Sq	"	"	27	6a	142		
464th Ord Co (Avn)B (less 3rd Plat)	"	"	5		141		
2nd Chem Co (Avn)	"	"			61		
	Sub Total		127	13a	1042	1a	1169
22nd Bomb Group (M)							
Hq & Hq Sq	Townsville	x2	32		233	16a	
2nd Bomb Sq	"	"	51		216	8a	
19th Bomb Sq	"	"	52		216	8a	
33rd Bomb Sq	To /Necal/		52		218	8a	
408th Bomb Sq (M)	Townsville	x2	60		235		
464th Ord Co (Avn) B (3rd Plat)	"	"	1		38		
453rd Ord Co (Avn) B (less 1 Plat)	"	"	3		178		
481st Ord Co (Avn) B (less 1 Plat)	"	"	1		24		
Det 1st Chem Co (Serv Avn)	"	"			18		
	Sub Total		252		1376	40a	1628
38th Bomb Group (M)							
Hq & Hq Sq	Eagle Farm	x3	20	2a	257	15a	
Det Hq & Hq Sq	Batchelor	x1			20		
Det Hq & Hq Sq	Wagga Wagga T.P.	x7			14		
69th Bomb Sq	Eagle Farm-/Necal/-3		21	1a	250	8a	
70th Bomb Sq	Wagga Wagga	x7	5		204		
71st Bomb Sq	Batchelor	x1	4		201		
405th Bomb Sq (M)	Ballarat	x4	7		223		
445th Ord Co (Avn) B (2nd Plat)	En.Batchelor	x1	1		39		
445th Ord Co (Avn) B (4th Plat)	Eagle Farm	x3	3		57		
	Sub Total		61	1a	1265	23a	1406

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U.S.A. AIR CORPS UNITS IN AUSTRALIA (CONT'D)

ORGANIZATION	STATION		STRENGTH Off.		STRENGTH E.M.		TOTAL STRENGTH
19th Bomb Group (H)							
Hq & Hq Sq	Cloncurry	x2	58		152		
28th Bomb Sq	"	"	15		89		
Flight "A"	Cunderdin	x5	24		69		
Flight "B"	Longreach	x2	21		69		
30th Bomb Sq	Cloncurry	"	55	1a	232	43a	
93rd Bomb Sq	Longreach	"	55		216		
40th Rec. Sq (H)	Garbut	"	52	6a	75	83a	
450th Ord Co (Avn) B	Cloncurry	"	6		157		
	Sub Total		286	7a	1049	126a	1345
43rd Bomb Group (H)							
Hq & Hq Sq	Sydney	x7	16		195		
63rd Bomb Sq	" T.P.	"	8		185		
64th Bomb Sq	" -Daly Waters	"	7		185		
65th Bomb Sq	"	"	13		185		
403rd Bomb Sq (H)	Laverton	x4	9		240		
441st Ord Co (Avn) B (less 1 Plat)	Sydney T.P.	x7	6		181		
441st Ord Co (Avn) B (1 Plat)	Sydney-Daly Waters	"			17		
	Sub Total		59		1188		1247
8th Pursuit Group (I)							
Hq & Hq Sq	Archerfield	x3	34	1a	166		
8th Inter Con Sq	"	"	6		202		
35th Pur Sq	Woodstock	x2	35	2a	189		
36th Pur Sq	Antil Plains	"	39		68		
80th Pur Sq	Lowood	x3	41	3a	215		
683rd Ord Co (Avn) P	Archerfield	"	2		14		
683rd Ord Co (Avn) P (1st Plat)	Lowood	"	1		23		
683rd Ord Co (Avn) P (3rd Plat)	Woodstock	x2	1		23		
683rd Ord Co (Avn) P (2nd Plat)	Antil Plains	"	1		23		
	Sub Total		160	6a	923		1083
35th Pursuit Group (I)							
Hq & Hq Sq	Mascot Airdrome	x7	11		121		
39th Pur Sq	Woodstock	x2	38	2a	209		
40th Pur Sq	Antil Plains	"	38		216		
41st Pur Sq	Bankstown	x7	37		143		
31st Inter Con Sq	"	"	7		205		
679th Ord Co (Avn) P (Less 2 Plats)	"	"	1		22		
679th Ord Co (Avn) P (1 Plat)	Woodstock	x2	1		[redacted]		
679th Ord Co (Avn) P (1 Plat)	Antil Plains	"	1		19		
	Sub Total		134	2a	955		1089

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U.S.A. AIR CORPS UNITS IN AUSTRALIA (CONT'D)

ORGANIZATION	STATION		STRENGTH Off.		STRENGTH E.M.		TOTAL STRENGTH
49th Pursuit Group (I)							
Hq & Hq Sq	Darwin	x1	20	1a	270		
7th Pur Sq	"	"	37		194		
8th Pur Sq	"	"	33	1a	163	38a	
9th Pur Sq	"	"	34	4a	184	21a	
49th Inter Con Sq	"	"	3		367		
445th Ord Co (Avn) B (3rd Plat)	"	"	1		40		
445th Ord Co (Avn) B (1st Plat)	"	"	1		39		
Replacements					59		
	Sub Total		129	6a	1316	59a	1445
8th Air Base Group							
Hq & Hq Sq	Sydney	x7	19		224		
11th Mat Sq	"	"	7		315		
15th Sig Plat (Avn)AB	"	"	1		36		
703rd Ord Co (Avn)AB	"	"	4		60		
Det 2nd QM Co (Avn Sup)	"	"	2		39		
	Sub Total		33		674		707
22nd Air Base Group							
Hq & Hq Sq	Archerfield	x3	16		185	5a	
30th Mat Sq	"	"	12		257	23a	
37th Sig Plat (Avn)AB	"	"	1		23		
713th Ord Co (Avn)AB	"	"	4		50		
Det Chem Co 1st Plat (Serv Avn)	"	"			20		
Co "D" 89th QM Co. (Avn) LM	"	"	3		117		
704th QM Co (Avn) T	"	"	3		108		
	Sub Total		39		760	28a	799
35th Air Base Group							
Hq & Hq Sq	Charters Towers	x2	21		202		
47th Mat Sq	" " T.P.	"	12		250		
2nd Mat Sq	Amberley-Townsville	x3	12		198		
2nd Plat 2nd Chem Co (Serv Avn)	Charters Towers	x2			20		
Decon Det 2nd Chem Co (Avn)	" "	"			15		
11th Sig Plat (Avn)AB	" "	"	1		27		
1st Det 4th QM Co (Avn Sup)	" "	"	1		30		
725th Ord Co (Avn)AB	" "	"	4		60		
	Sub Total		39		802		841

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U.S.A. AIR CORPS UNITS IN AUSTRALIA (CONT'D)

ORGANIZATION	STATION		STRENGTH Off.	STRENGTH E.M.		TOTAL STRENGTH
36th Air Base Group						
Hq & Hq Sq	Ballarat	x4	12	242		
49th Mat Sq	"	"	9	327		
Decon Det 2nd Chem Co (Avn)	"	"		18		
707th Ord Co (Avn) AB	Ballarat	"	4	58		
4th QM Co (Avn)	Port Melbourne	"	2	34		
867th QM Co (Avn)LM	" "	"	3	175		
	Sub Total		30	854		884
45th Air Base Group						
Hq & Hq Sq	Charleville	x3	18	232		
8th Mat Sq	"	"	10	205		
Det 4th QM Co (Avn Sup)	"	"	1	14		
Co "K" 30th QM Regt(Avn)T	"	"	3	107		
	Sub Total		32	558		590
46th Air Base Group						
Hq & Hq Sq	Daly Waters	x1	21	277		
43rd Mat Sq	Adelaide River	"	4	304		
709th Ord Co (Avn)AB	" "	"	4	58		
24th Sig Plat(Avn)AB	" "	"	1	38		
733rd QM Co (Avn) T	" "	"	3	109		
Det 2nd Qm Co (Avn Sup)	" "	"	3	100		
	Sub Total		36	889		925
4th Air Depot Group						
Hq & Hq Sq	Wagga Wagga	x7	21	169	2a	
Repair Sq	" "	"	11	212	2a	
Supply Sq	Brisbane	x3	6	121	42a	
Supply Sq Det	West Footscray	x4	3	115		
	Sub Total		41	617	46a	658
	SERVICING DETAILS					
	Adelaide	x5	1	8		
	Alice Springs	"	1	8		
	Cloncurry	x2	1	8		
	Forrest	x5	1	8		
	Fremantle	x6	1	2		
	Kalgoorlie	"	1	8		
	Oodnadatta	x5	1	8		
	Port Pirie	"	1	8		
	Sub Total		8	58		66
OPERATIONAL TRAINING GROUP						
	Williamstown	x7	?	?		

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U.S.A. AIR CORPS UNITS IN AUSTRALIA (CONT'D)

ORGANIZATION	STATION		STRENGTH Off.	E.M.	TOTAL STRENGTH
WEATHER OBSERVERS AND FORECASTERS					
	HQUSAFIA	x7	2	11	
	Batchelor	x1	2	4	
	Daly Waters	x1		4	
	Charters Towers	x2	1	7	
	Cloncurry	x2	1	5	
	Horn Island	x1		1	
	Townsville	x2	1	6	
	Charleville	x3		5	
	Archerfield	x3	1	3	
	Rockhampton	x2		2	
	Alice Springs	x5		2	
	Ceduna	x2		2	
	Oodnadatta	x5		2	
	Cunderdin	x5	1	4	
	Broome	x1		2	
	Kalgoorlie	x2		2	
	Wagga Wagga	x7		5	
	Perth	x5		5	
	Longreach Q.	x3	1	4	
	Sub Total		10	76	86

AIR CORPS UNITS NOT ASSIGNED TO ANY BASE OR GROUP

832nd Sig Serv Co	Brisbane	x3	1		22		
21st Transport Sq	Archerfield	x3	43	23a	134		
22nd Transport Sq	Essendon	x4	18		162		
1st Chem Co (Serv Avn)	Geelong	x4			22		
61st Mat Sq	"	x4	10		283		
Det 4th Chem Co(Sup Sec)	Archerfield	x3	1		12		
Det 4th Chem Co(Sup Sec)	Wagga Wagga	x7	1		12		
8th Photo Sq (Flight A)	Garbut	x2	9		60		
370th Mat Sq(Reduced)	Laverton	x4	17		110		
Co "A" 91st QM BN(Avn)	LM Darwin	x1	3		87		
Co "B" 33rd QM Regt(Avn)	T "	x1	1		56		
1st Plat 453rd Ord Co(Avn)	"	x1	1		39		
USAC Det	Batchelor	x1	3		73		
USAC Det	Cloncurry	x2	3	1a	14	3a	
	Sub Total		111	24a	1118	32a	1129

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U.S.A. AIR CORPS UNITS IN AUSTRALIA (CONT'D)

ORGANIZATION	STATION		STRENGTH Off.	E.M.	TOTAL STRENGTH
808th EMG. BN. (AVN)		x1	23	816	
Hq Co	Katherine	x1			
Co "A"	"	"			
Co "B"	"	"			
Co "C"	"	"			
	Sub Total		23	816	839
11th REPLACEMENT CONT. DEP.					
Hq Sq	Camp Murphy	x4	22	627	
1st Sq	" "	"		71	
2nd Sq	" "	"		60	
3rd Sq	" "	"		408	
4th Sq	" "	"		82	
5th Sq	" "	"		59	
6th Sq	" "	"		74	
7th Sq	" "	"		42	
8th Sq	" "	"		91	
9th Sq	" "	"		87	
10th Sq	" "	"		60	
11th Sq	" "	"		44	
(less 636 distributed to organizations)					
	Sub Total			1069	

Sub Total	Officers	Enlisted Men
Assgd.	1722	17545
Att.	59	355

GRAND TOTAL 19,681

Units below not carried in Grand Total:

694th Sig Rep Co (AWS) (less 1 Plt)	Townsville	x2	6	2a	107	
694th Sig Rep Co (AWS) (1 Plt)	Brisbane	x3	3		44	
699th Sig Rep Co (AWS) (Less 1 Plt)	Perth	x5	9		180	
699th Sig Rep Co (AWS) (1 Plt)	Brisbane	x3	2		44	
			20	2a	375	395

Brett Report, Summary M.

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UNCLASSIFIED

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