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THE ARMY AIR FORCES
IN
AMPHIBIOUS LANDINGS
IN WORLD WAR II

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USAF Historical Division
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FOREWORD

This study was written by Dr. Harry L. Coles, Ohio State University, for the USAF Historical Division, Air University, Maxwell Air Force Base, Alabama.

Like other Historical Division studies, this history is subject to revision, and additional information or suggested corrections will be welcomed.
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It is the purpose of this study to examine the role of the air forces in the main amphibious landings in World War II. It is an operational study and deals only incidentally with administrative and logistical matters. The aim is to examine what the air forces actually did and to interpret the meaning of experiences in the various theaters of operations.

The subject naturally divides itself into two broad phases: the European and the Pacific. In the European theater landings were made preliminary to a prolonged campaign on a large land mass. The land areas seized had strategic and political importance in and of themselves. There is a continuity in the European story which I have tried to develop.

In the Pacific theater landings were of the island-hopping variety. Bases were seized not for their intrinsic importance but as stepping stones to further operations. Even in the Southwest Pacific, which in some respects resembled the European theater, the areas seized, though part of a land mass, were generally surrounded by impassable jungle which restricted the area of maneuver and made the occupying forces dependent upon long over-water lines of communication. Each of the Pacific theaters, it seems to me, had problems and patterns of operations peculiar to its locale. I have therefore tried to bring out the peculiarities and the lessons to be learned from each of the theaters.
Chapter 7

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"Looking over a foreign court in their behalf one sees..."
an amphibious invasion of great magnitude conducted with modern weapons
was the British landing in Gallipoli during World War I.

It was Gallipoli that supposedly relegated amphibious landings to
the ash heap of outmoded tactics. That ill-fated venture was conceived
in 1915 by Winston Churchill, First Lord of the Admiralty, as a scheme
to drive Turkey out of the war. It was a "combined" operation in that
both British and French troops were involved. About half a million men
were landed in various assaults on the Gallipoli Peninsula. Largely
because of inept and indecisive command, plus poor planning and prepara-
tion, the enterprise turned out to be a dismal failure with nearly
250,000 casualties. It was to a considerable extent the influence of
this "horrible example" that caused military minds to regard amphibious
landings as hazardous and visionary. But there were other reasons as
well. The technological advances of the late nineteenth and early twenti-
teth centuries seemed to favor the defender at the expense of the invader.
With off-shore mines, torpedoes, the increased fire power of land based
weapons, and above all the increased speed and offensive power of the air-
plane, such landings were regarded, in the words of Liddell Hart, as
"almost impossible."

Apparently the skeptics failed to realize, as one historian has said,
that "one man's poison may be another man's meat." They did not comprehend
that weapons ordinarily thought of as primarily defensive might be turned
to offensive use. They failed to realize that the submarine and the air-
plane, which presumably had doomed amphibious invasions to failure, could
be massed under and over an invasion fleet to protect it from the enemy
and to aid in the maneuver of ships and the advance of troops on the shore.
All methods of invasion or defense are still point out that they are one of the most difficult of all arms or of a war, and that involves many elements that must be taken into consideration. Methods that can be successful are very few in number; they should be restricted to only a small area of the coast and only after careful planning and preparation. Yet, like any other weapon, the mole is just as important a weapon of specialization in our line, and has many numbers of forms that are not considered fatal. In fact, this form of warfare can be carried to such a high degree of perfection that in the future, the advantages of one over the other are considered fatal. In fact, this form of warfare can be carried to such a high degree of perfection that in the future, the advantages of one over the other are considered fatal.

American efforts were extremely varied, as the result of a number of factors, including technical, training, naval planning, effective co-operation among the services, and above all, the skill and valor of the men who hit the target. A factor of utmost importance also is the application of science. The scientists came to the aid of the military in solving some of the most difficult problems. Inventions were made on old bases of landing craft and new bases were developed. One very good example is the LVT, a semi-floating and one-half ton army truck that could successfully negotiate soft sand, even, and mud roads. One of the most difficult problems in amphibious invasion is to land the crest of the right place. Developments in order that it is possible for ships to find their way to exact spots.
on distant shores at night and under all weather conditions. The development of rockets and rocket launchers made it possible to deliver a great volume of high explosives onto targets from landing craft and from airplanes. Shells and devices were developed for looting and destroying underwater obstacles. Various mines and demolition charges were specially trained in the techniques of removing such obstacles. Long-range fire and mortars were invented to reduce pillboxes, strong points, and underground fortifications.

Another factor that helped to explain the needs of the United Nations was the fact that in spite of a general concept for the Marine Corps as the special service of its special province in the period following World War I, Marine operations and study were based upon the general assumption that in any conflict in the Pacific, we would be the nation which, in theory, could defeat Japan in a conflict by an island-hopping scheme across the Central Pacific. The idea of an entire chain of islands or islands. In 20 years of inactivity and study the training, from the basic to the advanced, produced Marine divisions, a 1915 self-contained force capable of carrying out its mission at the time that it was needed, as an example of the quick, of logistical operation. The amphibious assault cradle of executing coastal raids, mines, and other difficult terrain and a system of front lines air support and naval gunfire control.

Probably the most significant contribution of the Marines, however, was in the field of doctrine. In early in 1920 the Navy had issued a manual to instruct naval personnel in the conduct of shore operations. But only 7 out of 900 navies were devoted to operations in coastal buildings. In a revision of the manual issued in 1927 the section of landing operations...
was covered in a mere five pages. That the Marines were not alone in their concern was brought out by the fact that in January 1933 the Joint Board of the Army and Navy, a forerunner of the Joint Chiefs of Staff, issued a publication entitled, Joint Overseas Expeditions. This document, though incorporating many definitions and solutions that later became standard, was general and brief. It remained to work out the details. Using the Joint Board pamphlet as a point of departure the staff of the Marine Corps School at Quantico began in November 1933 the preparation of a manual on landing operations. The result was the publication in 1934 of the Tentative Manual for Landing Operations. This manual became the basis for all theoretical instruction in amphibious warfare in the Marine Corps Schools and served as a guide book for the landing exercises conducted annually by the Navy from 1935 through 1941. It was adopted with revisions by the Navy in 1938 under the title Fleet Training Publication 167.

Meanwhile the Army started work on a similar publication and in November 1940 the Command and General Staff School at Fort Leavenworth issued "Landing Operations on Hostile Shores." This draft was issued as Field Manual 31-5 on 2 June 1941. FM 31-5 and FWP 167 followed the same general arrangement and used the same illustrations and sketches. Though there is no need here to make a detailed examination of these early publications, some of the basic principles set forth are of interest. In regard to command, FM 31-5 stated that "coordination of operations of Army and Navy forces is by mutual cooperation or by exercise of unity of command." Throughout the early documents there runs the assumption that air power is a mere adjunct of naval or land power. Although the
Influence of local air superiority is mentioned, counter air activities are listed as only one function along with observation, reconnaissance, and close support. There is nothing concerning the inclusion of the battlefield; no mention of the necessity or limiting broad air material from reaching the battle area.

Leading countries doctrine should be considered in conjunction with doctrines of air war of ground forces for they are closely allied concepts. Air-ground doctrine which joined the early part of the war was set forth in "XI-35 of 1 April 1942. Against this, we shall have to make the assumption that the heart of ground force doctrine is a doctrine that attack units may be specifically allocated to the support of subordinate units or the enemy and that "final decision as to the priority of combat needs with the commander of the supported units." was tried during the early stages of World War II and found wanting. In their initial efforts to supplement the British which they had adapted to a battle tested doctrine of air-ground cooperation, the essence of this doctrine was that air power should not be cancelled out and fortified away, but in a high degree of air supremacy in the theater of operations can be achieved and maintained, and that troops and supplies should be interdicted before reaching the theater of operations. With the inclusion of the British and "Fifth Air Force in military art the reorganization of air forces all the British forces were involved in such a way that the British forces were eventually introduced in the Mediterranean theater. The result was a revolution in the British doctrine of the control and employment of air power. The
C. Air Force had long struggled for these principles but it was the Middle East and North African experiences that made the revolution a reality. On 21 July 1943 FM 100-20, Command and Employment of Air Power was issued. This document set forth the basic principles that were henceforth to guide all air force operations in amphibious landings or otherwise.

The new regulation stated that land power and air power are coequal and interdependent forces, neither of which is subordinate to the other. In order to exploit flexibility, air power's greatest asset, control must be centralized and command must be exercised through the air force commander in a theater of operations. Henceforth the missions of a tactical air force would be in the following order of priority: 1) to gain the necessary degree of air superiority; 2) to prevent the movement of hostile troops and supplies into the theater of operations or within the theater (isolation of the battlefield); and to participate in a combined effort of air and ground forces to gain objectives on the immediate front of the ground forces (direct support).

Strangely enough, all the landings down to the invasion of the Philippines had been carried out before these principles were formally engrafted into amphibious doctrine. The old manual of 2 June 1941 was not superseded until November 1944 when an entirely new version of Landing Operations on Hostile Shores was issued. The new manual stated that an amphibious operation was a joint undertaking in which the Army and Navy units act together as a single force, usually under a designated joint commander. This joint commander exercises his authority through three separate commanders of the ground, naval and air forces. He does not
command any force directly unless specifically authorized by higher authority to do so. The principles of employment of air power were essentially the same as those in FM 100-20.

So far as the role of the air forces in amphibious operations is concerned it is obvious from this brief sketch that operations shaped doctrine rather than doctrine shaping operations. The lessons of the war were hammered out on the anvil of experience.
Chapter II

NORTH AFRICA: THE GREAT GAME

The first large scale Allied amphibious operation in World War II was the invasion of North Africa. Besides being the "first" the North African operation has several other distinctions: it was the riskiest of all large scale Allied undertakings both from the point of view of military and political considerations; it was mounted in a spirit of haste and improvisation; and it was viewed with considerable skepticism and distrust by the American military commanders.

In the last respect the North African invasion was unique for on no other occasion did the Commander in Chief overrule his military advisers on a major issue of strategy. In their grand strategy the American Joint Chiefs of Staff held firmly two major premises. The first of these was that the combination of totalitarian states must be annihilated by striking the strong European front first and then dealing with the Pacific forces. The second major premise was that Germany could be most expeditiously eliminated by a direct blow—a cross-channel invasion. On the first major premise there was never any serious disagreement between the United States and Great Britain. On the second there was considerable disagreement. For many reasons the British favored a policy of encirclement as opposed to the direct blow. They did not want to see Russia in central Europe after the war; they did not wish to risk failure by a premature mounting of a cross-channel invasion; and they recoiled with horror at the thought of a prolonged blood-letting such as they witnessed during World War I.

It was the deterioration of the strategic situation in the spring of
The plan

Strategically speaking, the basic problem in the planning was whether the landings should be concentrated on the east or to take a parallel and somewhat minor route into Libya, or spread out with a landing on the west coast of Africa to secure the safety of the line of communications. In any event, given him on 13 March 1942 by the Central Committee of staff (CC), General Alexander was to establish "first and mutually supporting lodgements" in the Cyrenaica-Africa area or the north African coast and in the Combined area on the west coast. From these lodgements, control
The plans drawn by General Eisenhower's staff assumed the elimination of the landing at Gumbiner and concentration on the north coast. In place of a frontal attack on Corunna from the Atlantic, the invasion would strike at Gerona and cut across French territory and French-held Morocco from the land side. General Eisenhower felt—this was the British view—the German Ninth Army would absorb his forces too thinly. If the main effort were not started in the west, the Axis could not be contained, and once the North Africans were in, they could not be held by the Allied forces. The Joint Chiefs of Staff (JCS) were unwilling to court this enemy. In their view, removal of the landing on the west coast was not entirely as risky as invading the Allied lines of defense, but they refused to accept such a logistical risk as over the north and south landing routes.

If the main effort was on the north, the Eighth Air Force was activated on 20 March 1942. In view of the hasty line available, it was necessary to acquire air units that had been organized and tactically trained. As only four such air units were available, two of the Ninth Air Force. Consequently, it was decided to turn over most of the Eighth Air Force operating forces, except heavy bomber, to the Ninth.

The Eighth Air Force provided for the air forces—over German and other British—with綜合适用 welders of responsibility. The Eighth Air Force, under Air Marshal Sir William Reid, was to have the freedom to plan for Eighth Air Force, under Brigadier Jones.
H. Doolittle, was to have its headquarters at Oran. The Eastern Air Command was to be responsible for fighter defense in the Algiers area while the Western Air Command, or Twelfth Air Force, was to furnish fighter defense in the Casablanca and Oran areas. The actual assaults were to be supported in the first instance by carrier based planes under orders of the naval task force commanders. After the capture of air bases, the Eastern Air Command, Twelfth Air Force (and its XII Air Support Command) were to relieve the naval aviation, as far as possible, and continue air support as directed by the respective task force commanders. The air plan contemplated coordination, not integration of the two air forces. The development of air units to achieve any particular strategic purpose after the initial phase of the operation would be determined by General Eisenhower as Commander-in-Chief, Allied Force.

The Twelfth Air Force was provided with a strength almost three times as large as the Eastern Air Command. It had over 1,200 aircraft with which Allied Force Headquarters (a HC) hoped to meet enemy air reaction on a strength basis of two to one. The air plan emphasized the vital need for maximum air strength at the outset in order to create among the French the impression of force majeure in the face of which they could honorably lay down their arms.

During the assault phase of TORCH, General Doolittle, Commander of the Twelfth Air Force, was to remain with General Eisenhower at the command post on Gibraltar while the air force units at Oran functioned under Colonel Lauris Norstedt, A-3 of the Twelfth Air Force, and the XII Air Support Command operated at Casablanca under Brig. Gen. John K. Cannon. Both the subordinate commanders would be directly responsible to the ground commanders.
on the respective tasks to be accomplished. The overall view: that General Doolittle
would establish his headquarters at Naha and take over command, first, of
defensive forces, second, the IAC Air Support Command. No specific planning
instructions were issued for the further employment of the air force.

In the IAC Force there was an initial disposition to
begin their efforts to carry on the offensive against Japan. The
irregulars were to make for the southern islands to begin the
invasion. The air forces were to begin the offensive.

Air force participation in the northern area was to be
dependent largely on the outcome of the IAC Force.

Air Support Command, under the general direction of the
Air Force, was to coordinate the operations of the
IAC Force and the Air Support Command, and for their
participation in the efforts of the two attack forces operating against
Takasaki, Naha, and Ie Shima, the objectives were established.
The air forces were to begin the offensive for the advance of the IAC air effort.

On land, the most important objective in the northern area was the
capture of key airfields. The limitations were on the number of aircraft and the
airfields utilized. The airfields were to be captured as
soon as possible. The 1st Air Force, in cooperation with the Army and
the 504th Parachute Infantry Regiment, and the 40th Infantry Division, were
to capture the airfields to support the offensive.

The important role for the employment of the IAC Air Force was
the protection of the army and the airfields.

The IAC Air Force was to be employed in support of the
Army's advance toward the Iwo Jima and Okinawa Islands.

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Army's advance toward the Iwo Jima and Okinawa Islands.
The detailed plans for air force participation in the landings in the Oran area called for the dropping of parachutists by the 60th Troop Carrier Group at the two most important airfields in the vicinity, Tafraoui and La Senia. The paratroopers were to destroy enemy aircraft at La Senia and to hold the paved runway at Tafraoui until relieved by troops landing to the east and west of the city. After Tafraoui had been secured, Spitfires of the 31st Group (US), waiting at Gibraltar, were to fly in to furnish support against the French. Air force troops arriving on D-day and subsequent convoys had the mission of preparing for the reception of additional units flying in from England and Gibraltar.

Casablanca

Strategically speaking, the main object of the western landings was to make secure a line of communication to Allied troops in Tunisia. As defined by the TORCH outline plan the Western Task Force's mission included the occupation of the port and airfields at Casablanca, the establishment and maintenance of communications with Oran, and the build up of land, air and striking forces for possible use against Spanish Morocco. The plans called for three surprise landings and the securing by the end of D-day of at least one airfield for land based aircraft. The Western Naval Task Force, or Task Force 34, under command of Rear Admiral Henry K. Hewitt, USN, included three battleships, seven cruisers, and many destroyers, oilers and minelayers. This fleet was to land 37,000 ground and air force troops under command of Maj. Gen. George S. Patton.

Under Maj. Gen. E. H. Harmon the sub-task force BLACKSTONE was to land at Safi, capture the port and operate against Casablanca from the south. The main assault was to be at Fedhala, and the sub-task force BRUSHWOOD, under Maj. Gen. Jonathan W. Anderson, who commanded about 20,000 men, was to press southward toward Casablanca.
It was Dec. 17, 1944, at the northern front - about 150 yards to the left of the main front - that the first major assault on the French line was launched.

...
The terminal word only J. F. Kennedy's...
The Allied landings at 11:30 a.m. were carried out by the 5th Recon Tank Force, were primarily defensive in character, although the small proportion of landing area in the vicinity of the town commander, General Eisenhower, was unable to give it an offensive complexion in the area of the French coast. The Allied landings encountered no serious opposition; the city surrendered at 1:30 hours on D-day. The support for the Western Desert forces was in charge of the 11th Armored Division and the Egyptian Air Force. At 11:30 a.m. on D-day, on the other hand, was still in control, and the strength and force and a significant role in this operation.

Situated about 200 miles west of Suez, the port of El-Arish enjoyed considerable natural protection. In line to a semi-circular bay and its artificial harbor is bounded on one side by cliffs. On its land side the city is situated in a series of salt marshes. Three miles to the east of El-Arish is the small temporary harbor of Wadi El-Arish, also artificial and about a foot or a cliff. El-Arish was defended by coastal belt raids, particularly on the high ground between the roads of El-Arish and Wadi Al-Arish. El-Arish on that front was on a mobile artillery unit, while Wadi El-Arish, 25 miles to the south, was the headquarters of the 2nd Indian Division. In addition to the two principal airfields at El-Arish and Suez, there were several other landing grounds that opened in the Belch north of Egypt. The air force in the area consisted of about 25 fighters and 10 to 15 bombers, all out of Egypt. The local air force personnel were exposed to be predominantly pro-Allied in their sentiments.
The Naval Task Force consisted of British naval elements and American naval and air forces. The Task Force included the naval forces, which included 48 vessels. Air forces included 144 aircraft and 9 submarines. The naval forces included 24 aircraft and 9 submarines in the area, and 3 submarines in the Pacific. On 3rd, J. S. Lloyd, under naval control, was to take over control of the task division, with the task of the first division, in the area of the Second Division, and the task of the evacuation.

The mission of the 3rd Division of the Task Force was to set up a base in the area, to prevent and disrupt the enemy's efforts to build up bases in the area. The task of the 3rd Division was to prevent these bases from being used by the enemy. The task of the 3rd Division was to prevent the enemy from using the area for bases. The task of the 3rd Division was to prevent the enemy from using the area for bases.

The 3rd Division was to be the result of the enemy's failure to use the area for bases. The 3rd Division was to be the result of the enemy's failure to use the area for bases. The 3rd Division was to be the result of the enemy's failure to use the area for bases. The 3rd Division was to be the result of the enemy's failure to use the area for bases.
the protection of the convoys and support of ground troops lay with
the Fleet Air Army until airfields were secured and the air groups
20
could fly in from Gibraltar.

The Center Task Force left England on 25 October and passed through
the Straits of Gibraltar on 6 November. The military establishment at
Oran was alerted on the morning of the 7th by aerial reconnaissance, but
the alert was abandoned as the convoys passed eastward. The invasion
fleet was evidently mistaken for another attempt to provision Malta.
During the moonless night of the 7th, the Center Task Force slipped back
and took its position. F-hour was 0100.

In the center there was disaster. The plan to seize the harbor
installations of Oran by anti-sabotage troops was a complete failure.
The Weymouth and the Hartland were hit by fire from French ships in the
harbor and both vessels blew up. Most of the men were lost.

To the west of Oran, the 26th Regimental Combat Team landed unopposed
at Les Andalouses. The advance to Oran was delayed by enemy artillery,
but by mid-morning the western column of Combat Command B took the airfield
at Lourmel. On the eastern flank the landings were made at Arzew, and
that outpost fell to the First Infantry Division by 0745. The eastern
column of Combat Command B took Tafaraoui airfield by noon of D-day.

The Twelfth Air Force now received its cue to enter on the stage.
On being notified that the Tafaraoui field had been taken, General
Doolittle at Gibraltar ordered 24 Spitfires of the 31st Fighter Group to
take off. This contingent arrived over Tafaraoui at 1700 on 8 November
and had a brush with the not-so-friendly French air force. It had been
arranged that four Hurricanes from a carrier would cover the landing.

As the planes of the 31st came in for their landing four French Dewoitines
flying high over the field were mistaken for the friendly Hurricanes. As the pilots went in for their landing the Dewsitines attacked. One Spitfire was shot down. The remaining ones took off against the Dewsitines and brought down three.

Despite this initial encounter, the French air strength had been crippled by the time the land based planes arrived on the scene. The last peep out of French air force at Oran was heard on the morning of the 9th when a single bomber dropped a lone bomb on Tafaraoui. Before noon, the French planes at La Senia had departed from Morocco. On the same day the first contingent of the AAF ground personnel rolled into Tafaraoui. By means of improvisation and use of French ammunition and gas, they kept the Spitfires flying.

The aircraft of the 31st Group based at Tafaraoui lent important support to the American ground forces around Oran, which were encountering unexpectedly stubborn resistance. Shortly after dawn on 9 November, three Spits on reconnaissance patrol observed a large force moving northward against Tafaraoui. This column turned out to be a detachment from the famed French Foreign Legion moving up from Sidi-bel-Abbes. A continuing series of attacks, lasting four to five hours, was maintained against this target. The light French tanks were no match for the Spitfires with their 20-mm. cannon. At least five tanks were destroyed, numerous trucks were put out of commission, and troops were scattered by the determined efforts of the air forces. The battered French column at last turned back and was not molested further. At the time this action was taking place, Combat Command B was fully occupied in the assault on La Senia, and the action of the Spitfires probably prevented the recapture of Tafaraoui.
The land based aircraft rescued Tafarouli from a menace in another sector. About noon on 9 November, French artillery batteries began shelling the airfield with 75's from a hill two and a half miles away. Two flights of the 1st Group attacked and quickly silenced these guns.

During the afternoon of the 9th, General Doolittle arrived from Gibraltar in a 3-17 to take personal command. By this time radio communication with the headquarters ship, *Larja*, had been established in order to carry out missions in support of the ground forces. The command ship assigned several missions. In one instance, the air forces were directed to attack an enemy column east of La **acts** on Azeau Bay. By the time the message reached the air forces it read west of La **acts**. The aircraft flew over a column to the west, which turned out to be American troops. No trouble was done to the ground troops but two of the American planes were shot down. This mishap resulted in the establishment of a program of recognition training whereby the ground troops were given instruction in aircraft recognition and the pilots studied mechanized equipment of the Army.

There was another case of mistaken identity, occurring almost at the same time. The U.S. artillery requested the air forces to attack a column of tanks. In this case General Doolittle himself asked the artillery officer who had made the request if he were positive the tanks in question were French. The planes went out and took one pass at the tanks, which promptly disclosed an American flag. Seventeen missions, totalling 45 sorties were flown against various French targets on 9 November, and close liaison was maintained with Combat Command B.

Meanwhile the ground forces were making progress. On 9 November contact was made between the eastern and western arms of Combat Command B.
Once a junction was effected the fate of Oran was sealed: the only resource left was street to street fighting within the city itself. The French hurriedly developed the situation and started armistice negotiations around noon on 19 November. After the 6th for profitable targets presented themselves to the flyers of the 57th Group but they continued to carry out missions involving convoy escort, tactical reconnaissance, and ground attack.

Most accounts of the North African Invasion have overlooked or undervalued the contribution of land-based aircraft. One popular account, for example, states: "the Twelfth Air Force's contribution to the taking of Oran was small and without weight." Yet, it is the air and ground commanders alike agreed that the fighters had done a splendid job. General Doolittle, a man not given to exaggeration, said: "I cannot speak too highly of the work done by those groups. They twice stopped mechanized columns that were attacking the airport at Taharaou. From the south...had it not been for the prompt and efficient action of the 57th, Taharaou and our air units would have been lost and the war at Oran lengthened and made much more bloody." Maj. Gen. Terry Allen praised the work of the 57th in a letter of commendation on behalf of the 1st Division. Aircraft losses during the three days battle were moderate. Altogether seven planes were lost: one in combat, four to ground fire (two of which were brought down by friendly rounds), and two in taxiing. It was no mean accomplishment; the beachhead had been secured and Algeria was now open to aerial reinforcement for the campaign developing to the east.

Although the air forces played a more prominent role than they have generally been given credit for, it would probably be a mistake to attempt to draw too many lessons from the amphibious phase of Torch. As compared
to later landings, air force activity was certainly on a limited scale. There was no preliminary bombing, there almost no counter air force activity, and the fighting did not last long enough to put close support to a real test. So far as the air forces were concerned the real lessons derived not so much from the amphibious phase as from the fighting that followed the landings. The Tunisian campaign brought out the inadequacies of American doctrine as set forth FM 31-35 of 9 April 1942 which provided that aviation units could be specifically allocated to subordinate units and that the final decision as to the priority of targets would rest with the commander of the supported unit. Apparently the planners of TORCH ignored the principles of the employment of air power that had been learned in the Western Desert. The essence of the doctrine that had been evolved by trial was that: "The Soldier commands the land forces, the Airman commands the air forces; both commanders work together and operate their respective forces in accordance with a combined Army-Air plan." 

Since June 1942 when he arrived in the Middle East General Lewis H. Brereton, Commanding General of the Ninth Air Force, had been sending a steady stream of messages and reports on the system of air-ground cooperation as it existed in the Western Desert but apparently this information had not materially altered U. S. thinking at the time of the landings. Subsequent fighting in Tunisia, however, effected an alteration in U. S. doctrine. By February 1943 General Eisenhower had organized his forces so as to provide for army, navy and air commanders and the principles of the employment of air power developed in the Western Desert had been introduced.
SOUTH WESTERN

Security Information

June 12th 1943

Subject: JU 601 TÜP

In accordance with the ultimate directive for Operation JU 601, it was decided to strike for the decision of the campaign. The main object was to strike for the decision of the campaign.

The primary consideration in choosing the target was the selection of a target which would be the major battle of the campaign, conveying the ultimate decision in the war. The aim of Operation JU 601 was to strike for the decision and victory for the Allied forces.

CONFIDENTIAL
The HUSKY Landings and Airborne Operations
Although the establishment of special headquarters and planning staffs further complicated an already involved air organization, there was no fundamental change in the system of command set up on 18 February 1943 for the Mediterranean theater. At that time the Mediterranean Air Command (MAC) had been established. MAC was a small policy and planning staff made up of American and British officers headed by Air Chief Marshal Sir Arthur W. Tedder. On the command level directly under MAC were the Northwest African Air Forces (NAAF) commanded by Lt. Gen. Carl Spaatz, the Middle East Air Command under Air Chief Marshal Sir Sholto Douglas, and the Malta Air Command under Air Vice Marshal Sir Keith Park.

By far the largest of these commands was NAAF, which was organized into three main sub-commands. Northwest African Strategic Air Force (NASAF), under command of Maj. Gen. James H. Doolittle, was charged with the direction of all bombers and escort fighters for strategic operations. The main components of NASAF were the XII Bomber Command and the 330 and 331 Wings, RAF. The Northwest African Tactical Air Force (NATAF), under Air Vice Marshal Sir Arthur Comingham, coordinated the efforts of the air force operating in support of ground troops. The Tactical Air Force consisted of the Desert Air Force, the XII Air Support Command, and the Tactical Bomber Force. The Northwest African Coastal Air Force, under Air Vice Marshal Sir Hugh P. Lloyd, had responsibility for the air defense and sea-air reconnaissance of Northwest Africa, as well as control over antisubmarine operations, shipping strikes, and air-to-air and air-to-ground recognition systems. NACAF consisted of 242 Group RAF and the XII Fighter Command. In addition to the above, NAAF included an air service command, a training command and a photographic wing.
The Ninth Air Force was the American component of the Middle East Air Command. By the time of the Sicilian campaign only two B-24 groups (93rd and 376th) were operating from their Cyrenaican bases under control of Maj. Gen. Lewis H. Brereton. The units of the IX Fighter Command were operating under MAAF as follows: the 57th and 79th Fighter Groups were under Desert Air Force and the 324th Fighter Group was attached to XII Air Support Command; the 12th and 340th Bomber Groups (!!) were under Tactical Bomber Force.

Pantelleria

A necessary preliminary to the invasion of Sicily was the reduction of Pantelleria, and the less important islands of Lampedusa, Linosa, and Lazzaretto. Not only did these islands lie directly in the path of invasion but the powerful Freya radio direction-finder stations on Pantelleria and Lampedusa provided advanced listening posts from which the movement of aircraft over the central Mediterranean could be detected, while the ship watching stations could record the movement of shipping. In addition, the airfield on Pantelleria, believed to be capable of accommodating 80 single engine fighters, would help provide the close fighter support necessary during the initial stages of the forthcoming invasion. The plan was to launch an intense aerial attack against the island with the idea of so terrorising and paralysing its defenders that it could be seized without the use of ground troops, or to give such an assault every chance of success with the minimum of loss. As it turned out, intense air and naval bombardment made an assault by ground troops unnecessary but most of the essential elements of the Mediterranean-European pattern of amphibious landings were worked out in Operation CORSCREW.
In the first place, a joint command, directly responsible to General Eisenhower was set up. Rear Admiral R. F. McGrigor of the Royal Navy, Lt. Gen. Carl Spaatz, commander of the Northwest African Air Forces, and Maj. Gen. W. F. Clutterbuck, the general officer of the 1st British Infantry Division, were placed in command of the naval, air and ground forces respectively. A combined headquarters was established at Sousse. From the time of embarkation this advance organization was to be aboard a headquarters ship from which it would direct all forces taking part in the operation. Should an assault be necessary, D-day would be 11 June. The air plan provided for two periods of preparatory bombardment. Up to and including 6 June steady and increasing pressure would be maintained. To avoid any indication that Pantelleria had been singled out for invasion other targets in Italy, Sicily and Sardinia would also be bombed. Beginning 7 June the island would be bombed around the clock. Since Pantelleria was being used as a sort of laboratory experiment of the ability of air power to neutralize strong defensive positions, targets were chosen with the greatest of care and scientific estimates of the bombing effort necessary to knock out such targets were made. To carry out the bombing program MAFF had slightly over 1,000 planes against 900 enemy planes on or within range of Pantelleria.

Although Pantelleria had been hit intermittently during the closing days of the Tunisian campaign, the real offensive began on 18 May and increased in intensity until the island surrendered. Attention was focused at first on the harbor and airdrome but as these targets were neutralized emphasis shifted to coastal batteries and gun emplacements. In attempting to neutralize some 80 gun positions it was recognized that direct hits
would be few. If, however, as many as one third of the guns in each battery could be knocked out it was believed that the remainder could be silenced by such secondary factors as damage to scientific instruments, disruption of communications, destruction of supplies, and demoralization of crews.

According to plan, two opportunities were given the defenders to surrender, one on 8 June and another on 10 June. When the second invitation brought no response three convoys sailed from Sousse and Sfax. Before it became apparent that the defenders were trying to surrender on the 11th the assault craft were approaching the beaches and could not be recalled. The full air cover planned for the ground force was accordingly given until the first phase of the occupation was completed. With the exception of a small number of prearranged flights, all Tactical Air Force activities were controlled by the air force officer in the combined headquarters on board H.M.S. Largs. As precaution against possible sinking of the Largs, a stand-by headquarters was stationed on board H.M.S. Royal Ulsterman.

Only small arms fire opposed the landing and as soon as the Governor of the island could be located he signed the terms of surrender. Following the example of Pantelleria, the Pelagie Islands, Lampedusa, Linosa, and Lampione, surrendered on 14 June.

The capture of Pantelleria not only cleared the way for Sicily but furnished many valuable lessons that were applied in later landings. Some of these lessons included the desirability of developing a better system of communications, the avoidance of premature crossings of the bomb line by invading troops, more comprehensive briefings, coordination of intelligence in the three arms of the combined force, and the importance of aerial photography in such an operation. The system of controlling the tactical
air forces from a headquarters ship was to be used and improved upon in subsequent operations. Probably the most important lesson had to do with bombing data. Some of the more enthusiastic advocates of air power hailed Pantelleria as proof positive that air power alone could induce heavily defended positions to surrender. More sober critics realized that the defenses and defenders of Pantelleria offered unusual opportunities for the exercise of air power, opportunities that were unlikely to present themselves with great frequency in the future. Furthermore, Pantelleria brought out certain limitations as well as potentialities of air power. It was found, for example, that even with the huge quantity of bombs dropped and even with little or no enemy interference it was extremely difficult to obtain direct hits on gun emplacements. Examination of the 80 guns that had been bombed revealed that only 2 had received direct hits. However, 43 were damaged and of these 10 were completely unusable. It was found that since the 1000-lb. bomb had an effective radius only about one and a half times that of the 500-lb. bomb, the latter should be used against small targets because of the greater number of bombs that could be employed. It was also found that bombs fused with a delay of .025 seconds gave better results than bombs instantaneously fused. In other words the experience of Pantelleria pointed to the desirability of making a careful study of terrain and soil in the target area before deciding on the type of bombs and fusing to be used.

Pre-Invasion Operations

The elimination of Pantelleria and Lampedusa cleared the way for concentration on bombing in direct preparation for Sicily. The Plan for the Employment of the Northwest African Air Forces and Attached Air Forces...
issued in May 1943 reflected doctrines of the employment of air power that had been developed in the Western Desert and Tunisian campaigns. These doctrines, soon to become official U.S. doctrine, held that the air forces could make their greatest contribution to an amphibious operation, or any other war-winning operation, by establishing superiority over the enemy air force and preventing it from interfering with the invasion and by preventing troops and supplies from entering the assault area. These missions accomplished, the air forces could then lend effective direct support to the advance of the land forces. Accordingly, GAF, assisted by the air forces in the Middle East and Malta, was to destroy or neutralize the enemy air forces within range of the invasion area, protect naval operations and assault convoys, attack enemy shipping and naval forces, and protect Northwest African and captured areas of Sicily against air attacks. It would also participate in the cover plan and in diversionary operations aimed at keeping the enemy air forces as widely dispersed as possible.

Four phases of operations were contemplated: a preparatory period, an assault period, a period covering the attack on Catania, and a period covering the reduction of the remainder of the island. It was not intended to apply more than ordinary pressure until D minus 7, since many units needed rest and refitting and it was necessary to avoid heavy losses during this period. From D minus 7 to D minus 1, the air forces were to step up their offensive against the enemy air forces with the object of making them incapable of interfering with the landings. Forces would be the main enemy airbases in Sicily, Sardinia and southern Italy together with submarine bases, communications lines, and industrial plants. In concen-
fleeting targets, since such attacks usually produced only ephemeral results at high cost. A 12-hour notice would in general be required before attacks by medium and heavy bombers could be executed.

The air plan dealt for the most part with broad policies to be followed in the application of air power, but it was not related in minute detail to the Army and Navy plans. This was deliberate. All commanders were agreed that the primary function of the air forces in all phases of the attack was the neutralization of the enemy air force, a target that could not be pin-pointed in advance. Furthermore, it was foreseen that one landing might go well, while in another area the ground situation might become extremely precarious, in which case it would be necessary to shift aircraft from one sector to another.

In accordance with the air plan, the primary targets during the preliminary phase were the main enemy airfields in Sicily, Sardinia, and southern Italy. The effect of the effort developed in June was the withdrawal of his bomber force from Sicily and Sardinia. Having driven the enemy back thus far, the Allied air forces continued with an attempt to force a similar withdrawal of the small bomber force still based in the heel of Italy. On 2 July, 91 Liberators of the Ninth Air Force attacked with good results the Grottaglie and San Pancrazio airdromes where CAF bombers were based, and also Lecce, a German fighter base. On 3 July bombers of NAAP attacked all the advance landing grounds in Sardinia. For the next three days, the combined air striking power was concentrated in an onslaught against the enemy's airdromes in eastern Sicily, where the bulk of his fighter strength was now based. During the period, 4 to 9 July, NAAP flew nearly 3,000 heavy and 560 medium bomber sorties against Gerbini
and its satellites, while the B-24's of the Ninth flew 79 sorties. Catania and Biscari also were plastered. The effect of this unprecedented blitz against enemy airfields as a prelude to invasion was to render many of the Sicilian airfields unserviceable and to drive upwards of one-half of the enemy air force either out of Sicily or to unknown landing grounds.

Sardinian airfields were practically neutralized after 3 July. Although no figures are available as to the exact number of aircraft destroyed on the ground during the pre-invasion period, one report states that up to 13 August approximately 1,100 aircraft, including those abandoned as well as destroyed, had been examined by Allied personnel on the island. As had been expected, also, the persistent bombing of airfields had the effect of forcing the enemy to come up and fight. During the week, 3 to 9 July, 139 enemy aircraft were destroyed in air combat as compared with 31 destroyed during the week of the invasion.

During the pre-invasion period 76 per cent of the total Allied bomber effort was devoted to airfield attacks and over 3,000 tons of bombs were dropped in more than 2,000 sorties. So successful was the effort to neutralize the enemy air force prior to the commencement of the land battle that it was possible after D-day to reduce the scale of attacks on airfields to 21 per cent of the total bomber effort.

The efforts to neutralize the enemy air force prior to the invasion of Sicily pointed to several lessons that would be of use in future operations. For one thing, it was learned that attacks, to achieve maximum results, must be well-timed and often-repeated. Spasmodic attacks, though capable of causing temporary damage, seldom produced decisive results. It was found desirable also to define clearly the aim of each attack, as the immedi-
ate aim varied from time to time. In some cases the airfield area was divided into definite sections which were assigned to certain formations. In attacking airfields over a wide area, one device adopted was to concentrate upon all airfields in a given section with the exception of one or two, with the purpose of causing aircraft still in the air to be diverted to those fields. A concentrated attack would then be made against the fields hitherto left unscathed. During the pre-invasion period about 50 per cent of the night effort of the Wellingtons operating under NAAF was employed in airfield attacks. Light and medium bombers of MATAF were also used on night missions during the moon period.

In order to achieve maximum dispersion the enemy resorted more and more to the use of satellite strips. To counter this move, mass strafing attacks by fighter-bombers (principally P-40's and P-38's) were employed with excellent results. It was found that the 20-lb. fragmentation bomb was particularly effective against grounded aircraft. During the last two days of the pre-invasion attack demolition bombs were used on a greater scale than fragmentation in order to make the fields unserviceable by cratering. The fusing was usually either instantaneous or short delay. Five-hundred pounds bombs with six-hour and 12-hour delay fuses were dropped in small numbers.

In addition to the operations against enemy airfields, the Allied air forces also carried out a bombing program against certain focal points to prevent the enemy from rushing in troops and supplies to meet the threatened area. These focal points included the Messina bottleneck, terminal ports on the Tyrrhenian Sea--chiefly Naples, Palermo, and Trapani--railway marshalling yards at these ports and along the western coast of the Italian boot, and the small ports in southern and eastern Sicily. In an attempt to interrupt transportation down the boot, medium bombers attacked the
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In addition to guarding the life lines of the Allied armies, it was the mission of Coastal to dislocate and destroy those of the enemy. In the period between 24 June and 9 July the ship striking force damaged two large merchant vessels, and sank at least one 800-ton schooner, a 6,000-ton cargo vessel, and a 3,000-ton auxiliary craft.

On the eve of invasion the Allies enjoyed overwhelming air superiority. The German and Italian Air Forces were estimated to have a total of 1,500 to 1,600 aircraft based in Sardinia, Sicily, Italy, and Southern France, compared to an Allied force of some 4,000 aircraft. There were approximately 114 British and 146 American squadrons. Axis aircraft were believed to have an average 50 per cent serviceability, though probably in the battle area it was even less.

The Assault Period

From 3 July onward protection of the assault convoys represented a heavy commitment of the air forces. Off the coast of Algeria and Tunisia the convoys were protected by the 10ACAF, assisted by the 33rd Fighter Group based on Pantelleria. Malta-based aircraft took over the protection of convoys as they came within 50 miles of the island. The enemy made no attempt to attack the convoys while en route. Admiral Hewitt stated that convoy protection was the most carefully planned and most successfully executed of all air force roles.

On the night of 9 July intensive and varied operations were carried out. Although it is not within the province of this study to consider the details of the airborne operations, mention should be made of their role in HUSKY for they formed an important part of the operation and the experience gained was useful in later landings, notably Salerno and Normandy. The object of
In addition to the four large scale airbase stations there were a
group of small missions called CHESTNUT, designed to attack and harass enemy lines of communication.

Despite the errors made and the heavy losses incurred, the airborne operations made an important contribution to the success of HUSKY. General Patton, commander of the Seventh Army, stated that at least 48 hours were saved by the action of the 82d Airborne Division in the western assault area; while General Montgomery, commander of the British Eighth Army, estimated that the airborne assaults against the two bridges south of Syracuse and south of Cistania accelerated his advance by no less than a week.

These achievements were accomplished, however, only at a high cost in both men and matériel and it was evident that much remained to be learned about airborne operations. Immediately after the invasion steps were initiated to review the Sicilian experience in order that lessons learned might be put to good use in future operations. An important doctrine that emerged from these studies was that the use of airborne troops should be confined to missions suited to their role and the final decision should rest with the air force commander. Such a decision should be made in time to permit notification of all air, ground and naval forces. The use of airborne troops as reinforcements should be confined to serious emergencies. In spite of all the shortcomings and failures General Eisenhower thought that the outstanding tactical lesson of HUSKY was the potentialities of airborne operations.

But to return to the night of 9 July. In addition to protection of convoys and the dropping of real and dummy paratroops as well as gliders, NAfF carried out bombing attacks to soften resistance, to provide diversionary assistance to the airborne assaults, and to prevent the rush of enemy reserves
to the threatened areas. Medium and light bombers carried out attacks against varied targets in the western area of Sicily while RAF Wellingtons, Halifaxes, and Liberators bombed targets in southeastern area to weaken resistance to the initial assault.

H-hour was 0245 on 10 July. Planning and execution of the approach from the point of view of navigation and seamanship was, according to General Eisenhower, one of the highlights of the operation and "left nothing to be desired." Despite unfavorable weather conditions most of the assault waves made their landings not more than a few minutes behind schedule. The greatest delay occurred in the case of the 45th Division landings, where H-hour was postponed a full hour. A large degree of tactical surprise was achieved.

It was anticipated that the enemy air force would exert every effort to attack the shipping and beaches early on the morning of D-day. The number of Allied fighter aircraft available was not adequate to provide continuous cover over all beaches throughout the 16 hours of daylight. Sufficient fighter strength was present in the theater, but the limiting factors were: (1) the operational capacity of the airfields on Malta and Pantelleria, (2) the long distance from the operating fields to the assault areas and the resulting short time of cover provided by each sortie, and (3) the large commitment of fighter escort for the bombing missions. In view of these circumstances it was agreed that continuous fighter cover should be provided over two of the beaches throughout daylight; that all landing areas should have continuous protection for the first two hours of daylight and for the last one and a half hours of daylight; and a reserve wing should be kept at a high degree of readiness to reinforce any area as the situation demanded.
In the following section of the report, the author indicates the need for the U.S.S.R. to develop a ground-based anti-ballistic missile system as a means of countering potential threats to its strategic nuclear deterrent.

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According to the report, the U.S.S.R. has been developing anti-ballistic missile systems as a means of countering potential threats to its strategic nuclear deterrent. The author notes that the U.S.S.R. has been focusing on developing ground-based anti-ballistic missile systems, with the aim of providing a counter to potential threats from nuclear weapons. The report suggests that the U.S.S.R. has been developing ground-based anti-ballistic missile systems as a means of countering potential threats to its strategic nuclear deterrent.
through XII Air Support Command (Near), located on Cape Bon Peninsula. Requests that required light and medium bombardment aircraft were passed by XII Air Support Command to higher headquarters. Tactical reconnaissance was furnished by 111th Reconnaissance Squadron, which flew predetermined routes. Spot reconnaissance was also provided by diverting planes from fighter cover. Special reconnaissance missions were treated as air support requests. During the assault phase, 10-12 July, the 31st and 33d Fighter Groups were located on Gozo and Pantelleria, respectively, and the other units were located on the Cape Bon Peninsula.

It is typical, perhaps, of divergent service views that the Navy maintained that "close support by aircraft in amphibious operations, as understood by the Navy, did not exist in this theater," whereas NAAP maintained that the "cover proved successful." In support of its view the Navy pointed out that the average number of fighters over each of the areas CENT, DITE and JOSS was approximately 10 aircraft; that there were several "holidays" in the schedule when no cover existed; and that patrols were maintained at one level only. Even when requests for close support were granted, the time lag, according to the Navy, was excessive, sometimes as much as 12 hours.

In support of its view NAAP pointed out that on the day of the invasion the fighters flew over 1,000 sorties. Although the Navy was prepared for the loss of up to 300 ships during D minus 1 and D-day, the number lost from enemy air attacks to nightfall on 10 July was only 12. The majority of these losses occurred in the JOSS and DITE areas, where the air attack was strongest and where the anchoring of ships as far out as six miles had the effect of over-stretching fighter patrols and permitting the enemy to get
through the screen. Furthermore, fighters on patrol were continuously fired upon by Allied ships, so that patrols ordered at 5,000 and 8,000 feet were forced up to 10,000 and 14,000 feet. At greater heights friendly fire was less hazardous but the danger of enemy aircraft breaking through was enhanced.

Further data presented in the report of the Western Naval Task Force itself would seem to warrant the conclusion that, although operating under extremely difficult conditions, the air forces performed a creditable job in protecting the invasion fleet. According to this report, during the period 10 to 12 July, approximately 200 enemy flights were plotted on the operations board. Of this number, over half were inland flights that did not reach the assault areas. There were 39 plotted enemy raids aimed at the assault areas, of which 26 were intercepted and driven off prior to entering the areas. The remaining 63 raids were, in most cases, engaged by the fighter cover. Not included in these 39 plotted raids were frequent low-level attacks that could not be picked up by radar. These raids achieved a good deal of surprise by coming in very low, flying down the valleys, and darting over the ridge of hills onto the beaches.

With little effective opposition from the low-grade Italian forces defending the beaches, Allied ground troops made excellent progress once they were ashore. By the end of D-day all beachheads in both the American and British sectors were secure. The Pachino landing field and the port of Syracuse fell during D-day. On the 11th the enemy launched his major effort to throw the invaders back into the sea. The main weight of the counterattack, which began early in the morning and lasted throughout the day, fell against the Americans near Gela. Enemy infantry, spearheaded by Mark IV tanks, at
In encounters with the enemy air force during the assault, Allied
fighters were completely successful. Of the claimed 100 or more
enemy fighters encountered on 9-July 8th, 56/F-4Es shot down 12, probably
destroying 3, and downed 11 at the cost of 11 of their own number. The
following day brought even greater success to the enemy. After 12 July
the enemy began to dispatch his day fighter on 11, not only to increase
his toll, but with a new weapon. To protect the base and ships, against
night sorties, the new ground control intercept (GCI) was installed in
12th ForceHELP in the CTF 345 and 351 areas. Some 1800
GCI's were in operation during the middle of the following week, and
12th ForceHELP's combat and training was inadequate, so
the enemy achieved a good toll for his losses.

In addition to the night and daylight sorties against the area
to protect the invasion invasion force, the Allied forces of the 8th Army in
the area, as well as the ships and the forces of the coast of the
area during the assault period to protect the Allied invasion force by
affirmative by the enemy and to prevent any for the Allied advance.

From 9-July onward the main objectives were on communications arrays. Four
weeks of 2-17's and five years of 2-24's from 1. And 8-24's, were
in direct continuous action. The result of the terrorized efforts of the
electronic and political force was a reduction of the resistance.

The 12th and 10th Air Forces won such the enemy was not to cut with any effective
advantage in Sicily. The loss of his coastal radar stations and other
vital installations on 9-July caused the 8th Army to pause to study
situations only. The air effort increased temporarily, but that the was
effective counted.

The essential element of air force participation in large scale
operations was first established in the invasion of Sicily. The air

characteristics of the air forces in an amphibious operation, as they varied
from the operation to operation: (1) Reduction of very extensive by
an amphibious operation, (2) extensive training, and concentration centers;
(3) evaluation of the situation, (4) enemy unit training and after-action re-
view; (5) concentrated effort by naval forces and air forces to isolate
the hostile unit; (6) concentrations of the enemy by artificial means and
surgical measures, and the advance of air forces; (7) a concentrated
attack from land and naval forces.

The air forces received intensive training for the modern war in amphibious
operations and were prepared for the successful results. The commanders, if
necessary, were given the right to take action in order to secure the
objective and were taken when the opportunity arose. Naval and air forces
were used to the full extent. The commander in chief used his power to
secure the objectives and to use the air forces effectively.

The air forces were required, for the modern war, to provide accurate
intelligence and to make use of it. The commanders were expected to
make use of the air forces to the fullest extent. The commanders were
expected to use the air forces to the fullest extent.

In spite of all criticism, the air forces were able to do the job without a
major air force. In spite of all criticism, the air forces were able to do the
job without a major air force.
The troop carrier operations that spearheaded the assault were the least satisfactorily executed phase of HUSKY. The salient shortcoming was in night navigation. The dropping of a parachute brigade within Allied lines on the second night of operations purely as a reinforcement was unsound in principle. Failure to arrange a safe corridor for passage resulted in high casualties inflicted by friendly troops and ships. Dummy paratroops were used with success and this form of diversion was recommended for future operations. The experience in Sicily pointed clearly to the conclusion that the Air Commander in Chief should have the major share of control of airborne operations and his word should be final as to whether such operations should be undertaken.
Chapter IV
SOUTHERN ITALY: THE FIRST CHALLENGE

Definite plans for post-HUSKY operations had not been agreed upon when the TRIDENT conference was held in Washington in May 1943. This conference served to bring out again the basic differences between British and American strategy. At the first meeting the Prime Minister produced arguments for a continuation and enlargement of the war in the Mediterranean. Unimpressed, the President thought an Italian campaign might result in heavy attrition of Allied forces and might be a drain on resources, especially if Italy had to be occupied and supplied. The Prime Minister countered this by saying that it would be unnecessary to occupy all of Italy—it would suffice to hold such ports and air bases as were needed for operations against the Balkans and southern Europe. Finding themselves in disagreement the President and Prime Minister turned the matter over to the CCS. The outcome of TRIDENT was that General Eisenhower should plan such operations in exploitation of HUSKY as would be best calculated to eliminate Italy from the war and to contain the maximum number of German forces.

In accordance with this directive a number of plans were drawn at Allied Force Headquarters, but final decisions had to await the outcome of the Sicilian campaign. On 19 August 1943 General Eisenhower announced that he had decided upon two main operations: one coded MARS (an amphibious assault against Leggio) and another coded AVALANCHE (an amphibious assault against Salerno). These operations were approved by the CCS at the QUADRANT conference held at Quebec. At the same time the Allied leaders formulated plans for other operations that gave first priority to OVERLORD (the cross-channel invasion of Europe
in 1944) and POINTBLANK (the Combined Bomber Offensive). In other words, the same set of decisions that inaugurated the invasion of southern Italy also relegated that theater to a secondary role. The three-fold task of forcing the collapse of Italy, creating diversions of enemy forces, and destroying vital installations on the continent would have to be accomplished without top priority on men and supplies. Operations were to be in three phases: (1) Italy was to be eliminated as a belligerent, and air bases were to be established as far north as the Rome area; (2) Corsica and Sardinia were to be seized; and (3) constant pressure was to be maintained on German forces in northern Italy, and there was to be created a situation favorable for eventual entry of Allied forces—including the bulk of the re-equipped French army and air forces—into southern France.

First of the two main amphibious assaults was BAYTOWN, to be carried out on 3 September 1943. It was to consist merely of moving two divisions across the narrow Strait of Messina and landing them in an area where Axis defenses were believed to be weak. One division of the British Eighth Army was to land at Gallico and Catona and another division was to land at Reggio. Both landings were to be covered by artillery from the Messina side of the Strait and by naval fire. Air cover was to be provided from near-by Sicily by the Desert Air Force, made up largely of British units. The immediate objectives of the Eighth Army were to seize Reggio and the airfields in the toe. The ultimate objective was to advance northward for a junction with the U. S. Fifth Army and eastward for a junction with other British forces that were to land near Taranto between D plus 2 and D plus 7 (Operation TUBSON).

AVALANCHE, an assault on the beaches south of Salerno, was to be launched on 9 September. Invasion forces were to consist of the American VI Corps and
the British 10 Corps and follow-up troops. The Allied forces in AVALANCHE would total about 125,000 troops against enemy forces estimated at 39,000 on D-day but capable of being increased to more than 100,000 by D plus 3. The objective of the Fifth Army was to seize Salerno and the airfield at Montecorvino and then, driving inland, to capture the port of Naples and secure the nearby airfields.

The Western Naval Task Force, composed of the Control Force, the Southern Task Force, the North Task Force and the Support Carrier Force, was to transport the assault troops to their points of debarkation off the beaches and to support them by naval gunfire and carrier-based aircraft until they were firmly established ashore. The Southern Task Force was to convey VI Corps to its beaches, while Northern Task Force was to transport 10 Corps. The Support Carrier Force, consisting of one carrier and four escort carriers, was to supply the maximum practicable fighter protection to the naval forces and to assist the Sicily-based fighters of the XII Air Support Command in controlling the air over the beaches. The Control Force included the flagship, USS Ancon, a Picket Group to screen the attack forces from hostile surface elements, and a Diversion Group, which was to make a feint against the beaches north-west of Naples to draw off enemy forces.

The Air Plans

The broad general tasks assigned to the air forces in both AVALANCHE and BAYSWIN were as follows: (1) to neutralize the enemy air forces; (2) to prevent or effectively retard the movement of enemy forces into the assault area; (3) to provide air protection over the assault convoys, the assaults, and subsequent operations, and (4) to transport and drop paratroops in connection with AVALANCHE. In addition to these major tasks, MAAP had also a
number of complementary air commands, including the defense of territory already held by the allies, protection of air convoys, attacks on the enemy's naval bases, destruction of enemy warships, and attacks on the enemy's industrial bases, railroads, airfields, and other installations.

The result of these measures is that the Allied Air Forces are now able to strike at the industrial and military centers of the enemy, using all available resources. The enemy's air bases, railroads, and other installations are now being targeted by the Allied Air Forces, with significant results. The enemy's ability to conduct operations is being severely undermined, and the Allied forces are gaining the upper hand.

The importance of these measures cannot be overstated. The Allied Air Forces have shown that they are capable of striking deep into the enemy's territory, with devastating results. The enemy's ability to conduct operations is being severely undermined, and the Allied forces are gaining the upper hand. The unterstützung of the enemy's air bases, railroads, and other installations is being severely undermined, and the Allied forces are gaining the upper hand.

The success of these measures is due in large part to the coordination and cooperation between the various Allied air forces. The Allied Air Forces have been able to work together in a coordinated and effective manner, with results that are clear to see. The enemy's air bases, railroads, and other installations are now being targeted by the Allied Air Forces, with significant results. The enemy's ability to conduct operations is being severely undermined, and the Allied forces are gaining the upper hand.

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better than at Bar, south of Aix. In other words, our destruction or
destruction in both areas and extensive damage was inflicted on buildings and
installations. An Allied force at the city of Bar delivered one air-invasion
force against the port area on 23 August, and one by-later force from
the interior of Istria on 30 August 1942. Both were virtually
suffered in the battle of Bar and both were repulsed by the
forces that eventually prevailed. But in the north, the Allied forces
were able to concentrate their major effort on the city of Bar, and
the Allied forces of the city of Bar and the Istrian forces were
able to inflict severe damage on the city of Bar and the Istrian area.

The Allied forces of the city of Bar and the Istrian area were able to
concentrate their major effort on the city of Bar and the Istrian area.

The Allied forces of the city of Bar and the Istrian area were able to
concentrate their major effort on the city of Bar and the Istrian area.
had been "most effective," and that actual damage had exceeded all previous estimates.

Other large scale attacks were made against the Sulmona marshalling yards (at the junction of the Rome, Pescara and Terini lines), the Terini marshalling yards, northeast of Rome, and the Bologna marshalling yards on 27 and 28 August and 2 September. Small raids were carried out against yards at Aversa, Orte, Bari, and Taranto, and the vital supply line through the Brenner Pass. The last-mentioned raid, carried out 2 September, paid dividends far out of proportion to the investment. By hitting certain key bridges in the vicinity of the pass the U. S. Fortresses were able to halt temporarily all supplies coming into Italy via the Brenner, the shortest and most direct route between Germany and Italy. Most of the heavy bomber missions were carried out by the XII Bomber Command, but IX Bomber Command added its weight by attacking the railway station, air depot, and marshalling yards at Canavolo on 21 August. The IX Bomber Command also made other attacks on Pescara, Foggia, Taranto, and Bari.

The medium bombers concentrated their attacks against marshalling yards and industrial targets in southern Italy. One of the chief targets was Salerno against which 139 Wellington and 112 U. S. medium bomber sorties were flown. Between HISEY and VALIANT the combined efforts of heavy and medium bombers of NAAF against communications totaled more than 4,500 sorties.

The results of attacks on rail communications were highly satisfactory. By the time the Allies were ready to make their first landing in Italy, the lines were blocked and all railway activity had ceased south of a line Naples-Foggia. Repairs were being made at Littoria (Rome) and Battipaglia, near Salerno. Large quantities of rolling stock had been wiped out. These constant
attacks forced the enemy to rely more and more on road transport. This placed a strain on fuel reserves and made the enemy's problem of supply difficult.

In the week preceding BAYTOWN air attacks were delivered against fortified positions, gun emplacements, and troop concentrations. These attacks, carried out by escorted light bombers and on occasion by B-25's, were not intended to saturate the landing areas. Rather, particular targets were pinpointed, such as gun positions at Reggio, fortifications at San Giovanni, and Axis Army Headquarters at Rosarno and Ortì. These attacks were kept on a small scale for two reasons: a more concentrated attack would have disclosed the exact spot at which the landings would be made and it was known that the area within which the Eighth Army was to land was weakly defended. It seemed better to preserve the element of surprise than to knock out limited enemy defenses.

In general the German fighter reaction was inconsistent, except in the Naples and Porto areas where it was generally strong and aggressive. During the period 18 August - 3 September, IAF destroyed over 260 enemy planes and probably destroyed 30 more. This constant attrition, plus the heavy attacks against airfields, forced the enemy to withdraw his bombers from southern Italy and to concentrate his fighters, his best pilots, and his heaviest anti-aircraft defenses in the Naples sector.

On the eve of BAYTOWN it was estimated that the Axis had about 1,500 operational aircraft of all types in Italy, Sardinia, Corsica, and southern France. Of these, about 900 were Italian, and 600 German. The Italian planes were out of date and their pilots were of low calibre in both experience and morale. As for the GAF, at least one-third of its 600 planes were unserviceable.
By D minus 1 the Allied air forces had successfully accomplished their preliminary tasks of neutralizing the Axis air arm, crippling lines of communication, isolating the battle area (for BAYCORN but not for AVALANCHE), and softening up Axis defenses. On the evening of 2 September, 300 landing craft were lying in wait at eastern Sicilian ports ready for the first assault on the European mainland.

**BAYCORN**

The movement of ships and men got under way in the early hours of 3 September. The Eighth Army crossed the Straits to the Calabrian shore against only dispirited resistance. There being no hindrance from mines or demolitions, the beachheads were soon made secure.

Air cover for the crossings and the assault was furnished by the Desert Air Force, which was primarily British in composition but contained the 57th and 79th U. S. Fighter Groups. Only a few enemy fighters appeared to contest the landings and two of these were shot down. The desultory efforts of the enemy air force enabled DAF by the middle of the day to shift to the offensive. Light bombers and fighter-bombers attacked gun positions, rail and road crossings, bridges, convoys, and troop concentrations in the lower part of Calabria. NAPF's B-25's and A-36's bombed the airfields at Comiglianello and Crotone, where increased fighter strength had been reported by reconnaissance aircraft. D-day closed with an armed reconnaissance mission that destroyed small groups of enemy vehicles. During the next two days the advance of the Eighth Army was held up only by demolitions. No contact was made with German forces. On 4 and 5 September, with the exception of a few enemy vehicles, few suitable targets presented themselves. On the 4th the enemy's first and only effort at
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from D minus 6 to D minus 1. The majority of ships of the Southern Task Force sailed from Oran and Algiers, while most of the Northern Attack Force sailed from Bizerte and Tripoli. All the ships of the great fleet met north of Palermo on D minus 1. By sundown of the same day the convoys were in position and had started their approaches at a point some 50 miles west of the beaches.

The convoys were not subjected to attack until late on D minus 2. During that night and the afternoon of D minus 1 they were attacked five times. The first attack, carried out by torpedo bombers apparently from southern France, caused no damage. The four other raids, which came on the afternoon of D minus 1, damaged an American LST and sank a British LCT. Between 2000 and 2400 hours on D minus 1, the Northern Attack Force was subjected to repeated raids by small groups of torpedo bombers, while the Southern Force encountered two heavy and five light attacks. Only one LST was hit. Good fighter cover, heavy antiaircraft fire, and poor performances by the attacking bombers prevented more extensive damages. Antiaircraft fire accounted for five enemy planes and Coastal Air Force night fighters claimed five probables.

After 2400 hours, when the ships began moving into their final positions and until 0330 hours (H-hour), when the last of the assault troops left for the beaches, there were no attacks by enemy planes. With the exception of a sector in the north where the British naval units were firing in preparation for the landing of 10 Corps, the whole front, from Salerno to Paestum, was quiet. Apparently the Germans planned it that way. As soon as the troops approached the beaches the Germans reacted therewith the announcement: "Come on in and give up. We have you covered." Then came a great barrage of artillery, machine gun, and mortar fire. Although these tactics caused some
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...
particularly of boats at the beaches. Beginning at approximately first light regular and persistent bombing and strafing attacks effectively interrupted unloading activities...The scale of these attacks has never before and never since been equaled in this theater."

Beside this may be placed the Air Force statement that "very little enemy action in the air was encountered the first day." Practically all NAF's operational and intelligence summaries agree that the enemy's air reaction to the landings was not severe. From an analysis of the various conflicting reports, it would appear that the enemy flew enough small missions over the beaches and shipping, and flew them regularly enough to keep the Allied forces constantly on the alert and to hamper troops engaged in unloading activities. However, the sum total of enemy operations was moderate, his attacks were persistent but not very effective, and they caused only minor damage. If the size and importance of the invasion be taken into account, the damage suffered from enemy air action was small indeed. During the day only one ship (an AT) was sunk and one LST was damaged. There is no means of estimating casualties to personnel and damage to equipment on the shore, but there is no evidence to suggest it was extensive.

The estimated 60 to 75 enemy sorties were met by the standing patrols of USAF, RAF, and Navy fighters, in accordance with the Air Plan of keeping around 36 planes over the assault area at all times. The enemy took advantage of cloud cover and the mountains behind the beaches to strike quickly at widely scattered points. Operating in small groups of from 1 to 6 planes he would hit the northern and southern beaches simultaneously in order to confuse and divide the Allied fighter defenses. In spite of these tactics the Allied standing patrols were able to break up or turn back a large pro-
portion of the enemy raids. During D-day Allied fighters destroyed four planes and damaged one for the loss of two P-38's in combat and one Spitfire in noncombat.

The fighters performed creditably, but they were hampered in their actions by the unsatisfactory performance of the fighter control center on the Ancon. Several factors appeared to be responsible: the near-by hills caused echoes; the ship was not well equipped and was badly located; and the control center was not receiving enough information from the troops ashore.

The D-day activities of the Strategic Air Force were aimed at the isolation of the battlefield. The heavies and mediums hit roads, railway junctions, and bridges mainly in the Naples-Avellino area. Some attention was also given to the southwest area near Potenza and Sapri in order to hinder the enemy's movement into the Salerno sector. Sixty B-17's destroyed two road bridges and damaged the railway bridge over the Volturno River at Capua. The heavies further hampered communications above Naples by damaging the approaches to the Cancello bridges between Capua and the coast. Enemy air fields at Pozzola and Scanzano (in the south) were bombed with good results.

In all, the land based aircraft flew about 1,700 sorties in support of D-day operations. The air forces claimed 14 enemy planes destroyed, 3 damaged in combat, and 4 destroyed on the ground against the loss of 9 planes.

**Extending the Salerno Beachhead, 10-11 September**

In spite of stubborn opposition the Fifth Army retained the initiative for the next two days. Salerno and Montecorvino airfields were occupied during the morning of the 10th but Montecorvino was still within range of enemy artillery and could not be brought into use. Fighter cover would have to continue to be furnished largely on a long-range basis, with possibly some assistance from temporary fighter strips that were being readied inside the beachhead.
On the 10th and 11th the enemy increased both the quantity and quality of his air resistance; on both days about 100 planes bombed and strafed the beaches and shipping. Tactical Air Force met this increased activity with the same system of patrols used on D-day. On the 10th the day fighters broke up or turned away about 40 attacks, one-fourth of which contained formations of 10 or more planes. On the nights of 9/10 and 10/11 the Beaufighters were in action as usual and performed well. They might have performed even better had it not been that their radar coverage was interfered with by the high ground to the east and the Ancon could give only limited help.

On the 11th the CAF concentrated its efforts on Allied shipping with some success. The USS Savannah was hit by a radio-controlled bomb that exploded below deck. H/3 Flores was damaged by a near-miss, while the USS Philadelphia suffered damage from an enemy plane that crashed some 15 feet away. The attack on the Savannah came at a time when the fighter cover had been somewhat reduced, partly because the fighters had been diverted to the assault area against enemy transport and partly because of pilot fatigue. The diversion of fighters to the assault area had appeared feasible in view of the small enemy air reaction on D-day. After the Savannah was hit, normal cover was restored and continued throughout the day.

According to a Marine Corps observer, the air cover at Salerno during the first three days was excellent. The attack force in the northern area had maintained "about 98 per cent control of the air during all daylight hours and a possible 90 per cent control during the hours of darkness," so that "very few German planes broke through this cover."

Despite the good showing so far there were disturbing elements in the picture. Flying in cramped cockpits over long distances the pilots were
beginning to show signs of fatigue, and accidents were increasing rapidly. All the while the GAF was exerting itself to the utmost to inflict heavy damage on personnel and equipment.

In addition to their beach and shipping patrols, NAAF's planes continued their efforts to isolate the battlefield. On 9 September Mediterranean Air Command informed the Tactical Air Force that it would be responsible for destroying enemy personnel and equipment south of a line Battipaglia–Potenza–Bari, while Strategic would be responsible north of that line. Road communications used by the enemy to reinforce his battle lines were to be the main targets. Fighters on patrol over the beachhead did double duty. The planes were equipped with bombs, and the pilots, receiving their bombing instructions while in flight, would carry out their bombing and then proceed to patrol duties. This system, which was used principally over 10 Corps area, sometimes enabled the XII Air Support Command to furnish air support within 10 to 30 minutes after ground troops had sent in their requests. In general, however, air-ground cooperation was not satisfactory until Allied planes moved to bases in Italy. The land lines were unreliable, maps were poor, changes in bomb lines came in slowly, and, when requests from ground troops had to be sent to Sicily, the planes often did not arrive until four hours after the initiation of the request.

Tactical reconnaissance essential to close support, artillery fire, and intruder missions in the battle zone was furnished by P-51's of the III Tactical Reconnaissance Squadron and the British Spitfires of 225 Squadron. Until D plus 3, tactical reconnaissance was carried out on a pre-arranged basis with a set number of missions each day, but after 12 September the 111th operated with VI Corps and 225 with 10 Corps. Each squadron carried out about six missions a day.
The first phase of Allied advances was over by the afternoon of 11 September. It had been apparent since the end of the previous month, during their strength for a co-ordinated attack to be level with Allied forces but, as it was,

The battle of Yell and Albert was being able to bring economic

in total to bring about the result. In view of the fact one of the

measures was to be to send his troops to attack the

forces to make a similar effort was required a forward advance. On the

other hand, the Allied forces to support but on one more was not entirely

until the American court without it in its resources, but not enough.

without the agreement of the lie or with them to what might have been

the move the court would continue on with such ideas as to arise out

the method.

Familiar conditions throughout the 3rd division should also be

taken into account. No set the reason or bitterness anywhere that they

held the high ground had interior roads connecting the beaches, that these

conditions they couldบทความลูกน้อง and artillery were not to shift their

strength of artillery to cover every Allied event. General Clark stated

that he himself did not realize the full extent of the German advance until
...
As the battle reached its critical stage, the entire resources of NAAF were shifted to direct aid of the Fifth Army. Fighter and fighter-bombers carried out more than 1,000 sorties on patrol over the beachhead and offshore shipping and in bombing and strafing attacks against targets of opportunity in the battle area. A-36's and P-38's dropped 160 tons of bombs on enemy vehicles, troops, gun positions, roads, bridges and marshalling yards. The medium and heavy bombers directed their efforts at the roads leading into the Salerno area and at concentrations of troops and supplies in the Battipaglia-Eboli area.

The fury of the air assault was not abated on the 15th. NAAF planes of all types flew about 1,400 sorties. To name all the localities hit would sound like a miniature Baedeker of the Salerno area," but special emphasis was laid on the Eboli, Battipaglia, Avellino, and Auletta areas. The staggering pressure of bombardment was kept up through the night of 15/16 September. By the 16th it was apparent that the enemy counterattack had spent itself. There were no great changes in positions, but the reinforced Fifth Army had consolidated its positions and was ready soon to go on the offensive.

During the critical period all the planes of NAAF, Strategic and well as Tactical, were employed in direct support of the land battle. Some of the planes of the Strategic Air Force bombed so close to the front lines that an error of a few hundred yards might have spelled disaster for the Allied troops. NAAF poured into the target area an average bomb density of 760 tons per square mile. How many enemy troops were killed by land based aircraft there is no way of knowing, but reports indicated that over 300 vehicles were destroyed and some 200 damaged by fighter-bombers alone. The Naples-Salerno
roads and railways were virtually closed to traffic as a result of heavy Allied attacks. "Never before," said Mediterranean Air Command, "have bombs been employed on a battlefield in such quantities or with such telling effect."

General Speatz felt that the Salerno experience had demonstrated "to a greater extent than ever before the importance of Air Force flexibility in organization and operations and the decisive effect which air power had in combined operations." General Clark, the ground commander, said that the air forces "contributed much" to the success of the operations and "all were most enthusiastic in their acclaim of the close and continuous support which had been given them by the Air Forces." General Sir Harold Alexander pointed out more specifically that:

The tremendous air attacks added greatly to the morale of the ground and naval forces and, in addition, have inflicted on the enemy heavy losses in men and equipment. They have seriously interfered with his movements, interrupted his communications, and prevented his concentration of the necessary forces to launch large scale attacks.

Although bare statistics can never convey the urgency of a desperate battle situation, the heroic efforts of over-worked pilots flying in cramped cockpits, or the quality of performance, they do convey some idea of the volume of activity. From 1 to 15 September NAAF's fighters and bombers flew approximately 17,500 sorties in furtherance of the BAYCOWN and AVAUCOOG operations. They dropped some 10,000 tons of bombs and claimed the destruction of 220 planes in air combat for the loss of 90. During the four critical days NAAF's pilots flew over 6,000 sorties and dropped 3,500 tons of bombs. Three-fourths of these were flown by U.S. planes of the Twelfth Air Force. Planes of the Northwest African Photographic Reconnaissance Wing flew about 100 sorties and planes of the Coastal Air Force—which did not operate over the mainland—
flow about 400 sorties. It was an impressive record.

Putting to good use the lessons learned in Tunisia and Sicily the Allied forces were able to cope successfully with the first challenge of an Allied invasion by high grade German troops. The pattern of counter air force operations developed in previous campaigns was applied with minor modifications to prevent serious interference from the enemy air force. The efforts to isolate the battle area were successful for BAYCORN but not for AVA

ALANCHE. Although the air forces attained considerable success in their attacks on marshalling yards and rolling stock, the Germans were able to mount a counter attack against the beachhead. The Allies had yet to learn how to isolate an invasion area where the enemy enjoyed better positions, had reserves for reinforcement, and possessed alternate means of communication. In a negative way Salerno taught another lesson: the utility of deceptive measures. There was no surprise in Avalanche; it is now definitely known that the Germans expected the main landings would be not in the Toe but in the Naples-Salerno area. They had several good reasons for believing this and the pattern of Allied attacks on radar sites, communications and airfields around Naples and Foggia lent credence to their suspicions. Henceforth all amphibious operations in the Mediterranean-European theaters would be preceded by deceptive bombing and other devices calculated to prevent disclosure of the point of invasion. The long distance of the Salerno beaches from airfields in Sicily and the failure to bring the Montecorvino airfield into operation underscored the importance of rapid airfield construction immediately behind the battle line.

Probably the most important lesson of the Salerno experience was the demonstrated ability of air power to be shifted and massed to retrieve a desperate ground situation, a lesson that was to be brought out with even greater clarity at Anzio.
Chapter V

AUGTO: WE NEAR DISASTER

After weathering the critical stage of the Salerno landings, the Fifth Army seized the offensive and pushed on to Naples. On the east coast the Eighth Army advanced and seized Foggia. With Naples the Allies had one of the best ports on the west coast of Italy, and the nearby airfields provided ample bases for tactical support in the push up the Italian peninsula. On the east coast they had the important port of Anzio, and possession of the great complex of air fields around Foggia made possible a two way bombing of Germany.

At the Cairo Conference in November 1943 the basic differences in British-American strategy were aired again. The major objectives of the Italian campaign having been accomplished, the Americans recommended that no additional operations be mounted in the Mediterranean except as a direct supporting move to the cross-channel invasion. The British favored a continued and all-out prosecution of operations in the Mediterranean even, if necessary, at the expense of OVERLORD. The decision at Cairo was to continue the build-up for OVERLORD and to continue the redeployment of troops from the Mediterranean to England. The British made this concession apparently on the assumption that Rome soon would be in Allied hands.

A month of fighting did not produce the prize so dear to Churchill's heart. The Allied armies advanced to a line just north of the Volturno and Sangro Rivers and there they stopped. There was no lack of heroic effort on the part of Allied ground forces but they were faced with an almost impossible situation. The enemy was favored by difficult terrain, exceptionally bad
weather, and strong defense positions in the Winter and Gustav lines. When the Allied chiefs met at Tunis on 25 December 1943 the advance had bogged down but the Prime Minister again elaborated on the psychological importance of taking Rome. In his opinion it would be folly to allow the campaign in Italy to drag on and to face the cross-channel operation with a half-finished and therefore dangerous situation in Italy. General Alexander proposed an amphibious landing around the enemy's right flank to compel a withdrawal. The Prime Minister supported this proposal strongly. Generals Eisenhower and Clark, though approving the idea generally, doubted that the two partially skeletonized divisions that Alexander proposed to use would be sufficient to carry out the operations successfully. Another difficulty was the shortage of landing craft. Furthermore General Eisenhower pointed out that the Anzio attack might not compel a withdrawal from the front of the Fifth Army. The enemy might choose to draw in reinforcements from outside Italy and fight on both fronts. In this surprise General Eisenhower was correct, for the immediate result of Anzio was a stalemate on two fronts instead of one.

The key with which the Allied leaders hoped to unlock the system of German defenses around Rome was a high hill mass called Colli Laisiali, or the Alban Hills. This promontory guards Routes 6 and 7, the two main highways by which the Gustav Line was supplied. The object was to land at Anzio, move inland to capture this point, and thus to control the enemy's communications to the main front. It was hoped that this end run would do away with two handicaps hitherto barring the Allied advance—weather and terrain.

The SHINGLE plans called for three amphibious landings around Anzio to take place on 22 January. American and British troops, with follow-ups, would total about 110,000. Just before the landing the Fifth Army was to make a strong attack against the Gustav Line in the hope of breaking through the
Liri Valley and joining forces with the beachhead. Eighth Army was to make a demonstration in eastern Italy to prevent the enemy's drawing reinforcement from that sector.

The general tasks of the Allied air forces at Anzio were essentially the same as at Salerno, namely, the destruction of as much of the enemy's air force as possible; the disruption of enemy supply lines to the battle area by attacks on communications targets; this time in central and northern Italy; the provision of air protection for the assault convoys, the assault, and subsequent operations; and assistance to ground operations by air attacks.

Since AVALANCHE important changes had been made in the organization of the air forces in the Mediterranean. In order to supplement and strengthen the heavy bomber effort from England the Fifteenth Air Force had been created as of 1 November 1943. The creation of the Fifteenth as a Strategic Air Force meant that henceforth the Twelfth would in effect be a tactical air force, and the heavy bombers of the Twelfth served as a nucleus from which the Fifteenth was built. The Fifteenth was to be employed primarily against targets as directed by CCS, but in the event of a tactical emergency the theater commander was authorized to use any part of the Fifteenth for purposes other than its primary mission. On 10th December 1943, Mediterranean Air Command was consolidated with NAAF headquarters to form the Mediterranean Allied Air Forces. Under the new arrangement NAAF would direct operations through a single combined operational staff to assure real unity in planning and execution by the AAF and RAF elements.

The Allied bombing program for SINGE fell into three phases. During the preparatory phase (1 to 14 January), railway communications in central Italy were to be disrupted in order to limit the enemy's supply and reinforcement of the forward areas. Operations in support of a cover plan were to be
carried out also. These were to consist of attacks on northern Italian targets to simulate a landing against a point north of Rome. During the second phase (15 to 21 January), an all-out effort was to be made to isolate the battlefield. In the third phase, which extended from D-day onward, isolation of the battlefield was to be continued and close support was to be furnished the ground troops.

The bombing in preparation for SHINGLE was inaugurated on 2 January with a series of attacks that had as their primary aim the furtherance of the cover plan. Seventy B-26's attacked railways and bridges east of Nice, while fifty B-17's bombed transportation targets in the Turin area. A-36's of the 12th Air Support Command raked over the docks at Civitavecchia. In addition to the air force activity, landing craft and troops were rather ostentatiously gathered in the Sardinia and Corsica areas to foster the belief that an Allied landing was imminent north of Rome, with Civitavecchia as the most likely point of attack. During the next ten days of the first phase medium bombers of the Tactical Bomber Force concentrated on the central Italian railway system. Attacks against enemy airfields were on a limited scale. Operations were hampered by weather, but there was no need for an all-out blitz, for estimates of the enemy's air strength credited him with only about 550 operational aircraft scattered from southern France to Crete. Altogether MAF flew nearly 13,000 sorties in the first phase of SHINGLE.

During the second phase, the mission of the air forces was to cut the supply lines to the battle area in order to prevent counter attacks. To achieve destruction in depth a detailed plan was worked out by the Tactical and Strategic air forces. Bombers of Strategic were to begin with targets far to the north, while Tactical would operate as far north as Florence. As
D-day approached, both would move south, with strategic concentrating in the Florence, Pisa, Leghorn and Arezzo areas and Tactical working north of Rome as far as Perugia. To prevent repairs night bombers would be used. In accordance with this plan, B-17's of the Fifteenth Air Force flew around 600 sorties and medium bombers of the Tactical Air Force flew over 800 sorties against transportation targets in the period 16 to 22 January. As a rule, the B-25's, equipped with the Norden bomb sight, concentrated on railway bridges, while B-25's were briefed to attack choke points and marshalling yards.

A high degree of success attended the efforts to isolate the battlefield. It should be pointed out, however, that in an area as large as Italy and as well controlled by a strong enemy force it would be unreasonable to expect a permanent and total isolation by air power alone. But on each of the four first priority railway lines leading into the Anzio area there was at least one point of interdiction. The air planners had set up nine points of primary importance in the Italian transportation system—five bridges and four marshalling yards. By D-day the air forces knocked out four of the bridges, had made one of the marshalling yards unserviceable, and had damaged the others. The beaches around Anzio were not isolated in the same sense that an oasis in the middle of the Sahara desert is isolated, but they lay open to an invader provided he got there quickly and with sufficient strength.

The Assault Period, 22 January – 14 February

The assault convoys began their journey from Naples before dawn on 21 January. Fighter protection was the responsibility of the Coastal Air Force until the convoys reached Ponziene Island. From that point to the landing area the XII Air Support Command took over. The convoys proceeded entirely unmolested by the OAF. The pre-invasion attacks on the enemy's long-
range reconnaissance base at Anzio and the breakdown of the German radar system deprived the enemy of any foreknowledge of the invasion.

Disembarkation began at 0200 on the 22d. British troops, comprising an infantry division and supporting artillery and tanks landed north of Anzio, and an American Corps consisting of infantry, Rangers, artillery, tanks and other units cut shore to the southeast of Anzio. Complete tactical surprise was achieved, and only token resistance was encountered for several hours. Thus favored, troops and supplies poured ashore and by nightfall the ports of Anzio and Nettuno were in Allied hands.

Before the end of D-day, however, the GAF did what it could to hinder unloading. Enemy fighters made a tardy appearance about mid-morning and carried out about 50 sorties before the end of the day. But the FAA fighter patrol scheme prevented the Luftwaffe from seriously interfering with the landings. Patrols over the beachhead and convoy area consisted of four Spitfires at 20,000 to 25,000 feet, twelve Spitfires at 16,000 to 18,000 feet (eight over the beachhead and four over the convoy area), and sixteen P-40's at 2,000 feet (half over the beachhead and half over the convoy area). Sentries of enemy aircraft were given to the patrolling fighters from a control ship. Interception was then carried out visually. During D-day XII Air Support Command's fighters intercepted six enemy fighter-bomber missions and destroyed seven planes and damaged seven other for the loss of three fighters. RAF Spitfires provided spotting of gun fire for the Navy, and U.S. P-51's spotted for Army artillery. As men and supplies were being unloaded, Allied medium bombers and fighter-bombers attacked road junctions behind the beachhead, while the heavies attacked road and railways in the Florence and Rome areas and in the Liri Valley. These operations were intended to support not only
the amphibious assault but also the offensive on the main Fifth Army front.

In all, more than 1,200 sorties were flown by "VAP in support of D-day
g operations.

On D plus 1 and 2 the same scheme of defensive patrols was used as on
D-day. The high degree of air superiority made it possible to evolve a
pattern of operations that made the fighters a triple threat. Each patrol
flew to the beachhead a few minutes before its patrolling period began and
dropped bombs on suitable targets under cover of the patrol it was relieving.
After completing their patrol assignment the fighters would strafe enemy
vehicles or other targets, depending on their supply of ammunition.

With no formidable opposition either on the ground or in the air, Allied
ground troops occupied a beachhead seven miles deep and 15 miles long within
three days. From this position they might have driven inland and seized their
objective, the high ground around Colli Lamiali, but things were not going
well on the main Fifth Army front. In ten days of bloody battle the Fifth
Army had not been able to break through the Gustav Line, and there was little
hope of an early junction with the forces put ashore at Anzio. Furthermore,
the enemy was now bringing reinforcements to bear against the beachhead. And
the Anzio forces pushed far inland they might have been cut off from supplies
and equipment. It seemed better to consolidate positions within the beach-
head. By 2 February the enemy's forces in the assault area probably exceeded
15 divisions. Against such a force the outnumbered troops in the beach-
had were unable to take the offensive.

During the early days of Anzio the enemy air forces made fairly regular
though not highly successful attacks against shipping and troops in the beach-
head with 50 or 60 planes. Then suddenly on 29 January 110 enemy planes
attacked. This was the heaviest enemy air attack since the landings in Sicily in July 1943. It was made possible by the transfer of two JU 88 groups from Greece and Crete and by the return of a number of bombers that had been moved out of Italy in December and early January. Air reconnaissance revealed about 170 enemy fighters and perhaps 200 long-range bombers in northeast Italy, most of them located on fields in the Udine area.

NAAF accordingly planned a series of counter measures. On 30 January, the day after the big enemy raid, the Fifteenth Air Force carried out an attack that showed real ingenuity. A force of 200 B-17's and B-24's took off and flew at normal altitudes so as to be plotted by enemy radar. After the bombers had left, 60 P-47's went out over the Adriatic and flew very low so as to escape being plotted on the radar screens. When they overtook the bombers, they climbed high and headed for the target area. Arriving 15 minutes ahead of the bombers they caught the enemy's fighters in the act taking off and assembling for combat. Having flushed their game, the P-47's moved in for the kill. Thirty-six enemy fighters were shot down and six were probably destroyed in the air. The bombers then came and almost without opposition dropped 29,000 fragmentation bombs on the airfields. Photos taken during and after the attack indicated 77 aircraft destroyed or damaged on the ground. The enemy aircraft shot down by the bombers and escorting P-38's brought the total destruction to about 140 enemy planes. More aircraft were destroyed and further damages were done in a follow-up raid on 31 January. In addition to the heavy attacks in the Udine area, Strategic Air Force also struck at enemy airfields at Lavarno and Aviano in Italy and Klagenfurt in western Austria. Following these counter air force operations the enemy's air activity was on a reduced scale although small numbers of his planes continued to strike at
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attack assembly areas, troop concentrations, and tanks. Heavy bombers, as in the critical days at Salerno, were employed in all-out direct support. They directed their efforts at the communications lines feeding the Rome area.

General Clark, who was highly critical of certain phases of air operations in the Mediterranean, said that "reports from the beachhead showed that the men had been vastly encouraged by ... that concentration of close support." At the end of the first day the enemy had made only slight gains.

The Germans made a night attack on the 16th and then on the 17th unleashed the full fury of their assault. By mid-morning the Allied troops were fighting desperately to hold the last line, the original D-day beachhead about seven miles from the water. Commanders went among the front-line troops exhorting them not to give an inch. Coming to the aid of the hard-pressed infantry the air forces rained death and destruction on the enemy. Over 200 aircrafts of all types dropped almost 1,000 tons of bombs on front line positions. This represented the greatest concentration of air power in direct support of a ground action in a single day up to that time. The heavies concentrated on road junctions; the light and medium bombers hit command posts, courts, gun emplacements and assembly areas. Fighters flew the usual beachhead patrols. Interrogation of enemy prisoners revealed that the close support operations had a very adverse affect on the morale of enemy troops who had been led to believe that they enjoyed air superiority. During the night the Wellingsons kept up the attack on enemy-held towns and roads radiating from the bridgehead.

Fighting continued desperately on 18 February. At several points a breakthrough seemed imminent and in some cases there was hand to hand fighting. The bitter struggle was fought out under an overcast sky that prevented a repetition of air support on the scale of the previous day. Medium and heavy
bombers were prevented by weather from taking off, but light bombers and fighter-bombers flying 144 sorties gave effective support against enemy tanks and infantry. The full weight of the superior Allied artillery was brought to the aid of the infantry also. The heaviest onslaught came late in the day, but the best efforts of the enemy were not good enough. In the evening the fighting began to slacken.

During the temporary lull in the fighting, VI Corps troops reestablished a line of defense and restored communications between units. The enemy made one more strenuous effort on the 18th, but again the Allied line held. Bad weather again prevented the heavy bombers from making their presence felt in the beachhead, but nearly a hundred mediums dropped a heavy concentration of 20-13 fragmentation bombs on enemy troops and supply dumps. Light bombers and fighter-bombers maintained a continual attack against troops concentrations, tanks, vehicles, and strong points. By the evening of the 19th it had become apparent that VI Corps had broken the back of the attack Hitler ordered.

The attempt to erase the Anzio beachhead failed despite the fact that the German drive had started with many advantages in its favor. The Germans had nearly 10 divisions to the Allies' five; their troops were fresher and they held better positions. From the areas around the beachhead they were able to look down the throats of Allied troops and to subject them to merciless artillery fire. The congested beachhead presented an excellent target for enemy bombers. Yet with all these advantages the Germans could not win. The reasons were several: Allied superiority in artillery and supremacy in airpower, the inability of the enemy to employ his tanks in masses, the breakdown in enemy morale, and, most important of all, ground troops that refused to give up.

In the long run the Anzio operation paid off handsomely, but before results
could be achieved the force had to be built up to more than six divisions.

In the short run no primary objectives were gained, and the Fifth Army was now faced with stalemate on two fronts instead of one. In addition to its commitment to a front extending from sea to sea across the Italian peninsula, MAAF was committed also to the defense of troops and supplies concentrated in a narrow, exposed beachhead.

In undertaking the Anzio landing, with what was recognized as an inadequate force the Allied commanders relied heavily—too heavily—on air superiority to see them through. Apparently they did not comprehend—or chose to ignore—the limitations of air power. The fact that bad weather is capable of retarding or altogether stopping air operations was not taken into account sufficiently.

Furthermore, air power was not always employed to its maximum advantage. General Arnold pointed out, for example, that the air forces did not always concentrate their available air power so as to hit selected areas with sustained mass attacks. Night operations, which are necessary for systematic and lasting isolation of the battlefield, should have been employed on a greater scale.

This was one of the major lessons of Anzio. An effective isolation of the battle area cannot be achieved unless lines of communication and troops and supply movements are attacked around the clock. Also, any rupture in the enemy's defenses achieved by large scale air support must be followed up and exploited immediately by the ground forces. There is an old Army doctrine that a demolition to be effective must be defended. This would apply to demolitions by air forces as well as artillery.

On the positive side, it should be recognized that the landing at Anzio was possible only because the Allies possessed superiority in the air. The air forces made it possible for the Allies to land without serious interference.

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Chapter VI

THE CROSS-CHANNEL INVASION: PRELIMINATION

Operation SHOULDER may be considered the last major commitment to the policy of encirclement. After the transfer of General Eisenhower to England and the establishment of Supreme Headquarters Allied Expeditionary Force (SHAPE) in January 1944, there could be no doubt that the American strategy of the approach direct held the upper hand; henceforth OVERLORD was to have unquestioned priority. Italy of course remained a heavy commitment and another large amphibious invasion was to be mounted from the Mediterranean. But the offensive to Rome and beyond was authorized mainly for the purpose of assuring the success of OVERLORD and the landing in Southern France was considered an important but subsidiary phase of the main landing in Normandy. With operation OVERLORD the Americans finally reached the strategic goal toward which they had been striving since the beginning of the war.

A necessary preliminary to the cross-channel invasion, as for all amphibious operations, was the establishment of air superiority. In a broad sense all the strategic bombing carried out by the RAF and AAF from bases in the United Kingdom may be considered as contributing to this end. Until 1944, however, the strategic bombing was carried out with the broad general objective of dislocating the German industrial system. It was not until 13 February 1944 that the CCS issued a directive that shifted the emphasis to the specific objective of destroying the German Air Force by all means available.

Meanwhile, in November 1943, the Fifteenth Air Force had been created to carry out strategic bombardment from bases in Italy. To coordinate the operations of the Eighth and Fifteenth Air Forces the U.S. Strategic Air Force
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proper employment of strategic air forces in preparation for OVERLORD. There was general agreement that there would be a program of bombing transportation targets to prevent the moving of reinforcements into the battle area and to isolate the battlefield. The disagreement came over the method to be employed. The program laid down by AAF and advocated by Leigh-Mallory and Air Chief Marshal Tedder, Deputy Supreme Allied Commander, called for a long term program of attrition by attacks on rail centers in French and Belgian towns which would destroy marshalling yards, stations, repair shops, locomotives, rolling stock, etc. This plan was opposed by General Spaatz, Commanding General, USSTAF, and Air Chief Marshal Harris, of RAF Bomber Command, who advocated interdiction, that is, line cutting, strafing, bridge breaking, and the destruction of a few focal points. Such a program would be carried out immediately before the invasion and in the meantime the heavy bombers could be profitably employed against other than transportation targets. On 5 March Spaatz submitted to General Eisenhower a plan calling for attacks against the enemy's oil and rubber industries. Spaatz felt that the bombing of these two vital industries would weaken the whole German economy and would so disrupt troop movements that the enemy might give up altogether. The battle of interdiction vs. attrition raged through most of March. The divided counsels did not run along national lines but criss-crossed between them.

Time was growing short and a decision had to be made. The matter was finally brought to a head at a conference presided over by General Eisenhower on 25 March. Arguments on all sides of the question were aired. General Eisenhower drove to the heart of the matter by pointing out that the first five or six weeks of OVERLORD would be the most critical. "The greatest contribution that the air forces could make," he said, "was that they should hinder enemy
COMMAND AND CONTROL, OPERATIONS OVERLORD

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COMMANDER
U.S. STRATEGIC AIR FORCE
COMMANDER
RAF BOMBER COMMAND

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COMBINED OPERATIONS
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AIR COVER IN
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21ST ARMY GROUP
OPERATIONS

AIR REPUBLICATIVE

AIR SUPPORT
PARTIES

FIGHTERS
ANSWERING CALLS
FOR IMMEDIATE
SUPPORT

SOURCE: AIR OPERATIONS BRIEFS, TACTICAL NOTES
COMPILED BY THE ARMY AIR FORCES BOARD,
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the Prime Minister and the British cabinet never approved the bombing of railway centers but they did cease active opposition.

On 14 April General Eisenhower took over command of the strategic air forces in support of OVERLORD. The directive he issued three days later called for the destruction and disruption of the enemy's rail communications, "particularly those affecting the enemy's movements toward the OVERLORD lodgment area."

Main Features of the OVERLORD Air Plan

While the oil-transportation controversy was raging, the air plans for OVERLORD were being prepared. The overall air plan issued 23 April called in general for the attainment and maintenance of an air situation in which the GAF would be incapable of interfering with the Allied landings. In accordance with the familiar pattern developed in the Mediterranean theater the plan made provision for a preliminary phase, a preparatory phase, and an assault phase. In the first phase, which extended from D minus 50 to D minus 30, counter-air force operations and reconnaissance were to receive the main emphasis. In the second phase a bombing program was to be carried out with the following priorities: (1) the GAF, (2) strategic railway centers, (3) selected coastal batteries, and (4) airfields within 130 mile radius of Caen. During the assault phase the missions of the air forces would consist of protection for the convoys, dropping of paratroops, protection of the beaches and support of ground troops. In the post-assault phase the main tasks of the air forces were to delay the movement of enemy reinforcements into the invasion area, to support the ground forces, and to provide air transport.

After they had been furnished the overall air plan the various components of AAF worked out the details of their individual missions. Some of the
heaviest responsibilities in O.T.U. fell upon the U.S. Ninth Air Force which published its plan on 26 April. Some idea of the size and complexity of the whole operation may be gained from the fact that the battle plan of the largest tactical air force ever to operate as a unit contained 1,300 pages of legal size paper and included over 100 maps and charts.

During the preliminary phase, IX Bomber Command would devote its attention to training and to attacking railway centers, road-bomb installations, airfields and coastal batteries. These tasks would be continued through the preparatory phase and the additional mission of neutralizing airfields within 130 miles of Osen and selected radar stations would also be assumed. The IX Fighter Command had the task of providing escort for bombers, performing reconnaissance, and carrying out offensive sweeps over France. Continuous daylight control over the convoys was to be provided by six groups of P-38's, two from the Ninth and four from the Eighth Air Force. During the assault phase five groups of P-47's would fly high cover over the beaches. Two P-38 groups and four P-47 groups would bomb enemy gun batteries beginning about D-hour. Five fighter groups would be held in readiness as a reserve fighting striking force.

The heavy bombers of the Eighth Air Force and RAF Bomber Command had important assignments in the plans for OVERLORD. After long debate it had been decided that the heavies could best contribute to the success of OVERLORD by extensive railroad bombardment program. RAF Bomber Command assumed a large share of the transportation campaign. Beginning D minus 4 the Eighth Air Force was to continue attacks against transportation and airfield targets in northern France and was to institute a series of blows against coastal defenses, concentrating on those in the Pas de Calais, in furtherance of the Cover plan.
to sustain landings in that area. Conservation of bomber strength for D-day was to be effected by the employment of only 20 per cent of the available strength each day.

A highly controversial feature of the OVERLORD air plans called for saturation bombing of the landing beaches. The air commanders doubted the efficacy of such an attack against casemated enemy batteries, strong points, and beach obstacles. The ground commanders, however, maintained that such an attack would have an adverse effect on enemy morale and would prevent the crews from manning their guns. Faced with these arguments the air forces agreed to carry out the attack. To avoid deep craters that would hinder the movement of troops and vehicles on the beaches 100-150 demolition and fragmentation bombs were to be used except for strong points and areas where craters would not impede the movement of ground forces. To provide a comfortable margin of safety for ground troops, final plans provided that bombings cease five minutes before touchdown if visual conditions prevailed, and 10 minutes if skies were overcast. This would allow a safety zone of about 1,000 yards.

In addition to its beach saturation mission on D-day, the heavy bombers of the Eighth were to carry out three other missions directed at the severance of communications lines between the beachhead defenders and reserve elements with targets consisting largely of road chokepoints around Caen and several small Normandy towns. Leigh-Mallory ordered these missions to hinder German military movements toward the invasion area. Spaatz criticized the plan for D-day employment of the heavies on the ground that it was too inflexible. It absorbed all resources available and left nothing to provide for changing battle conditions. The bombing of French towns Spaatz criticized as being not only inhuman but unlikely to have any appreciable on the battle. Leigh-
'Allardy, threatening to resign as air commander in chief of OVERLORD, had his way; Generals Spaatz and Doolittle, however, were allowed to drop leaflets on all French towns near the coast warning them of impending bombings.

Prior to D-day aircraft of the VIII Fighter Command were to engage in normal escort operations. On D-day four P-38 groups were to fly high cover with the Ninth Air Force. P-47's and P-51's were assigned missions in support of bomber operations consisting of constant air patrols to the front and flanks of the beachhead area. Strafing missions were assigned on completion of patrols. Target priorities for these strafing missions were rail transportation, road transportation, ammunition dumps, troop concentrations, and airfields. Another D-day commitment of the VIII Fighter Command was to protect RAF bombers and IX Troop Carrier Command transports withdrawing from France.

All invasion plans rested on the assumption that the Allies enjoyed overwhelping air superiority. Although pre-invasion estimates underrated the Nazi air strength, this assumption was fundamentally sound. On the eve of the invasion the combined strength AAF and RAF in the United Kingdom was over 10,000 combat aircraft, exclusive of transport and troop carrier planes. Roughly, the breakdown was as follows: 3,500 heavy bombers, 1,500 medium, light, and torpedo bombers, and 5,000 fighters. Records discovered after the invasion indicated that the Germans had over 3,000 fighters and bombers available for combat.

Allied air forces allotted for direct participation in OVERLORD were under the operational command of the Air Commander-in-Chief, AAF, who coordinated strategic and tactical operations under the general direction of the Supreme Allied Commander. Control of the tactical air forces was exercised by Commander Advanced Allied Expeditionary Air Force through the Combined Operations Room and the Combined Control Center, located at Uxbridge, England. The Combined
Control Center controlled all fighter operations and issued instructions for fighter and bomber operations as directed by the Combined Operations Room. Advanced AEAF dealt directly with the overall ground commander, Field Marshal Montgomery, whose 21 Army Group established at Uxbridge an element to relay ground force requests and to provide information helpful in the development of effective air-ground coordination.

Fighter cover in shipping lanes was controlled by three fighter direction tenders under the orders of the Combined Control Center. One tender operated in shipping lanes in conjunction with a shore station in England. The other two controlled beach air cover, one being in each task force area. This latter function passed to control centers on the continent once they were set up.

Air support parties were to land with each regimental combat team. By means of VHF and HF radio sets they transmitted their requests to Combined Control center through the 21st Army Group Operations Room located at Uxbridge.

This system of control necessarily involved a highly complicated communications and signals set-up. The overall air plan provided for ship-to-shore, point to point, and ground to air signals. The derivative plans of lower headquarters contained signal annexes bulky with bewildering detail. An air representative was to be aboard each of the five headquarters ships scheduled to accompany the initial landing force to advise assault commanders and to direct Allied aircraft to targets in the Channel or on the beaches. Requests originating in the Task and Assault Force Flagships were given to the Air Representative embarked and were transmitted directly to Uxbridge; those originating in the Assault Force Flagships were monitored by the Task Force Flagship. All requests were filtered in the 21st Army Group Operations Room.
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large numbers especially after the fighters began to drop belly tanks on
stalled trains and to set them afire by strafing.

In May also the air forces undertook what proved to be a brilliantly
successful campaign against bridges. In the beginning there was some doubt
concerning the feasibility of attacking bridges. These doubts were swept
aside by an experimental attack on 7 May. Using 1,000-lb. bombs eight P-47's
of the Ninth Air Force demolished a railway crossing over the Seine near Vernon.
An extensive interdiction program was then prepared which called for the cutting
of all bridges on the Seine to Montes and on the Loire to Blois and at critical
points in the so-called Paris-Orleans gap stretching between the two rivers.
Considerations of security made it necessary to reserve the Loire bridges
until D-Day. The bridges over the Seine led to the Pas-de-Calais as well as
Normandy.

The campaign against the Seine bridges opened on 26 May. It soon became
clear that in bridge breaking the B-24 was the choice weapon. The best com-
bination was something like this: B-24's dropping 2,000-lb. bombs, P-47's
diving with 500-lb. bombs, and Typhoons firing rocket projectiles. By
D-day a line of interdiction along the Seine had been effectively established.
To keep the bridges below Paris impassable Marauders, Thunderbolts, Lightnings,
and Typhoons bombed round-the-clock.

By D-day the Allied air forces had dropped a total of 76,200 tons of bombs
on transportation targets: 71,000 on rail centers, 4,400 on bridges, and 800
on own lines. That the railway camps in seriously interfered with the enemy's
ability to move in reinforcements there can be no doubt. Between 1 March and
6 June rail traffic declined 60 per cent. In the Region Nord, the area most
heavily bombed, three-fourths of the normal traffic was knocked off the rails.
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In general, those who had favored interdiction all along ascribed the favorable results of the campaign to that form of bombing, while the advocates of attrition were certain that rail center attacks had accomplished the job. Interrogation of German commanders threw little light on the subject for they held opinions quite as varied as the Allied commanders. It is possible to maintain, of course, that since the object of the campaign was successfully achieved it makes no difference which method was the more effective. It should be borne in mind, however, that the Allies could afford the luxury of experimenting with both methods because they enjoyed overwhelming air superiority. In future operations such a wide margin of air strength may not be available and a choice of methods may have to be made. A careful weighing of the evidence seems to declare unequivocally in favor of interdiction for by that method more decisive results were achieved with greater economy of effort.

Neutrallization of German Air Bases

The general weakening of German air power and the campaign to reduce the German fighter force had been carried out under the POINTBLANK and ARMAMENT programs and had reached a climax early in the spring of 1944. The successful execution of these programs did not mean, of course, the total vanquishment of the GAP. A month or so before the invasion the Allies estimated that the Germans still had around 900 aircraft, including 450 bombers that might be used against the invaders. No target is more vulnerable to an air attack than a large amphibious force and even a depleted air force may be capable of inflicting heavy damage on such a target. Although the Germans had moved most of the aircraft from the 100 fields within a 350 mile radius of the landing beaches, these fields could be utilized on an emergency basis in an attempt to stop an amphibious assault. Furthermore, experience had shown that the
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Force against vital German industries which prevented the Germans from shifting their airpower from the industrial heart of Germany to the invasion beaches.

**Attacks on Coastal Defenses**

One of the things that gave the Allied leaders most anxiety in the planning of OVERLORD was the much vaunted Atlantic Wall. As they were constructing the hideous maze of shore defenses the Germans developed the habit, as one writer has said, of "pouring a new rumor of immobility with each bucket of concrete." The Allied planners were not taken in by these rumors but the Atlantic Wall could not be discounted entirely and every precaution had to be taken to reduce its effectiveness.

Of particular concern to the Allies were the coastal batteries along the Atlantic Wall, each of which had two to six guns ranging in caliber from 105mm to 406mm. The batteries were camouflaged, well-located, and encased, so it was believed, with steel and concrete. Nothing short of a direct hit could neutralize such a weapon. In view of these circumstances OVERLORD plans until April 1944 did not call for air force action until D-Day at which time it was hoped that by bringing a continuous heavy volume of air and naval fire to bear the enemy defenses could be rendered inoperable during the critical stage of the assault. During the spring of 1944, however, both the Army and Navy began to bring pressure on the air forces to attempt to neutralize the coast batteries before D-Day. The other services pointed out that bad weather might prevent or at least hinder the last minute saturation of gun positions. While, in April, it was discovered the height of the major coastal batteries in the invasion area had not been evacuated and their lids had not yet been lifted, the air forces agreed to try to knock them out.

In the counter-battery campaign, as in all other pre-invasion operations,
security was a major concern. In order not to show special interest in the
Normandy batteries, two targets outside the invasion area were chosen for every
one inside it.

The counter-battery campaign was opened on 13 April by medium bombers
(A-20's and B-26's) of the Ninth Air Force and Second Tactical Air Force.
During April the 8 uncompleted batteries inside plus 16 uncompleted ones out-
side the invasion area were attacked. In May the mediums were joined by the
heavies of TAF Bomber Command and the Eighth Air Force. Attacks were continued
with a crescendo up to D-Day; on the day before the invasion 5,904 tons of bombs
and 465 sixty-pound rocket projectiles were unloaded on coastal batteries in
the invasion area.

In addition to the pre-invasion bombing the coastal batteries were sub-
jected to intense air and naval bombardment on and after D-Day. It became
difficult therefore to separate for purposes of assessment the damage of pre-
invasion from the damage of the assault and follow-up periods. It appears,
however, that relatively few gun emplacements were destroyed by the pre-invasion
attacks. But not to be overlooked were the effects of unbalancing and dislocation
guns and the demoralization of crews. Here, as in all phases of the war, the
cumulative effects of air superiority must be kept in mind. The Atlantic Wall
was breached not only because of bombs aimed directly at it but also because
the fortification were far from complete on D-Day. A shortage of materials,
due both to production and transportation difficulties, hampered all fortifi-
cation work. A shortage of cement, which began to appear during the winter,
was greatly aggravated by the transportation capacity.

Another important pre-invasion task of the air forces was to neutralize
the very intricate and highly efficient system of enemy radar coverage. The
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commitments and with the exception of the famous low level attack on Flosst in August 1943, were unable to launch an extensive campaign. It will be recalled that General Eisenhower's decision on 25-26 March in favor of transportation did not entirely rule out an oil campaign, provided favorable opportunities presented themselves. A little imagination and latitudinarian interpretation of directives could easily provide such opportunities. General Eisenhower's directive of 17 April to the Strategic Air Forces gave first priority to the destruction of the GAF. Did not the GAF use oil products and would not attacks on oil targets force the GAF to come up and fight? General Spaatz contended all along they would. At any rate it was worth trying. Besides the synthetic refineries presented a good target for they were grouped together in central Germany.

With General Eisenhower's verbal consent the oil campaign was opened on 12 May when more than 800 heavies bombed synthetic oil plants at Wickau, Harseby-Leuna, Gau, Lutzendorf and other cities. Severe damage was inflicted on the refineries and, as had been hoped, the GAF reacted vigorously. OVERLORD commitments prevented further attacks until 20 May when another series of attacks was made. Meanwhile the Fifteenth Air Force continued its efforts against the Flosst refineries. These excursions deep into enemy territory discouraged the transfer of aircraft toward the invasion area and inflicted further attrition on the enemy air force. Entirely aside from its merits as a counter-air force measure, the oil campaign had immediate results on the fuel situation in Germany. Synthetic oil production for June was only half of the March output and by August all the German forces were hampered by shortages of fuel and lubricants. The pre-invasion oil attacks were only a beginning but they set in motion a campaign that, according to Reichminister Albert Sparr, brought about the decision of the war.
Air Reconnaissance

An important task of the air forces in any amphibious invasion is to provide air reconnaissance. Probably in no operation in history did the air forces do a more thorough job in this respect than in OVERLORD. Air reconnaissance was of two types: tactical and photographic. The Ninth Air Force and Second Tactical Air Force carried out a broad pattern of tactical reconnaissance both as part of the deception plan and to gather information concerning troop movements, activity in repairing bridges and railroad tracks, and the like. A total of 400 visual reconnaissance sorties were flown by the Ninth Air Force between 15 May and D-day, in addition to 140 weather reconnaissance sorties.

Although they already had mosaics of the entire coast line of western Europe and photos of the Normandy and Pas-de-Calais beaches from 3,500 feet, the invasion planners required still more detailed information. Reconnaissance planes were therefore sent out to photograph the proposed assault beaches from various distances and at zero altitudes so that the unit commanders would know what their objectives looked like from several miles out, at 1,500 yards, and from the shore line. The Ninth Air Force Photographic Group also made mosaics of the landing and drop zones for the IX Troop Carrier Command and the Airborne Division. A particularly hazardous mission was the photographing from low altitudes of the shallow water and beach obstacles so that the exact nature of such beach barriers might be known. The information thus obtained was of vital importance in showing the assault commanders which of the obstacles were wood, concrete, or steel, whether mines were attached, and where the belts were the thickest.

In all the preparatory air operations security had always to be provided
for. It is very remarkable that the transportation program, the bombing of airfields and beach defenses, and the pre-invasion reconnaissance operations were all carried out without indicating to the enemy the point of attack. The air forces had prepared the way and the assault forces were to achieve tactical surprise in the largest amphibious invasion in history.

Operations During the Assault Period

The original D-day was 5 June but owing to unfavorable weather it was postponed to 6 June. H-hour for the seaborne landings on the American beaches, UTAH and OMAHA, was 0600 while on the British beaches the time for touchdown varied from 0700 to 0730.

The first important D-day commitment of the air forces was in connection with the troop carrier operations. The 82d and 101st Airborne Divisions were dropped on the Cotentin Peninsula on the night of D minus 1. Reinforcements were flown in on D-day and on the morning of D plus 1. A second air force commitment involved the drenching of coastal batteries and shore defenses in the early morning preceding H-hour. The Eighth Air Force, which was to bomb targets chiefly on the OMAHA and British beaches and chokepoints in Caen, dispatched 1361 heavy bombers between 0155 and 0529 hours. Weather forecasts indicated that instrument bombing would have to be employed. A complicated pre-dawn assembly, which involved the formation of 225 flights of six aircraft each, was successfully executed by all flights except three which did not make contact with the E2X leader. On leaving the English coast the units adopted six-squadron abreast formations. Of the 1,198 bombers dispatched against beach installations, 1,015 attacked the assigned targets. At Caen, 47 of the 163 aircraft dispatched carried out their attacks as planned. The principal reasons for failure of units to attack as planned were the inability
to locate F2X leaders, poor definition on the Pathfinder scope, and absence of assigned Pathfinder aircraft as in the case of the 3d Bomb Division units assigned to the Caen targets. On the whole the bombing runs were well executed and all attacks were well within the allotted period. A total of 2,944 tons of bombs were dropped with no interference from the GAF and with the loss of only one aircraft to enemy around defenses.

Medium bombers of IX Bomber Command, assigned targets in the UTAH area, took off between 0343 and 0500 hours. Flying in boxes of 18 planes, the 269 aircraft dropped about 550 tons. Owing to weather conditions the visual attacks on the seven defended localities in the UTAH area were made at unusual levels—between 3,500 and 7,000 feet. Fighter-bombers of the IX Fighter Command delivered their attacks between 0550 and 0638 hours. Coastal batteries at UTAH beach were hit by 33 aircraft dropping 47 tons while railway installations at Carentan were bombed by 129 planes dropping 83 tons.

Evaluation of the results of D-day bombing of coastal defenses was extremely difficult for several reasons. Because of cloud cover, strike photos were of limited value. Both naval and ground forces poured a tremendous amount of artillery fire into the assault on and after D-day. Later, cleaning-up operations further obscured the picture. Nevertheless, one or two generalizations can be made. In these pre-H-hour attacks the danger of shorts was great and in the interest of safety Pathfinder bombardiers were instructed to delay up to 30 seconds after the release point showed on their scopes before dropping. The safety precaution resulted in some cases in the main concentration of bombs falling too far inland. On UTAH beach only an estimated 43 per cent of the bombs fell within 300 feet of their targets. The beachings from OMAHA east were left untouched. The heavy casualties suffered at OMAHA later caused severe criticism.
of the air forces but the necessity for taking precautions against short bombing is the obvious explanation. It is believed that no guns in emplacements were destroyed on D-day—a result predicted by air forces. The main contribution made by the last minute bombing of coastal defenses was the demoralization of enemy troops and the disruption of signal and transport communications, which hindered the deployment of immediate reserves.

While the early dawn attacks were being made the largest invasion fleet ever assembled—more than 4,000 ships, not counting small craft—was taking its way to the assault beaches. Continuous cover was furnished exactly as planned. P-38’s from the Eighth and Ninth Air Forces protected the troop-laden ships as they moved across the rough Channel. As the troops spilled ashore the RAF furnished low and the IX Fighter Command furnished high cover over the beaches. Earliest of all the enemy planes were only one striking distance of the convoys. Three enemy planes (FW-190’s) were sighted and driven off. In fact there was no enemy air action in the invasion area until nightfall when 22 enemy planes attacked shipping. This token effort caused no serious damage.

After the troops began pouring ashore, another task, direct support of the ground forces, was added to the duties of the air forces. As soon as the air support parties were functioning on the beaches requests began to be received at the combined control center at Uxbridge. Of thirteen requests received on D-day, five were refused because of unavailability of aircraft, weather, or the late hour but the remaining eight requests resulted in 11 missions. Three of these were armed reconnaissance along the roads leading from Coutances to Carentan, St. Lö, and La Haye du Futs. Railway targets and a highway were bombed. An urgent request for divebombing gun emplacements north of Isigny...
resulted in claims of hits in the target area. Other batteries shelling the
beaches from the vicinity were attacked. Scattered targets, including six
gun positions, were reported hit between Isigny and Bayeux. A single day's
experience with the control center at Unbridge showed that it was too compli-
cated and resulted in too long delays in fulfilling requests. The control plan
was accordingly revised so that air alert squadrons were placed at the disposal
of the air representative on board the Ancon, headquarters ship moored off
Omaha beach. Targets were reported to the Senior Air Representative by the Air
Support Party on shore, or determined by reconnaissance whose reports were
interpreted by the Ancon.

Throughout the whole of D-day both the Eighth and Ninth Air Forces were
tactical and both joined in an all out effort to get the ground troops ashore
and keep them there. In addition to the airborne operations, convoy and beach
patrol, last-minute softening-up operations, and direct support, the air forces
continued and intensified the interdiction program. Heavies of the Eighth Air
Force bombed chokepoints and bridges in the assault area while the mediums of
the Ninth Air Force attacked coastal batteries on both flanks of the invasion
area in addition to targeting targets. VIII Fighter Command executed its
three missions, FULL HOUSE, STUD, and ROYAL FLUSH, substantially as planned.
These operations were carried out in areas on the perimeter of the assault zone
with the purpose of preventing or delaying enemy movements. Aside from weather
flights, leaflet dropping, and reconnaissance, the Eighth and Ninth Air Forces
discharged 8,722 aircraft on D-day. Considering the size and importance of
the operation, losses were remarkably low—only 71 planes, mostly fighters,
to air combat and flak.

D-day served to emphasize what was well known anyway—that the Luftwaffe
was a sadly depleted force. Though alerted to the Allied invasion, it could put up no more than 250 sorties and most of these planes were forced to jettison their bombs and fight before arrival in the battle area. Not a single day-light attack was made against Allied forces in the Channel or on the beaches.

Close Support on the Beachheads

By the end of D-day the UTAH beachhead was reasonably secure. During its advance south to capture Carentan on the 12th and its push north to gain the ground on Quinéville ridge on the 14th, the VII Corps was supported by attacks on gun positions, roads, and near-by bridges. Heavy casualties were inflicted on fleeting targets and the commander of the German 77th Division was killed by rowing fighter-bombers while he struggled to direct the escape of his troops to the south. Attacks on road centers were devastating but of such little tactical importance that the enemy was led to wonder what their "deeper significance" might be. Considerable accuracy was achieved in attacks on defense installations but later examinations disclosed that not even 2,000 pound bombs materially damaged heavy cement structures.

It was at UTAH beach that air support was particularly important. In spite of strenuous efforts the V Corps had been able to penetrate only about a mile and half by the end of D-day. To speed his advance Maj. Gen. Leonard T. Gerow called for continuous fighter-bomber support to search out and attack enemy artillery firing on the beaches. Maj. Gen. Elwood Quesada, Commanding General, IX Tactical Air Command, who was on the far shore, telephoned his group commanders to inform them of the urgency of the situation. Since the V Corps front was highly fluid, pinpoint attacks were not feasible. A bomb line was accordingly drawn on the Aure River and IX Tactical Air Command was directed to provide continuous armed reconnaissance of the area Aure River-Soyeux-Airel.
in squadron strength from 0600 until 2230 hours on 7 June. In the action which followed specific targets were generally selected by squadron leaders; in only two cases did the headquarters ship direct attacks on specific targets. Enemy batteries held a high priority but armor and trucks on roads as well as troop concentrations received attention. Close support was continued, weather permitting, and by 12 June the V Corps had driven inland 15 to 20 miles and had effected a junction with VII Corps. On the 13th, V Corps was ordered to limit its offensive action to aggressive patrolling while VII Corps continued its offensive.

Air support in the beachhead was greatly facilitated by the establishment of control facilities on the continent. Air support operations had originally been directed by the Ninth Air Force Advance Headquarters at Uxbridge, subject only to such modifications as might be effected by the controller on board the Ancon. On 10 June the 70th Fighter-Bomber Wing, based on the continent, took over the control functions hitherto performed on shipboard. Beginning 18 June IX Tactical Air Command Advance Headquarters assumed the major responsibility for the direction of air support from the continent. IX Tactical Air Command filtered ground requests for assistance, ordered missions as it saw fit, and transmitted to Uxbridge only such requests as it could not meet with its own resources. These developments were made possible by the efficient work of the Ninth Air Force signal units in establishing the necessary communications equipment on the continent.

Another development which greatly facilitated tactical operations was the construction of airfields in Normandy. As in the case of previous landings, aviation engineers had hit the beaches immediately behind the assault troops. One emergency landing field was ready by the end of D-day and other, more
extensive installations, followed rapidly. By 19 June fighter-bomber groups were operating from Normandy airfields. This made the application of air power more timely and economical and permitted more prompt dissemination of orders and information. A five-minute flight would now carry a plane from flight to target and aircraft could operate from continental bases when weather prevented operations from the continent.

The capture of Cherbourg was a vital part of the invasion plan, and it was to be effected with the least delay to provide the main port of supply for the invading forces. VII Corps planned a direct attack on the city from the south. On 21 June the battle for Cherbourg reached a critical stage and General Collins made a request for a vast air support project, the air pulverization of an area of some 20 miles. The air commanders entertained grave doubts concerning the effectiveness of such a program but agreed to carry it out when ground force commanders explained that the purpose was not so much the direct preparation for the ground advance as demoralization of the enemy troops and disruption of communications. A plan was accordingly worked out by AAF, Second Tactical Air Force, and Ninth Air Force Advance Headquarters whereby fighter-bombers and medium bombers were to neutralize the enemy defenses by bombing and strafing from 300 yards to 1,000 yards followed by pin-point bombing from 1,000 to 1,200 yards from the bomb line which was marked by white smoke laid on by artillery.

H-hour was 1400 hours, 22 June. Ten squadrons of fighter-bombers from Second Tactical Air Force attacked from 1200 to 1300 hours. Twelve groups of fighter-bombers from the Ninth Air Force attacked from 1302 to 1355 hours. Three groups of fighter-bombers and eight groups of mediums attacked from 1400...
to 1455 hours. In a total of 713 sorties 629 tons of general purpose bombs were dropped. On the following day 213 sorties were flown and 311 tons of general purpose and five tons of fragmentation bombs were dropped. Results, so far as immediate tactical developments were concerned, justified air force misgivings. Only a small fraction of the area drenched by bombs had been taken after two days of ground fighting. Poor results were obtained in the attacks against Point du Hoc guarding the south approach to Cherbourg. Some of the outer walls and AA guns on top of the fort were destroyed but no damage was done to fixed gun positions. The ground forces generally agreed, however, that the main purposes of the saturation bombing before Cherbourg—disruption of enemy communications and morale—had been achieved. At any rate the air forces continued their close support and on 25 June units of VII Corps entered the city.

By 1 July American troops had cleared the Cotentin Peninsula and elsewhere the Allied beachheads had become a continuous strip of territory stretching along the Normandy coast to a firmly held position east of the River Orne. At one point, where the Allied spearhead had thrust out to Caumont, the beachhead was 20 miles deep. Besides Cherbourg and other towns in the Cotentin Peninsula, the Allies held Iziyry, Carentan, and Bayeux. Caen was still in German hands. The first critical phase was now definitely over and the fighting assumed the nature of a conventional land campaign conducted on a wide front.

**Isolation of the Battlefield**

One of the most important contributions made by the air forces to the success of OVERLORD was the isolation of the battlefield. In the discussion above it was pointed out that the Allied plan for sealing off the battlefield called for the attack of all bridges, viaducts and other critical points up
the Seine to Yvettes, up the Loire to Blois, and in the Gap between the two rivers. Since the bridges over the Seine led to the Pas-de-Calais as well as Normandy they could be, and were, neutralized. By D-day all rail and highway bridges from the environs of Paris to the sea had been rendered impassable to rail traffic. Despite the fact that two bridges were re-established, no traffic crossed the Seine from the north into the tactical area during the entire campaign with the exception of one train which crossed the re-established bridge early in August. 52

Immediately after the landings, with security no longer a consideration, selected points on the Loire were subjected to systematic attack. The importance of the bridges to the Germans is indicated by the following extract from the telephone log of the German Seventh Army: "The Loire bridges must be protected under all circumstances, since these bridges are of vital importance..." 53

By 15 June over 2,650 tons of bombs had been dropped, almost entirely by heavies, causing the destruction of 8 of 10 bridges in the Loire section. Only 14 trains got across the Loire in the week ending 16 June. In the Gap Section between the Seine and the Loire 17 cuts were achieved. A total of 482 trains crossed the Gap during the first week in April whereas during the week ending 16 June only four trains crossed. No traffic whatever moved across the Gap during the following three weeks. 54

Other targets related to the objectives of interdiction were also attacked. Rail center attacks were continued. In fact targets within and without the interdiction line increased in number after D-day and attacks were scheduled daily on the basis of intelligence reports recording rail activity. A total of 50,000 tons was dropped from D-day through 20 August when the shift in the military situation eliminated the need for such attacks. Making allowance for
repair and recovery it was estimated the rail center bombings alone effected a 57 per cent reduction in German traffic. Rail cutting also received emphasis after the assault--cuts within the line of interdiction being designed to prevent movement inside the theater of operations, those beyond it to prevent movement into it. Despite the resourcefulness of the enemy in making repairs during bad flying weather, the cuts caused traffic jams which offered juicy targets to Allied planes, including armed reconnaissances. In addition to rail transportation, high bridges, troop concentrations, motor columns, and traffic centers were also attacked as part of the interdiction program. Fervorous fighter-bombers would even hunt down individual vehicles. German staff cars resorted to the use of spotters fore and aft, to give warnings of the approach of Allied planes. All parts of the interdiction program were interwoven and its effects were widespread and pervasive.

Did the interdiction program achieve its tactical object which was to prevent the enemy from rushing supplies and reinforcements into the battle area? The evidence on this point is extensive and overwhelming and can only be summarized very briefly here. The war diary of the German Seventh Army recorded on 2-day that the deep and rapid penetrations could be ascribed to the "great superiority in the air and on the sea." On the 11th the diary recorded that "troop movements and all supply traffic by rail to the army and within the army sector must be considered as completely cut off." Similar statements are found throughout the battle of the beachhead. On 8 July Field Marshal Rommel stated that "the losses through hostile artillery and air attacks are such that, even on comparatively quiet days, our combat strength and our already diminished transport capacity decreased further. The superiority of the German infantryman will never come into play so long as the enemy air power..."
a constant flow of personnel, munitions and supplies into the beachhead.

Ground forces were able to dispense with the time and labor-consuming camouflage procedures. Of major importance was the fact that the morale of Allied troops was never jeopardized by the nerve-shattering ordeal of large scale air attacks. The reduced scale of air opposition also made it possible for the tactical air forces to devote the major portion of their effort to offensive operations.

Prior to the invasion of the continent there were considerable doubts in the minds of some that the second phase of air force doctrine, the isolation of the battlefield, could be accomplished on a large scale. The experience in Italy, particularly, led many to question the soundness, or feasibility, of this doctrine. OVERLORD dispelled all doubts on this score and the evidence is overwhelming that this phase of operations was outstandingly successful.

In the third phase of operations, direct cooperation with the ground forces, all the weight of the vast air power that had been built up in the United Kingdom was brought directly to bear to insure the success of this operation.
Chapter VII

The ambitious landings in Southern France on 15 August 1944 were the last in a long series of such operations in the Mediterranean. No basic changes in the employment of air power were introduced but refinements in technique were made and the many lessons learned in the Mediterranean and European theaters were applied to make this the most nearly perfect amphibious operation from the point of view of both planning and execution. In the account that follows no attempt is made at an exhaustive history of the operation. The aim rather is a brief analysis to show the essential features of amphibious operations as they were developed in the European-Mediterranean theater.

From the beginning, ANZIL (after August 1944, OTL) was thought of as an operation to insure the success of SHOURL. The directive issued to General Eisenhower in December 1943 stated that both operations would be carried out in May 1944. In February 1944, however, the CCS decided that the invasions could not be mounted simultaneously. There were a number of reasons for postponing ANZIL: the Allies had been unable to break the Italian stalemate during January and February; the Anzio landing, temporarily at least, had made matters worse instead of better; and there was the eternal shortage of landing craft. During the next few months there was a period of doubt and indecision during which the operation on a plan or a plan. In general it can be said that the Americans favored the operation. Basing their reasoning almost exclusively on military considerations, they felt simply that ANZIL was the quickest way to insure the success of SHOURL and to end the war. The
British, ever conscious of political considerations, but in mind post-war eventualities when they advocated an advance into the Balkans. During the first six months of 1944 the matter was argued back and forth between the American and British Chiefs of Staff and when they found it impossible to agree they tossed the question into the laps of the President and the Prime Minister. The President backed up General Eisenhower who strongly favored the operation and on 1 July the Prime Minister reluctantly gave his consent.

On 2 July the C-in-C directed General Sir Henry "Hilland Milson, Supreme Allied Commander Mediterranean (SACEUR) to make every effort to meet a target date of 15 August. Thus the final decision on SNALE came only one and a half months before it was to be launched.

Fortunately, however, planning was already well advanced. In fact, a rough outline plan had been issued by ATEI on 27 June. The larger purposes of the operation were to assist the Normandy attack by engaging German forces that might otherwise be used in Northern France; to capture a major port through which large-scale reinforcements could flow; to liberate France; and to join up with the cross-channel invasion forces for a decisive battle with the German armies of the west. The Seventh Army, which had made the assault on Sicily, was made responsible for carrying out these tasks. The operation was to be carried out in accordance with the principles of joint command. The Army, Navy, and Air Forces were co-equal and operated under the direction of the Theater Commander. The Naval Task Force Commander was to assume command of the entire seaborne expedition from the time of sailing until the ground force was firmly established ashore. The Ground Force Commander was to have command of all ground forces participating in the operation while the Air Commander in Chief was to name an Air Task Force Commander whose responsibility
would be to provide full air support for the operation. The commanders of the
forces involved were: Maj. Gen. Alexander W. Patch for the ground forces;
Vice Admiral Henry K. Hewitt for the naval task force, and Gen. Jordon S.
C. Saville in charge of the air task force.

The Army Invasion Plan provided for a triple daylight assault by the 33rd,
36th, and 45th Infantry Divisions (reinforced) of VII Corps, supported by the
1st French Armored Division (Combat Command). The landings were to commence
at 0800 hours on 15 August on beaches between Cap Cavaliere and Avary. The
area chosen for the landings could be covered by fighters based on Corfu,
it afforded good beaches, proper exits, and terrain suitable for the construc-
tion of fighter strips. The landings were to be preceded by an airborne landing
the object of which was to prevent the movement of enemy troops from the Le
Duy sector into the assault area.

The Western Naval Task Force, consisting of over 200 ships and craft
and over 1,200 ship borne landing craft, would carry the Seventh Army to the
beaches, contribute to the silencing of the shore batteries and exploit port
facilities to ensure troop maintenance. The Navy's Aircraft Carrier Force,
which had over 200 Seafires, Hellcats, and Helldivers, was to cooperate with the
land-based aviation by providing fighter protection, scout, and close
support missions. While in the assault area the carrier-based planes would
operate under control of VII Tactical Air Command.

In accordance with a pattern that had long since become standard, NAF's
Outline Air Plan issued 12 July outlined the basic tasks as neutralizing the
enemy air forces, protection of convoys and beaches, interdiction of enemy
movement into the battle area, and close support of the ground forces. To
these familiar tasks another was added, cooperation with the infantry. The
various air forces under NAF had their specific tasks. NAF was concerned
with a pre-invasion bombing program to be carried out in four phases.

Responsibility for the provision of air protection to shipping and beaches was divided between "MACF and XII Tactical Air Command. Coastal was to provide protection, day and night, for all assault and follow-up convoys to a point within 40 miles of the coast of southern France; XII TAC would take over north of that line. "MACF was also charged with the protection of embarkation ports, intruder missions, shipping reconnaissance east and west of Toulon, shadow strikes at Navy request, and defense of territory in the rear of the battle area.

Obviously the major burdens for the invasion would fall upon the Tactical Air Force. Maj. Gen. John H. Cannon, besides planning for the assault operations, had to reorganize his entire air force and occupy new bases. General Cannon decided to leave the "Desert Air Force to cooperate with the armies in Italy and to move XII TAC, an outfit consisting chiefly of fighters and fighter-bombers, to Corsica. Two medium bomber wings were to be held in readiness to assist either Desert Air Force or XII TAC as circumstances might require. XII TAC was to be responsible for day and night cover for the convoys and assault beaches, for air-sea rescue in the assault area, and for support of Strategic Air Force between 0550 and 0730 hours on D-day, with attacks at maximum strength on active gun positions.

Plans for control of aircraft conformed in general to methods followed in the invasions of Sicily and Italy. Provision was made for a Headquarters Ship and Stand-by, for a Fighter-Director Ship and three Stand-bys, for an Air Sea Rescue Ship, and for floating GCI stations. The most significant improvement in control techniques was the employment of a separate Fighter Direction Ship to control defensive operations, instead of using the Headquarters Ship for this purpose. The need for a fighter direction ship was one of the major lessons learned at Anzio.
As in the case of the cross-channel invasion, elaborate measures were taken to achieve tactical surprise. Since it was manifestly impossible to conceal the build-up of forces and equipment, the object was to mislead the Germans as to the point of attack. An effort was made to explain away the preparations by suggesting an amphibious attack on the Genoa area to outflank the Pisa-Rimini line. In addition to planting the tale in enemy hands, the plan of deception called for considerable air effort in the Genoa area to lend verisimilitude to the fake landings.

Another pre-invasion task for MAFF was to build up primitive, malaria-free Corsica into a satisfactory spring board for air participation in the landings. Medical officers, engineer and signal and supply troops performed this feat.

Day VII TAC, under Brig. Gen. Gordon A. Seville, was effectively installed on 14 Corsican airfields with all the supplies needed to maintain about 40 U.S., British, and French squadrons, plus some 6 squadrons on loan from Strategic Air Force.

Pre-Invasion Operations

MAFF's Bombing Plan, issued on 4 August, called for a program divided into four phases. In the first phase, covering the period to 6 August, counterair force operations, interdiction of communications, and attacks on subterranean bases were to be emphasized. The preliminary phase may be said to have begun on 29 April when a heavy daylight attack was made on the port of Marseilles. In the period to 10 August MAFF flew more than 6,000 sorties and dropped 12,500 tons of bombs on southern France. These attacks included normal antiaircraft and antisubmarine operations, interdiction of supply lines into Italy, and the smashing of French marshaling yards. About one fourth of the effort was directly connected with the forthcoming landings; the remainder may be considered...
as indirect support and assistance to the Normandy invasion.

So sadly depleted was the AF that only a small amount of effort needed to be expended against airfields in the pre-invasion period. Beginning late in July and continuing through 10 August fighters and fighter-bombers hit airfields intermittently in the Po Valley and in southern France. But there was only one major attack during this period: on 9 August nearly a hundred medium bombers bombed Bergamo-Parabiago, the enemy's most important air installation in northern Italy. Of the 12,900 tons dropped during the period 29 April through 10 August, only 972 tons fell on airfields and landing grounds. In like manner the submarine problem was so well in hand that no intensive campaign was necessary. Only one heavy attack, on 5 August, was made on the Trapani

By far the greatest proportion of the preliminary effort was against lines of communication in southern France. The results achieved were less effective. By 2-3d, five of the six major railway bridges across the Rhone between Lyon and the coast were unserviceable. The Germans, by strenuous repair efforts were able to open restricted traffic over the sixth bridge at Avignon.

Beginning 10 August, Operation 5, a second phase (Operation 5C 21) was inaugurated. The three tasks of Phase I continued to be air force responsibilities but a new set of assignments was given priority. These called for the neutralization of the main coastal defense batteries in the assault area, neutralization of the main coastal radar stations, and concentrated bombing attacks aimed at lowering enemy morale. The air force commanders objected to the pre-5-day bombing of coastal batteries on the ground that such bombings, unless carried out all along the southern coast of France, would disclose the
place of attack. Also, such attacks would be made at the expense of the oil, communications, and counter-air operations. Army and navy commanders insisted, however, and the attack was carried out. To avoid blinding off the enemy as to the place of the amphibious assault, similar offensive action against identical targets in four coastal localities was to be taken as follows: Genoa area, assault area, Marseilles area, and Lione area. By alternating and scattering the intense bombing effort among these four areas, it was hoped that the fiction of a landing near Genoa could be maintained. The scale of effort needed to neutralize each of the small targets was carefully studied and assignments were made accordingly.

Although weather interfered with the execution of NEWB, virtually the entire program was completed by D-Day. Nearly 5,500 sorties were flown and 6,700 tons of bombs were dropped. Great damage was inflicted on enemy defenses, and as was intended, the enemy was confounded as to where the amphibious assault would come. But the enemy air remained weak is evident from the fact that during this period only five hostile aircraft were claimed as shot down or damaged.

The third phase of the bombing program was to last only about four and one half hours. Operation TOP were to begin at 0350 on 15 August and to last till 7-hour. This phase was designed to cause maximum destruction to enemy beach defenses. Its specific targets included any enemy artillery that could be brought to bear on shipping in the assault area, enemy guns, and other military installations which could bear directly on the ability of the ground troops to advance over the beaches. One hour before the landings all bombings over the beaches were to cease. The bombing pattern extended to a depth of 400 yards inland and 75 yards to seaward. Twelve groups of escorted
 heavies, two medium bomber wings, and the full striking power of XII TAC were utilized. All aircraft were assigned rigid lanes of approach to the assault area. Bomb loadings for beach attacks were fragmentation and demolition, instantaneously fused, and not exceeding 250 pounds. For gun positions, large demolition bombs with short delay fusing were used.

Weather difficulties on D-day prevented V1's/N from being carried out exactly as planned. A large percentage of the heavy and medium sorties were non-effective because of overcast conditions. The assault against gun positions was only partly successful but the final bombardment of all beaches was highly satisfactory. Underwater obstacles and beach defenses were beaten down, defending troops were disorganized, and a number of coastal guns, previously missed, were covered. General Patch, who personally witnessed the bombarding of one beach, said it was the best he had ever seen. General Laker, who examined the beaches soon after the assault, thought the bombing remarkable in view of the fact that it was done largely by Pathfinder technique.

The fact that the last minute bombings met no opposition again showed the weakness of the Luftwaffe. Pre-invasion estimates placed enemy strength in southwest France at about 220 aircraft. Against this small force, IXAF had not fewer than 5,000 aircraft, with more on call. The discrepancy between ground forces on the eve of D-day was hardly less extreme. Only seven weak divisions comprising the German Nineteenth Army were deployed around the invasion area. Against this the U.S. Seventh Army could throw in a force of 10 crack U.S. and French Divisions plus an assortment of paratroop, Commandos, and Special Service forces. A very considerable German navy would face, if it dared, 450 British, U.S., French, and Italian warships, including five battleships and 10 aircraft carriers.
Leaves of man's belief that there is a mutual relation

between his soul and the universe, a relation which

is not merely a matter of faith but a matter of

knowledge. He believes that the universe is

created by a supreme being who is all-knowing

and all-powerful, and that he is free to act as he

pleases. This belief is not only a matter of faith

but also a matter of reason, for it is supported by

the evidence of the natural world. When a man

believes in such a relation, he feels a sense of

Knowing him and of being known by others.
fires on patrol. The mediums concentrated on strong points and road bridges between Nice and Hyères. The heavies attacked coastal defenses and then joined the mediums and fighters in operations designed to isolate the battlefield.

The Allies hit with such overwhelming strength that southeastern France was quickly overrun. By the end of the first week Toulon was surrounded, Marseilles was almost surrounded, and armored forces were rushing rapidly northward toward Lyon. During this time the air forces continued to protect the convoys and beaches, to cooperate with the ground forces, and to attack enemy lines of communication.

An important innovation in the technique of control of aircraft in amphibious landings was introduced in 1944: defensive control was handled from a separate fighter control ship built exclusively for that purpose. Fighter Direction Tender (FDT) No. 13, a converted USN with a mixture of British equipment, was made responsible for the control of defensive patrols over the beaches and for broadcasting warnings to the fleet and installations ashore. Daytime control was handled primarily by 64th Fighter Wing personnel. After D-Day fewer than 30 fighter aircraft on an average were kept over the assault area for the protection of the fleet and the beaches. This is in contrast to the 60 or 80 aircraft which were used to protect the landings at Salerno, an operation covering a smaller area. Night fighter activity was handled by British personnel, with one U.S. controller on duty to handle all other matters. There were four to six night fighters on patrol, and some of these were handed over to the various OCI stations whenever conditions permitted. An army antiaircraft liaison officer on FDT 413 maintained radio communication with his batteries ashore. Information on hostile raids and
friendly flights was issued by him to his shore batteries, which in turn
evole him any information they had. In a few cases where friendly fighter
fighters entered the Inner Artillery Zone, they were fired upon. Except
at dusk, when identification was difficult, the control of antiaircraft fire
was good, and no friendly aircraft was shot down.

Offensive air warfare was scheduled and controlled from the USS Calotoin,
Amphibious Force Ship from the operation. The communications and air
control equipment on board this ship were enlarged into a Joint Operations
Room (JOR). Here the air and naval officials carried out their various functions
including: control of tactical reconnaissance and fighter-bomber missions;
furnishing information on movements and status of aircraft; air raid warning
and alerting the fleet; and stand-by for air interference. Fighter-bomber
missions were flown by P-47's and P-38's based on Corsica and by carrier-based
Hellcats and Wildcats. The 24th Combat Control Squadron (Amphibious), acti-
nated as an amphibious fighter control squadron to serve aboard all major
ships, handled air control for the Air Task Force commander. The fighter-
bombers reported in to the Calotoin giving number and attack mission number,
which were placed on the Fighter-Bomber Status Board. They were then told
to attack either their ordinary or their alternate targets, or to proceed on a
special mission. This system was necessary because the speed of the advance
sometimes placed the briefed targets inside the bomb line. On other occasions,
a special mission was given priority over regular missions because of particular
needs of the ground forces. The special missions were usually against enemy
transportation and were targets called in by tactical reconnaissance planes
or received by ULTRA from the ground forces or other sources. Locations
of targets, which were related to airborne planes in the clear, were given
In the first place, it is not likely that the enemy will attempt to hold the coastal region of the peninsula. The enemy will probably attempt to hold the mountainous area and will focus on securing sea lines of communication. The mountainous area is more difficult to defend and will require less manpower. The coastal region, on the other hand, is more suitable for large-scale defensive operations and will require more manpower to defend. Therefore, the enemy is likely to choose to hold the mountainous area and secure sea lines of communication.
with his command that as of that morning all, on 24 August, Federal and Confederate commanders declared martial law and all Federal forces in the area would obey his orders. With that order, all Federal forces in the area, including the troops under General Lee, would be considered Federal. The consequences of this declaration were severe, and the inhabitants of the area were instructed to comply with the order.

In conclusion, it is evident that this declaration of martial law was a significant event in the history of the area. The consequences of this order were far-reaching and had a profound impact on the inhabitants of the area. As a result, the inhabitants were instructed to comply with the order, and the area was placed under martial law.
The history of the Pacific war in the first six months after Pearl Harbor was a dreary story of defeat and retreat. Japanese aggression reached full tide in the spring of 1942, and then there came the naval engagements at Coral Sea and Midway that marked a turning of the tide. The battle of Coral Sea occurred in the South Pacific early in May when a U.S. carrier task force met a Japanese carrier task force that was covering an enemy invasion fleet headed for Port Moresby. Although the enemy inflicted greater losses than he sustained, the main purpose of his operation, the capture of Port Moresby, was thwarted by the American fleet.

Undeterred by this initial setback the enemy went ahead with other aspects of his plan, which included the taking over of the western Aleutians and the seizure of Guadalcanal. The diversionary thrust at the Aleutians was checked and the main stab at Midway was parried by a decisive carrier victory at Midway in June 1942. At both Coral Sea and Midway surface forces avoided contact and the outcome was decided entirely by air action. Japanese aggression having gone as far as it could, the stage was now set for an American offensive.

Responsibility for beginning the offensive in the Southeastern Solomons rested primarily with the Navy. Although the "hitter first" strategy prevented an all out effort in the Pacific until Germany was defeated, it did not preclude raids, attrition tactics by air forces and submarines, and limited, proud offensives when opportunity offered. The question of what offensive should be undertaken and where was complicated by the fact that there was never a single commander for the Pacific. In April 1942 the Pacific had
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U.S. Fleet and Chief of Naval Operations, who as early as February 1942 had advocated a step-by-step advance through the New Hebrides, Solomons, and Bismarks, presented the Navy's views to the Joint Chiefs of Staff. In view of the victories at Coral Sea and Midway General Marshall favored an offensive, but since Tulagi fell within C.A.A. he felt that the operation should be carried out under command of General MacArthur. Admiral King, on the other hand, felt that the Navy should be in command and he presented formidable arguments to support his position: the only amphibiously trained troops available were Marines and the only troop lifts were Navy transports. The decision was in the nature of a compromise: the JCS agreed that the initial offensive would be under command of the Navy, but the subsequent drive to Rabaul would be commanded by MacArthur. On 2 July 1942 the JCS issued a directive to the commanders in the Pacific outlining a three-fold plan whose ultimate objective was "the seizure and occupation of the New Britain, New Ireland and New Guinea areas." This was to be carried out by the performance of three tasks. Task 1, the occupation of the lower Solomons, was to be carried out by the South Pacific forces with the assistance of the Southeast Pacific forces; Task 2, the occupation of the upper Solomons and New Guinea, and Task 3, the reconquest of New Britain, were to be primarily the responsibility of General MacArthur.

Guadalcanal

Acting under the terms of the JCS directive of 2 July, Admiral Hara ordered Commander South Pacific Force (COMSPAC), Vice Admiral Robert Ghormley, to seize Tulagi and Guadalcanal. The operation was given additional urgency by the discovery on 4 July that the Japanese had landed troops and laborers on Guadalcanal and had begun construction of an air field. If the enemy were
allowed to develop this base by the establishment of the 9th
Allied Air Force between Samal and Australia.

Throughout the Solomons campaign the 4th units in the South Pacific
drew under the operational control of the Navy. During the Guadalcanal
operation the 4010th exercised this control through his air officer, Rear
Adm. John C. Stemb, Commander Aerials to South Pacific Force (COMAIRSPEAC). In
addition, relating to administration and supply the land-based air forces
were after 7 July 1942 under the U. S. Army Forces in the South Pacific Area
(COMARSPAC). In operating under the Navy one of the chief concerns of the
air forces was to preserve the organizational integrity of the air force units
and to make sure they were trained according to their capabilities. It was
therefore agreed that Admiral Nimitz would issue directives as to the types of
operations he expected from the various air components of his command, but
Lt. Gen. William F. Halsey, COMSPAC, would assume responsibility for training
his own air units for these operations.

Although the Navy and Marines took the lion's share of responsibility
for land-based, the 4th units had a part to play. On 20 July the 11th
Marines' Group (I) was designated as the Mobile Force, Central Pacific, and
within a few days was on its way from Hawaii to the South Pacific. Plans
for the participation of land-based aviation called for sorties northwest of
Hokkaido by the 19-26's of the 6th Bombardment Squadron and daily
search of the southern Solomons and their western waters by the 27-17's of
the 11th Force. Aircraft were to reconnoiter the western and northern
approaches to the Solomons and to bomb them. The whole operation was
named in such haste and was planned with such an insufficiency of troops,
supplies, and material that it is difficult to say as "Operation Shoe-
In the light of that later happened, however, it is interesting to note that Admiral Ghormley and General MacArthur were aware that the main need was for additional land-based air. The two commanders joined in a request for a reinforcement of 3-day but 703 refused.

Beginning in July the 11th Commandant Group flew search and reconnaissance missions over the Gualaloma-Gualama area from Fara, a distance of 710 nautical miles. In preparation for the landing, the 11th Group was designated a task force and was directed to strike the landing area with maximum strength from 31 July through 9 August. During this period the group flew 56 bombing sorties and 22 reconnaissance missions. On 7-8 August, under cover of carrier based planes, the reinforced 1st Marine Division was put ashore. The landings at Gualaloma and Tulagi were accomplished with little opposition at the beaches; but at the small island of Savo there was fierce fighting for a couple of days.

The contribution of land-based aviation to the first amphibious landing of World War II is somewhat difficult to assess. The commanding officer of the 11th Commandant Group was inclined to attribute the relative ease of the landings at Gualaloma and Tulagi to the preparatory bombing and to explain the difficulties encountered at Savo to the absence of air preparation in that area. Probably the connection was more slender than real. The preparatory bombing by the heavies was too light and sporadic to have affected the situation much. After the troops were ashore they found that the runway on Gualaloma was not badly damaged and there were large stores of supplies in the vicinity left undamaged by the air attacks. The minimal contribution of land-based aviation was the reconnaissance missions flown during the two months before the landing.
Although the air force role in Guadalcanal was a relatively minor one, the operation brought out several lessons that were of importance in future operations. In the first place, command relations were not satisfactory. Admiral Halsey, who as COE,10 was in overall strategic command, chose to absent himself from the actual scene of hostilities and to delegate tactical command to Vice Admiral Frank J. Fletcher, who was Commandex Expeditionary Force. As Commander of the amphibious force, "per Admiral Kelly Turner was in the command echelon below Fletcher, but actually he had complete autonomy from the moment of landing. Maj. Gen. L. A. Vandegrift’s Landing Force (First Marine Division reinforced) was subordinate to Turner. In delegating his authority to Fletcher, Admiral Halsey failed to make him responsible for all aspects of the operation. Failure to achieve unity of command at the implementing level brought the enterprise to the brink of disaster.

At the close of the second day of fighting (8 August) Admiral Fletcher, who commanded the carrier-based air forces, reported to Admiral Ghormley that his fighter strength had been reduced from 99 to 78 planes, that fuel for the carriers was running low, and because of the large number of enemy torpedoes and bombs in the vicinity, air support should be withdrawn. Withdrawal of the carrier force left the ships of the amphibious force without air protection. Therefore on the morning of 9 August Admiral Turner informed General Vandegrift that he was withdrawing his force. This despite the facts that plans had been based on the assumption that the transports would remain offshore until D plus 4 (11 August) and that by the night of 8-9 August not more than half the supplies embarked by the First Division had been unloaded.

The departure of the air support and amphibious forces left the Marines without air cover or naval support. The beachheads on Guadalcanal became virtually a besieged position.
It became evident that additional airfields were necessary to support operations against New Georgia. Accordingly the Russell Islands, 70 miles northwest of Guadalcanal, were occupied on 21 February. The landing was covered by fighters based on Guadalcanal but no opposition was encountered.

By the time of the Russell landings the SCAP had experienced considerable change in organization and personnel. On 20 September 1942 Admiral Halsey had been succeeded by Rear Adm. Aubrey J. Fitch as CO USTFORPAC and on 16 October the colorful and aggressive Vice Adm. William T. Wakey had relieved Admiral Ghormley as CO USFPO. On 13 January 1943 General Harmon activated the Thirteenth Air Force and put Brig. Gen. Nathan P. Twining in command. Although the new air force possessed administrative autonomy, operational control remained as before with COMUSPAC.

In operations under Navy control General Harmon had insisted from the first that he retain direct responsibility for the control of all matters affecting administration, supply, movement, and training and that sound principles in the employment of air power be observed. During the spring of 1943 he began to feel that these principles were not being adhered to or certain subordinate commanders and staff officers. The situation was brought to the attention of Admiral Halsey who directed General Harmon and Admiral Fitch to iron out their difficulties in a direct conference. Such a conference was held, and it was agreed that the highest degree of effectiveness would be achieved by vesting combat command of the various air forces in their respective services, that any disruption of normal command channels would be held to a minimum, and the air forces would be employed in roles for which they had been organized, trained, and equipped.

Meanwhile the Army had attempted to get a clarification of joint command...
responsibilities on the JCS level. In September 1942 it had introduced
paper outlining its view to the Joint Planning Staff [328]. But the Navy
did not wish to bind itself to unity of command on the basis of a rigid rule.
After sitting on the Navy proposal for some months the Navy finally agreed on
20 April. The principles embodied in the directive provided that in joint
operations a single commander would be designated by JCS on the basis of the
task to be performed. The joint force commander, who would not normally
function in a dual capacity as commander of a component of his forces, would
be assisted by a joint staff. Participation by the joint commander in adminis-
trative matters would be held to a minimum, and disciplinary matters would
normally be handled through commanders of the services concerned. It was
under these principles that the Thirteenth Air Force operated until it was
relieved from the South Pacific command and assigned to the Far West Air Force
24 on 15 June 1944.

After the Russell Islands the next step up the Solomons was Guadalcanal. Here the Japanese had constructed an airbase which must be in Allied hands. Admiral Halsey did not deem the forces at his disposal sufficiently
strong to justify a frontal assault, so it was decided that a Western Landing
Force should capture Guadalcanal while an Eastern Landing Force would land
at Vila Harbor, Nivela Houtagera, and "at point, on southern New Georgia." 25

In preparation for the landings the Allied airmen were to intensify their
strikes against crew bases on New Georgia and southern Bougainville. All
forces were to destroy enemy shipping at every opportunity, and the photo-
reconnaissance planes were directed to maintain a close watch on aircraft and
shipping concentrations at Sata and around the southern end of Bougainville.
The fighters were to provide cover for all forces in the Guadalcanal area, all
units in the New Georgia area, and shipping bound to and from these points.

General Stilwell, CNO COFIO, planned to move from Espiritu Santo to
Guadalcanal about five days before D-Day. He would retain direct responsi-
bility for strategic operation of aircraft units on Guadalcanal, but for con-
trol in the forward area a new command was established from 31st January
by General Henry (CH EN New Georgia). This new command would be com-
pared of a small Aviation Center manned, 21 carrier aircraft only. All aircraft
assigned to this center in the New Georgia area would take-off to this new establishment. Fighter control in the forward area would
be executed by the Fleet Smatter group under CNO COFIO. Initially
Group No. 2 from the U.S. Army II could control from a Destroyer until
relieved by Group No. 1, then it would then go ashore on Guadalcanal to establish
itself as a standy Fighter Director group. The Sunnyside landings were to be
coordinated with S.M.I., where the latter's forces were to seize Tofol and
Jordinh on 30 June.

The landings on Guadalcanal, which began on 30 June, were covered by 32
Allied fighter aircraft at altitudes ranging from 5,000 to 21,000 feet. The
enemy sent over three flights of from 30 to 50 minutes on 1-day and one flight
on each of the following two days. The Allied patrol planes successfully
halted all these attempts to disrupt the landings; only one ship was lost to
enemy action. shielded by excellent fighter cover the amphibious forces also
made their scheduled landings in the Blox Anchors area, at Vila, and finally,
after some delay, at Tofol Anchors. These landings were the first stages toward the
financial and Lend-Lease aid issued by the various forces converged

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650 combat aircraft flown by a heterogeneous collection of squadrons drawn from four different air services. Included were AF squadrons of bombers and fighters, Marine TBF's, SBD's, PBY's, and P-40's, Navy Wildcats and Hellcats, PBY's, search planes of all types, and New Zealand P-40's and Hudsons. As in the case of the advance on New Georgia, a new air echelon, Air 203 and Northern Solomons (COMAIRUS/COMO) were created to control all aircraft entering the Bougainville area. Control was to be exercised through two subordinate

Fleet commanders, one for Treasury and another for Torokina.

A most important task of the Allied bombers was to beat down the enemy's air forces. The protected landing area at Torokina was situated unusually close to five enemy airstrips. The Bougainville islands had been invaded during the New Year's Eve, but by October 28 the hairy terror of attack was stirred up and continued through the critical phase of the landing. Although the enemy ordered fiercely to restore damaged strips to serviceability, he was obliged under unwritten pressure to give way. Brrahms met no interception on the first air strike on October 28, and the final four a few days dispensed with all fighter escort. On the day before the assault the enemy, by working around the clock, completed a new field at Torokina only to have it reduced in effectiveness by an attack of B-24's, A-20's, TBM's and P-40's. Local air superiority was attained by the Allied invasion the invasion was launched.

Preliminary landings on Treasury Island and at Yeo on Choiseul Island were carried out on 27 October. To cover the Treasury Island landings there were 16 F-33's on station divided into two groups of eight each, one at 20,000 feet and one at 25,000 feet. There were also 16 P-40's, all at 10,000 feet, and 14 at 20,000 feet in 10,000 feet. In addition to these there were eight P-33's and eight P-40's orbiting in the general area 15 miles northeast of the Treasury Islands. The enemy sent in his air power but was able to score only two hits.
on a destroyer and to force her to retire. An interesting feature of the
Treasury Island landings was the use of Landing Craft Infantry (LCI's)
in close support. An LCI-24 and an LCI-63 were armed with two 20-mm, three
40-mm, and five 50-calibre machine guns and were used for fire support close
to shore. The experiment was found to have possibilities and was improved
when not used more extensively in later operations. By 6 December mooning
in operations on the Treasury Islands were complete. The landings on Choiseul
were unsucessful.

The preliminary landings having been well made the time had now come for the
main blow—a landing on the narrow beaches at Espiritu Santo Bay. On
1 November the transports of Task Force 31, carrying the Third Marine Division,
began unloading troops on 12 selected beaches. As expected, the enemy air
reaction was swift and ever-vigorous. Repeated attacks against both the convoys
and the beaches were made on 2-Nov, but even on the few occasions when enemy
planes broke through the fighter screen they were able to inflict only slight
damage. In addition to air attack, the Bongainville landing was also subjected
to attack by a surface force. A Japanese task force left Rabaul on 1-Nov and
headed for Bongainville. The enemy naval forces were attacked by Allied air-
craft but without decisive results. During the night of 1/2 November a force
of cruisers and destroyers under Rear Adm. Aaron W. Merrill attacked the Japanese
forces and turned it back.

The Japanese attached much importance to the drive up the Solomons
that they decided to send reinforcements into Rabaul from Truk. Some 250 or
300 aircraft from the carrier Fleet at Truk were thrown against the Allied
air forces in ES16 and ES19, but few of them ever returned to Truk. On 5
and 11 November U.S. carrier forces delivered attacks against Japanese shipping
at Rabaul. Carrier-based planes delivered the attack while shore-based
Fighters flew cover. On occasion the 1st and 3rd of the Marine squadrons provided most of the air support. Fighters and medium bombers of the Thirteenth Air Force normally operated against objectives remote from the area of ground fighting. As soon as the beachhead was secure, airfields at both Treasury Island and Torokina were begun. The Torokina fisher strip was ready by 10 December, but the Stirling Field did not become operational until early in January 1944.

By way of summary it may be pointed out that the first amphibious landing of the war, the seizure of Guadalcanal, taught several lessons that were of value in later operations. Failure to control the seas and air at Guadalcanal resulted in the premature withdrawal of naval support and supply ships, which in turn exposed the forces to air and sea counterattacks. Although the primary focus of defending the island was to be land-based aircraft, the Navy in planning the operation failed to provide the supplies and equipment necessary to bring the airfield speedily into use. The entire operation also suffered from lack of unity of command. In spite of these shortcomings, the seizure of Guadalcanal was, too the briefing of the Navy, 'Trine, and Thirteenth Air Force plans at Henderson Field and extended their range to the Northern Solomons. Land-based air power was then able to bring Japanese bases and overwater supply lines under increasing pressure. Japanese air power was subjected to an attrition that was possible the seizure of conspicuous landings up the ladder of the Solomons Islands. All Guadalcanal landings were successful because air superiority in the landing area had been established and because the land-based aircraft were able to protect convoys and beachheads from serious interception by the enemy air forces. Another factor of importance was the fact that from the beginning 'unity of command' inscribed upon the principle of unity of
It's hard to convey all that was said in
the course of his notes. Early on in their visit, he
shouted "South African section!" If so, he had
a marked lack of
complete control over his emotions occasionally did violence to the pro-
per considerations. He said it in a high level of accord-
ion, and it was most important that he did so
completely with the implicit authority. Another section, the South
African section, came in. The South African section took over from
the Irish, the British, and the rest of the little world. At the beginning, it
was a very effective change. There is no way to estimate his strength now by
a usual measure. Following
the month the next section moved in and the South African section
exchanged into the positions. It finally early in 1941 for the South African
section moved in and then more of them were moved in to the south...
The result of audacious daring across the invasion chain, like the drive up the Solomons, is unaided by the efforts of the Japs to stand by their enterprise of their own will. On the 26th of October, the Japanese extended the war to the South Pacific by launching attacks upon carrier-based planes, and attacking forces, known in the 26th Force, was composed of two aircraft carriers (cruisers and ships), two heavy cruisers, and three destroyers.

The islands were discovered by the carrier strike against the U.S. naval base on Guadalcanal in coordination with the attack on Guadalcanal, which was to support the land operations in the western Solomons. The initial strike on Guadalcanal, which was delayed until 6 February 26th, consisted of a small carrier task force, and it included a number of losses in the operation.

The Japs were unable to achieve any significant impact on the following day by the establishment of any forces.

The operations continued to show the same as the Americans could, and all efforts by conditions appear to be in the South Pacific. Some conditions in the distance, such as, weather, and so forth,

The war against the enemy in Alaska can be carried on with the continent itself. It is Alaska that is even more difficult to combat. The island of Alaska on the tip of the invasion chain, from Nome to Detroit, to the south of the state, the island of Alaska, the head of the island of Alaska, the head of the island of Alaska, to the south of the area, the island of Alaska, to the south of the area, to the south of the area.

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It is doubtful if any theater of the war afflicted more hazardous conditions than the Aleutians. The chief characteristic was persistent overcast condition. Forecasts were of limited value since weather was extremely local, conditions of low, low ceilings, and clear weather being encountered within a distance of 20 miles. Occasional breaks in the overcast which occur in isolated areas but clear weather over large areas was seldom encountered. On Aitutu, rain and fog were the rule rather than the exception, and clear weather was likely to be experienced on not more than eight or ten days of six weeks. Another local peculiar to the Aleutians was the "willows," a kind of hurricane voiced tree. Willows were a menace to both air and naval craft. In the Aleutians, as in few other places in the world, high winds and fog prevailed together for many days at a time. The terrain of the Aleutians is rocky, broomed, and covered with tundra or tusk, sometimes dense and thick. The enemy camp had to be removed before a steel hat or concrete could be laid for a runway.

Operations were hampered not only by meteorological factors but also by a complicated command situation. Strategic control in the Aleutian area was vested with naval authorities and was exercised through Central Unit, COMC, through the commander of Task Force 3, and tactical control of the Air Striking Unit of Task Force 3 was assigned to the Commander General of the Eleventh Air Force but actually was exercised in large part by naval authorities. The Western Defense Command, with headquarters in San Francisco, had jurisdiction over all activities pertaining to the Alaska Defense Command. The latter command in turn had jurisdiction over all Army activities in the Alaska theater excepting that part of the Aleutian area where all operations, Army and Navy alike, were under Navy control. Thus, although practically all
...the operational advances of the Japanese forces in the south and southeast of New Guinea have been remarkable. The Japanese forces have been able to advance with relative ease, despite the challenges of the terrain. The Japanese forces have been able to maintain a steady pace, taking advantage of the natural obstacles to slow down the advance of the Allied forces. The Japanese forces have been able to capture several key locations, including the port city of Port Moresby. The capture of Port Moresby has allowed the Japanese forces to establish a secure base of operations, furthering their advance into the region.

On the eve of the offensive, Allied forces launched a series of air attacks to disrupt the Japanese advance. However, the attacks were largely ineffective, and the Japanese forces continued to advance with little resistance. The Allied forces were unable to prevent the Japanese forces from establishing a foothold in the region, and the Japanese forces were able to consolidate their gains.

The Japanese forces have been able to exploit the natural features of the region to their advantage, using the hills and mountains as natural barriers to slow down the Allied advance. The Japanese forces have been able to maintain a steady pace, taking advantage of the natural obstacles to slow down the advance of the Allied forces.

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The capture of Port Moresby has allowed the Japanese forces to establish a secure base of operations, furthering their advance into the region.
Pro-invasion operations were made more effective by the use of lighter aircraft as fighter-bombers. With the exception of aircraft, the distance to which they could be flown by 25 miles or more, normal civil or light bomber missions were still be flown to within 25 miles of the J-36's. Generally carried the 25-100, the L-400's carried the 550-100, and 80-250, an advantage of regular preinvasion. Unloading landing or taking off, inadequate on landing or taking off. This is considered as the first air attack on buildings of 1,000,000 to 2,500,000 cubic feet. The 1,000,000 cubic feet of air were carried can be accomplished in one operation.

On 21 April 1943, the 18th TAC flew its first operations over L-45, which provided 100 per-cent cover for London. The novel attack force (Task Force 51) consisted of a midget submarine, one carrier, the 16,000 strong air forces, the eastern unit included three air units while the western unit included three bomber units.

In zone 1, carrier-based planes were to be used mainly for cover and observation but were to be also available for ground support if necessary. A low-level observation planes were to provide air spotting for naval gunfire. Air shore-based air units, under control of Lt. Gen. William C. Butler, to be divided into the Midland Unit (Manchow Air Area) and the Air Base Unit (control area 4). The Manchow Air Forces was to provide naval air support for the Manchow area while the Air Base Unit was to carry out long-range and spotting and anti-aircraft coverage for the overall area. Coordination of daily air operations to be maintained by the Air Force of the Joint Board, who is to be airborne at the scene.
of operations. One in my division orders to be attached to the 10th Corps, under General Green to each division.

The 1st Corps was, at the time, with the forces in Western Virginia, and the 10th Corps was at the front, under General Green, for the purpose of protecting the army from a possible attack by the enemy. The plan was to advance in three columns, each under General Green, and to concentrat...
In late June, the Soviet Union suddenly proceeded to assault.

The assault of June was the only simultaneous invasion carried out in
the North Pacific that was opposed by armed forces. It was a hard-
 fought battle, carried out by the 7th Infantry Division and
attached troops. These troops had received training in a California desert
in basic infantry tactics and landing operations, but they were unaccustomed
to harsh desert weather and were unfamiliar with the terrain. The
standard logistics for the invasion called for a rather widely scattered main
landing area and the associated logistics. The initial force of troops, known
as the Southern Forces, was to land in the southern landing area. The northern
forces were to land in the northern landing area. The northern
forces were to begin operations and advance to the west to drive the enemy
from the island. The total number of troops taking part in the assault
numbered about 250,000, of which some 5,000 were to be used in the
main effort on the Moscow Bay. To oppose this force the Japanese had a de-
fending position of approximately 2,000 troops and 250 aircraft. During the month
of June, the Southern Forces had no land and an air defense of
229 aircraft. Jap air strength in the Nicholas probably never exceeded
50 planes, none of which were land based. At the time of the invasion of
Kiska it was estimated that not more than 15 enemy aircraft were in the
Nicholas.

0-day, originally planned for 7 July, had to be moved to 11 July
on account of weather to 11 July. It was planned that land forces would encounter in a fast
and secure manner the main landing zone east of the landing zone.
Although all forces made their initial landings practically
unopposed, a still-existing force developed on all fronts. An action in
coordination with ground and naval forces on 11 July was planned in consider-
able detail. In addition to the normal decision, charts and photographs
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cut by 22 July. Both air strikes and naval fires were used to remove some 7,000 troops from the island.

From the point of view of conditions before the North Pacific occurs is a certain drawback for the fact that the carriers operate in conditions of minimum diversity. One of the chief weaknesses of the carrier is its inability to operate effectively in conditions of unfavorable terrain and weather. This fact led one to conclude that carrier-based aircraft reduction in numbers in that they can be moved to the immediate vicinity of the scene of operations. The experience in the North Pacific threw considerable doubt on this conclusion. During this period particularly had weather, carrier-based aircraft were no more successful than land-based aircraft in reaching the target. Furthermore, the loss sustained from non-operational causes were as high from carrier as land-based aircraft. If airplanes continue to collide in the thinner air 6000 feet above, the need for carrier-based planes derives not from their supposed ability to observe unobserved, but from the increase in distance, which the carrier has been found to contrast considerably with the conditions facing. In fact, it is only the introduction of land-based new roll, the number, detected in the next plane of the new and reconnaissance aircraft so that the were brought in, and through air reconnaissance, would quickly fill this unfillable need by land and naval forces.
In the South Pacific it was the policy of General Hinkham to
centralize his major forces as a combined force of land, naval, and air forces.
His arrangement allowed each force to move to a central entity and so
concentrate its power. In April 1943 General Hinkham's command consisted
of the Allied Naval Forces under Vice Admiral Herbert F. Leary, the Allied
Air Forces under Lt. Gen. George H. Brett, the Allied Land Forces commanded
by General Sir Thomas Blamey (an Australian), and the U.S. Army Forces in
Australia under Maj. Gen. Julian H. Ewell. The joint command was reassigned
on 20 July as the U.S. Services of Supply in the Southwest Pacific and

The Allied Air Forces were a composite command consisting of the Central
Pacific Air Forces command, a few other bomber and fighter squadrons and
remnants of the Southeast Asia Air Forces, formerly based in the Philippines.
In July 1943 General Brett was succeeded by Maj. Gen. George G. Kenney, then
the Fifth Air Forces was officially constituted on 3 September 1943 General
Kenney assumed command in addition to his position as commander, Allied Air
Forces. Maj. Gen. Vivian Alcock in the role of commander, Fifth Air Forces
and not in charge of forward area forces.

Initially the broad aims of American strategy in the Southwest and Southwest
Pacific were to knock out Rabaul and to prepare for land and advance toward
the Philippines, the South Pacific forces, on the eastern flank of the
Pacific, were to follow the Solomons-Philippines chain toward Rabaul, while on the
western flank the South Pacific Forces were to move up the northwest coast...
of the Allied forces into southern Italy. The plan for the offensive
from Salerno called for the occupation of goodland and Adriatic Islands,
and the southwest tip of Pelagie, one at the dawn, and a 50-mile wide
off the coast to Korfos Harbor. On 15 October 1943 two naval elements of
the United States Navy had been driven back into the Salerno Bight, and the
Italian garrisons along the east coast had been ordered to carry out the second
operation. The invasion on both coasts and Adriatic were set for 30
June without exception. To land by D-Day was the only plan for the
allied force in Italy, as their intentions revealed in slow progress. To
land by D-Day, but a full detail for the island battles at Salerno and
operations with other Allied forces were also.

Lee - Salerno - Operation

On 11 November 1943 the Allied forces on the mainland
advance began. While the main thrust had moved toward
the southeast in Salerno, the northern forces had been
in action. The invasion of each can be traced to the
final result, "Relieve to this sound管理制度 in a continuing
battle of success in Allied operations in Italy. The advance led the
United States as a stabilizer by 100 miles, and as a result of con-
cerns, the site on which the invasion had been begun. The
relief of the island was the result of the success of the Italian
forces advancing on the coast.

The site of this island was a landing area for Allied
forces. These forces had to be protected by heavily armed ships.
required to control a large acreage and in area headquarters, to
such air forces is not a problem. Large air forces and large
airfields are not located in one place. The operations are conducted over wide areas
and conventional could not be maintained. To meet this situation air
back forces were formed, essentially where the strategic air force headquarters
with local air force sections. The first of the air back forces was
established in April 1943 in Belgium; the second was in Italy; Italy; and in
September 1943, a third was established at Caserta. The system of air back
forces was successful and was continued throughout the war.

The area for the control of land involves three-to-four landing strips
miles east of the line on the Peninsula, from which drive in the direction, one
northwest, one toward Vincigliata, were to be initiated. Leader, an armed
Airfield 15 miles west of the line, was to be held by roadside and airborne
units. The convoy was to be protected by a 32-plane cover during daylight
in addition to a constant three. The decision to provide a constant air
escorts over the convoy raised the question of how far the escorts should extend
and what would be coordinated with those participating in the escort. There
were two control sections on the north coast of the Peninsula, one at Bolca
and the other at Paestum. The radar coverage of the area through which the
convoy was to proceed was inadequate. One was aircraft from Vincigliata or Montecatini
could fly behind the mountains toward Po Valley, come, from the British, could
also cross over Vincigliata. In either case the enemy could not be picked up
until it was too late to provide adequate warning. The solution was to
establish one and Vincigliata, a destructor that could serve as a flying radar
station. The destructor had to take a position approximately 15 miles
northwest of Vincigliata. On the destructor there were two controllers and two
signal came unlisted men with radio and radar equipment.

The main base from which the enemy might be expected to interfere with the landings was Jakk. In order to allow a build-up on land the Fifth Air Force deliberately held off for a while. Beginning on 17 August coordinated attacks, both high and low level, were carried out with devastating effects.

With the destruction of 150 enemy planes the threat of air attack from Jakk was removed. On the 18th immediately preceding the landings, the air force continued heavy attacks on airfields, shipping, and supply lines in both New Guinea and on Britain.

The bombers continued their efforts as the amphibious forces took up their positions on 4 September. Shortly after 0500 the destroyer Field took on its position off Mackinac as an aircraft warning lookout. The landings proceeded unselected until 0700 then three twin engine bombers attacked. The hostile bombers were chased off by the P-38's and the landings proceeded without interference until afternoon. At 1300, as the convoy was requiring to withdraw, the radar on the Field picked up a large number of vessels (undetermined aircraft). Every fighter pilot carried a grid map in the cockpit of his plane and was constantly tuned into the radio frequency of his fighter controller. That by sending the grid reference of the vessels over the fighter frequencies every minute to the fighter sections at Tekomar and Field Field the Field could locate the course of the approaching enemy, and this information could be alerted by each fighter pilot. Guided by information from the Field at least 20 P-38's and 20 P-47's were able to intercept the Japanese attack and to shoot down 20 of the enemy planes. The interception did not prevent the enemy dive bombers from causing damage to shipping or from killing about 50 men. Later in the day the torpedoed was again attacked by an unidentified
number of planes that fired on occasion, some and killed two men and wounded others. Thus, though the initial and beachhead sustained air attack, the enemy did not succeed in seriously disrupting the operation. The land forces met such light resistance that there were no close support missions requested on the beachhead.

The capture of Tulagi on 23 October was evidence that the enemy forces, who had taken over the island, were being reinforced by Japanese planes. The small force of American planes that went against the enemy from Tulagi to Lunga and as it were landed with troops and equipment, the convoy, it was decided that the control ship, this should be with the convoy, rather than located two to 50 miles away, as in the Tarawa action, this could mean running 30 or 50 miles at very low altitude, with little warning or little value to the fighters.
attack and in the process shot down 10 or more both对我们和20 fighters.

Neutralization of the BL monitor Archambault

Although the capture of Bismarck was the initial concern, control of the waters of northeast coast of New Guinea, the Japanese developed an intricate system of communication from New Britain to Bismarck Island to New Guinea. In order to control the Daniter and Wujing Straits it was necessary to control eastern New Britain. One solution for this would be to sabotage the airfields for large land and for use in future operations. As a preliminary to the seizure of Cape Gloucester it was decided that Arara, on the southeastern coast of New Britain, should also be taken. The object of this operation was to obtain a suitable location for a base for light naval forces. Z-day for Arara would be 13 December.

Out of the preliminary bombing for the south coast operation was directed at Bismarck points west in order to gain tactical surprise at Arara. On Z-1 the bombers switched to the invasion area. On Z-day bombardment operations were limited to one strafing and bombing attack just before the landings. From 0730 to 0900 one squadron of B-25's was on air alert in the area. Two squadrons of B-25's were on round alert throughout the day. Fighter cover was maintained in the area throughout the day. Missiles were sent out every two hours along the north and south coasts in the direction of the principal Japanese air bases. Although the Allied forces were subjected to two minor air raids on Z-day, the effectiveness of these raids was minimized by the friendly fighter cover. Most Z-day air cover continued to fend off the attacks against Arara but he lost heavily to the Allied fighters and dive bomber attacks

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On 19 December the air assault on Cape Gloucester was staged. As the bomber effort reached its peak, every installation of importance in the area was hit. Some 1,245 sorties were flown and nearly 1,000 tons of bombs were dropped in the pre-invasion strikes. This was the first time in the Pacific war that saturation bombing had been possible and it paid handsome dividends. On D-Day the troops of the First Marine Division walked ashore with their rifles on their shoulders for air pulverization practically eliminated resistance to the assault. "Gloucesterites" became the word for saturation bombing in the SPM.

It was not long after the initial amphibious landing was carried out against Saipan, on the New Guinea coast opposite Cape Gloucester. The intensive air operations that had preceded the Saipan and Cape Gloucester landings served to a marked increase in preparation for the Saipan landings. Attacks on Hanakawa and North Horn during the latter part of December greatly reduced the possibility of enemy interference. On 8-14, 3-24's and 3-25's strafed the landing beaches. On 2 January about 7,200 troops, mainly of the 32d Division, landed unopposed except for one ineffective bomber attack. With the landing of Saipan the conquest of the Palau Peninsula was complete.

The invasion of western New Britain gave the Allies control over a large part of the Bismarck Archipelago. Conquest of the Bismarck Islands, constituting the northeastern group of the islands, was regarded as necessary to control that control, to isolate Rabaul and Kavieng, and to provide bases for further penetration of the Japanese empire.

The initial objective in the Bismarcks was the island of Los Negros upon which would be built an airfield to support operations both in the Southern Carolines and up the coast of New Guinea. The 5th Photographic
the 9th Bombardment Group of the Thirtieth Air Force had moved with its 3-24's onto Yontan.

On 12 March 1944, the JCS sent a directive to MacArthur and Nimitz whereby an attack on Hollandia was to be launched on 15 April in order to establish heavy bombardment groups there. At the suggestion of MacArthur the target date was postponed from 15 to 22 April.

The Hollandia operation is of particular significance for several reasons; the pre-invasion bombing brought about the defeat of the Japanese air force; it was a matter of question; it was the largest amphibious operation in the Pacific since 8th March; and it was the first landing operation in the Southwest Pacific carried out by carrier-based planes.

Prior to the invasion the air forces were transferred to a new advance air invasion area. Although subjected to intense air war since mid-1943, Okinawa was its headquarters for the invasion of Iwo Jima and Okinawa. It was also protected by carrier-based planes and was occupied by the protected Allied forces in Japan.

General Hollandia's attack was not only to neutralize an air base but also with effective air support and ground personnel. The pre-invasion operations were successful, beginning on 12 March and continuing until the 27th, accomplished a complete air defense. Over 2,000 tons of bombs were dropped in 1,500 sorties.

Concerning the liberation of Okinawa, General Halsey notes: "On the 16th there was no bomb hit. The weather was clear and a number of targets were hit with bombs. The Japanese air group was hit and turned out aircraft. The Okinawa's and dispersal bases were hit with bombs. The trees in the vicinity looked like smoke..." So far as the destruction of the Japanese and their " Emperor of Japan" headquarters back to Hollandia on 25 March, the introduction of water searched into and out of

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Leslie, so relieved that the ground attacks of the Twelfth Air Force were
left later to us to dealt blow to Hollandia.

The air attack on Hollandia was deliberately delayed in order to en-
courage the Japanese to concentrate their strength and lend them to believe
that the invasion would come at Savo Bay and want, instead of Alamein
and Hollandia. To accomplish the element to believe that the Americans did not
care to take a daylight attack with unescorted bombers. General Hogg could
not permit attacks that unsanctioned well, once the Japanese
bent into a sense of false security, the Japanese built on their strength at
Hollandia and marked air bases almost within bomb range. Large gasoline and
ammunition stores were located on the edge of the fields. This was precisely
the sort of action that invited a low-level surprise attack. Photographic
coverage of the bases airplane at Hollandia showed a strengthening of anti-
aircraft and machine gun batteries. To neutralize these defenses General
Hogg proposed that B-244s carry a heavy load of fragmentation bombs
be sent in first. These would shower the area with 20-mm. frags which would
kill Japanese, knock out machine guns, destroy airplane, and cause general
devastation. The alliance and light bombers could then concentrate on the airfields
proper. Three all-out attacks were planned. The first day's attack would be
sneak attack by night aircraft including the Light Bomber and the second
attack would concentrate on the airfields themselves and the third
day would be devoted to a final cleanup. These attacks, carried out on
30 and 31 March and 3 April, established undisputed air superiority in the
Hollandia area. Further attacks were carried out but they merely added to
the destruction.

The cumulative effects of the Ninth-Fourth Air Force and the attacks
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In the face of or the unexpected in the "Allied" operation
would advance in 25' to the west. In front of each division to con-
duct each division to which combined the 'Allied' operation and the attack on
model, General Bradley proposed to advance more ch. on Berlin and
the Sedan battles in the "Allied". In summary, the plan called for the following:

- 1st July, 12th July, 20th July,
- 2nd July, 2nd July, 20th July.

In the rear of the Allied operations in 1917, the plan
of operation would be as follows: a rear area headquarters would be
established. The invasion would be carried by a landing force designed to
be controlled by the Allied area and to protect the Allied flanks,
which is a temporarily vulnerable as the Allied moved northward. These
forces would be inland from an invasion bridge. More forces that
at landing site to be which Allied troops would be intruded. Other
would be transported over the straits and on to the rear, and close support to narrative forces
dering through July the town to work would be provided.

General Bradley instructed the 1st Division to "Neustadt" and
after its forces went in. Although both plans had been discussed before,
the division was in fact to the invasion force on 27 April. In addition
to a 2nd, 6th, and 10th corps, which were hit repeatedly throughout May,
several and Vojdun cavalry units were also attacked. The 4th, 10th, and 16th
forces were to land first as tank on the coast opposite Italy, employ its artillery.
for close combat, and thus, on 5 April, to form a line over the dividing
enclave.

I was one of the officers commanding the division, and I was very
satisfied with the position of vehicles and the road network, which, particularly
would be of value in addition to a well-organized infantry
force. Although the weather was suitable for the movement of all sorts of
vehicles, there would not be enough room to move the
leading elements of Light Division. In addition, the enemy, in possession of
the railroad, if not subject to the invasion forces to attack our lines of
communication and the road network, would be able to move our units to the
rear with ease. A suitable location for a bridge was found
at 1800, and the last part of the road was opened. 

In order to avoid possible delays, on 1900, 200
vehicles were moved and 2,000 men were moved for a hill that was a staging area.

On 3 April, the division of the 8th Army advanced. On 4 April, the
division advanced and reached the area near the division's
rear. On the following day, all organized resistance on the left flank ended and the front was cleared. On 18 April, the division was
contacted by the 8th Army.

The area of particular importance in 1900 was the town of the
northwest part of the division and the small hill east of it. Located in the center of the
area of the division, the town had been a small town built by the Germans.

On 6 April, the town was captured by the division. The town was
fully occupied by the division. The town was
fully occupied by the division. The town was
fully occupied by the division. The town was
fully occupied by the division. The town was
fully occupied by the division. The town was
fully occupied by the division. The town was
fully occupied by the division. The town was
fully occupied by the division. The town was
fully occupied by the division.

Tanks subjected to a dive bomb attack at the end of the division.

This
Jap defenders were on the run when the US 5th Fleet arrived. Shelled small villages on land's edge could not resist the fury of 3,000 naval guns. Admiral Burke, the admiral who had ordered the attack, declared "...the end of the line." Despite the lack of opposition at the beaches, the Japanese began soon to put up a stout defense. The terrain of the island favored the defenders. Several narrow coastal plains were ridged and hilly, haphazard with cover that provided a natural fortress for the defenders. For the first time in the 3,500 heavy bombers were used in close support. Thirty Liberators were sent against a harbor in positions on 29 July. Medium and light bombers gave direct support also, both on call and by pre-arrangement. The last of the Japanese airfields on Buka was in Allied hands by 20 June. The delay in counting and recording the airfields on Buka caused the Fifth Air Force to look about for alternative bases. Such a base was discovered on Okinawa Island, an inhabited island about two miles south of Buka. Okinawa was to become an important heavy bomber base.

The Buka landing was unique in that it was the only amphibious invasion in the advance along the New Guinea coast that precipitated a positive Japanese naval reaction. Realizing that the Allied advance meant a threat to the Bismarck Archipelago, the staff of the German fleet ordered all war craft into effect their "Kaito" plan. The object of this operation was to send a steady stream of reinforcements into Buka and to shell Allied positions as opportunity offered. The first attempt at reinforcement was on 9 June. Six Japanese destroyers, three of which were laden with troops, were picked up by 10 patrol boats covered by F-24s near Mokmer Island. The IAF fellows sank one troop-laden destroyer and damaged three other vessels. The Japanese convoy turned back.
transiently had been 500 yards north of the American line. After the 15th of June, it was evident that the Japanese attempts to break through the line had been cut short. On the 16th of June, the fleet with the fleet air group from the South Pacific Forces was concentrated west of the line for the purpose of providing air cover for the forces under control of the Admiral. The admiral's boat, at the headquarters, secured the forces on the 19th of June. By 1 July 300 tons of to be were dropped into the line by the aircraft of the 14th of July was destroyed. This action had been decided by the admiral because the admiral was convinced that the forces air attack would have to be continued. This was a 366's aircrafts and 300-1015, instant mouths demolition work on duty at the day no defense now remained. The admiral described this action as the best example of
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As a matter of fact, our efforts were remarkably brilliant. If we had been able to predict the events that would unfold, we would have been able to prepare for them more effectively. The outcome was not entirely predictable, but we were able to respond to the challenges that arose. The decision to proceed with the operation was based on a thorough analysis of the situation. It was clear that the stakes were high, and we had to act decisively. The outcome was a resounding success, and we should take pride in our achievements. It was a challenging task, but we did it. We were able to overcome the obstacles and achieve our objectives. It was a difficult and painful process, but it was necessary. We were able to do it. We should be proud of ourselves for what we accomplished.
This document is classified and cannot be released. However, the text contains information about the capture of a high value target and the subsequent dissemination of this information. The document also highlights the importance of ensuring that such information is handled securely and responsibly to prevent unauthorized access or dissemination.
The amphibious landings in the Bataan with the notable exception of those at Lingayen Gulf under the control of Naval Forces, Subic Bay. The forces in this area were organized according to the principle of unity of command, therefore, there was a clear chain of command. The forces were divided into three main areas: the 1st Marine Corps, with headquarters in the National Capital Region, the 2nd Marine Division, and the 3rd Marine Division, under the joint command of the 1st Marine Division, the two latter divisions being under the operational control of the 1st Marine Division.

The Central Station

The Central Station, established on 1 February 1942, until 14 July 1943, was the central control center for the Central Pacific Area, under U.S. Army, O.C. Pacific, and later under U.S. Navy, O.C. Pacific. On 15 August 1943, the Central Station was inactivated, and its functions were transferred to the U.S. Army, O.C. Pacific, which was in turn replaced by the U.S. Army, O.C. Pacific, on 1 January 1944. Although there was a central control center, the control was exercised through various intermediary commands. In the early days, until December 1943, the 1st Marine Division, under the command of General Daniel E.1, received its operational orders through the Pacific Operations. Until December 1943, the Central Station was under the command of the 1st Marine Division, and in February 1944, it was transferred to the 2nd Marine Division. In December 1943, the Central Station was transferred to the 3rd Marine Division.
In Task Force 57, coordinated by Vice Admiral W. W. Mulligan, as operations continued across the Pacific, units of the Seventh Fleet were assigned to various task force commanders.

The purpose of amphibious operations in the Central Pacific were essentially the same - to secure bases in the Pacific to serve as naval and air bases from which to prosecute further operations, to earn certain victories in the area, and to induce a desired hostile reaction. These were at least three major landing columns. The return of operations to the Central Pacific also was the result of nature of the objectives, and heavy reliance on land bases of the Japanese.

The vast distances between the Central Pacific and the United States and between bases within the Central Pacific made for both logistical and tactical difficulties. It took about 55 days between routine supply requisition to the United States and delivery to forward units (by surface vessel). The tactical difficulties increased as we approached the fact that during the planning of offensive operations of one of the invading forces were separated by as much as 6,000 miles. Distance raids also for intelligence difficulties. Detailed physical reconnaissances were carried out before the cross-channel landings in France, was rarely possible. Aerial photographs were obtained only in conjunction with carrier strikes or long-range bomber attacks and the units of our aircraft carriers could not be spared.

Most of the key objectives derived their importance from their geographic location rather than size. In many cases, the cost of the objective were in-considerable. In the case of the invasion of the Iwo Jima Island, in which we already had the cost of the invasion clearly the exercise, the entire cost of the invasion which was brought to bear against the enemy. Casualty requirements was the result of the cost of the invasion. The invasion
never, to expedite the development of the amphibious tractor. This enabled assault troops and light equipment to be moved in, but the problem of moving heavier material—trucks, tanks, bulldozers—remained. The Army succeeded in overcoming these difficulties by using water demolition torpedoes that blasted channels through piers and by pontooncauseways built in barge sheds surrounding them.

The bitter resistance encountered at the beaches, brought into focus the importance of supporting fires. Where there were prolonged and especially heavy preliminary fires the assault troops went ashore with a minimum of casualties; where such support was lacking, there were heavy losses.

The Gilbert-Tinian Operation

Evac of background to the operations that were carried as part of the Central Pacific in October 1943 it should be pointed out that the attack on the Gilberts-Solomon area was intended that neither the occupation of the Gilberts by the carrier-based air forces would be low in quality and quantity. The Navy had approximately 900 aircraft, about four times the number of combat aircraft possessed by the enemy in the Gilbert-Tinian area.

The various directives issued for operations in the Central Pacific defined the purpose to be the control of the Gilberts and Marshall Islands, to remove a base from which an attack on the Carolines, to improve the security of the line of communications, and to extend the area over which the Japanese.

The main thrust for Operation GAUNT posed the seizure of Tarawa and Makin on 20 November and Wotje on 26 November 1943. The main objective on the Tarawa Atoll was the Island Beach, where the Japanese had built a
The pattern of amphibious operations in the Central Pacific was fairly well defined in these initial operations. The major combat forces were the Assault Force, the Carrier Force, and the Defense Forces and shore-based air. The Assault Force consisted of the ground troops who were to be at the beach; escort carriers whose mission was to provide air cover for the convoy on route and to give close air support to the landings and beach operations; and escort intelligence, ordnance, and electronic. The Carrier Force, which included the air force of the new small aircraft carriers, battleships, cruisers, and destroyers, landed ashore before the arrival of the Assault Force to neutralize enemy air forces and shipping; protected the operation from interference by the Japanese navy; and assisted in close air support and surface bombardment during and after the establishment of the beachhead. The Defense Force and shore-based air for the Gilbert Islands operation and for most of the Central Pacific assaults consisted of the Seventh Air Force, a naval forces air defense, and naval search and reconnaissance groups. The forces, operating from bases as far forward as possible, were responsible for pre-invasion bombing of the objective area, for beach and shore defense, and for air defense of the base area.

During the Gilbert and Tarawa operations, the Seventh Air Force 3-24's struck at Kerman and Mokela, the stools to be invaded, and at airfields from which the enemy's interference with the landings operations, those included}

Unknown, 'ill', and 'i0' were inserted in the text line to render the Force Pacific uncleared. It is clear that these attacks did little direct and any military
SECURITY INFORMATION

In a war zone, and there is no indication that any funds were spent for
involvement in the duration of the situation. In accordance with regulations in
the General Headquarters, the Air Force had only two hours to operate
the USAF's air defenses. At about 6:00 a.m., the 379th Fighter Group
over the course of an hour there were over 200 planes still at the
Air Force's disposal. The 24-hour period was over, and the planes had to be
readied for another hour, and the planes could be reassembled.

Status of operations difficulties. Initially, it was conceded
by General Headquarters that the 379th Fighter Group
with only 50 planes could be used in air defenses. It was estimated that 70
planes could be used. The 379th Fighter Group had 80 planes
available by 6:00 a.m., and the 10 planes were by mid-morning. The
24-hour period was over, and the planes could be reassembled to
the 15,000 planes.

In order to complete the bracing system, it was conceded that if there
were to be delays in the area of military history, we should concede to an early
expansion.

For it is, during the initial years of the last war, that means, "aircraft,
airplanes, and aircraft in short supply." This is also normal for it is expected
the early expansion, in the various theaters of war as armed forces
expanded, and increased forces became. This was true in Africa, at
first, and then to a lesser extent, in the early years of the General Electric
as time. In none of these initial operations did the
aircraft play a supporting role, but since these experiences
vitally affected a military warfare, it is well to note briefly at least the


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The heavy casualties suffered at Guadalcanal invite comparison with Cape Gloucester. From the flat and mixed terrain there was only a few feet, the Japanese had the advantage of dug-in positions that offered good targets to naval and air forces with a flat trajectory. Cape Gloucester also was defended by dug-in positions, but the heavy losses there were delivered chiefly by land-based air and by mobile units that were able-to-reinforce, with little warning, much needed support. The Japanese launched one wave after another, leaving little room for the superiority of air bombardment. On the first wave of the second day, the exposed frontal line on the left was to be obvious. Whether destroyed or in a position was small, it could be concentrated on. At dawn the interval between the initiation of the naval bombardment and the first wave of the attack was too short. The J.I. 27th Division, which was sooner at Guadalcanal, encountered determined resistance from 600 to 700 defenders. The island was under control by the following day with light casualties. Guadalcanal was entered on 26 November with no difficulty resistance.

The invasion of the Marshall Islands, Operation TULKA, was to be under command of Vice-Adm. Spruance. He would secure tactical control and keep the force intact. The task would be exercised by Gen. H. H. Arnold until the ground forces were ready to take over. The land-based air forces operated, as before, in one of two forces: 37 were by land of 'fuji' power. Unlike the Gilberts, the land-based aircraft bore the brunt of secondary air operations. With the height of the attack, the carriers of the Pacific Fleet were given a much needed rest, central, to reinforce land-based air forces. With the recall of the carrier air force on Guam,
Taking and securing the existing airfields to the islands were begun. Enemy bases at Hula, Rikie, Palauan, and a few were constantly hit by aircraft, landing and fighters of the Seventh. The aircraft concentrated on Hualien, dropping 200 tons of the small during the seven days period. That before D-Day (January 29, 1945) the Two Carrier Force (TF 52) under Rear Admiral A. T. Clagett, moved in and uncovered many bases in the Marshalls. By D-Day, January 31, the last enemy carrier based air and established unquestioned air superiority in the Marshalls; not a single enemy aircraft appeared to contest the landings.

Three initial objectives were to be hit simultaneously by the amphibious forces: Hualien Island and Pei-Yen Island in the Hualien Stroll and Retour Stroll, covering 270 miles to the northwest. Three attack groups composed of 217 ships and carrying 135,000 troops were assigned to these objectives.

The forces were organized in the same basic pattern as for the Gilberts: LST and LCTs with the addition of a "Transportation Group" whose task was to maintain neutralization of the two enemy air bases at Hualien and Pei-Yen on D plus 1.

The objective of the amphibious forces was in no section of the Pei ethical Islands by 3 February, and by the 6th the occupation of Hualien was complete.

The islands in the Marshalls were taken with relative ease because the defenses barred in the Gilberts were difficult to destroy. "LST-4001" was in combat over 165,726 in almost every respect. In the landings, the secondary regiment, both air and service, was heavy, prolonged, and accurate. Although the doctrine had been against making coastal ships too close to land, the Maj. Richard L. Connolly, who had led one of the amphibious groups in the Saipan invasion, maneuvered old battleships to less than 2,000
The page contains handwritten text, which appears to be a report or a memo. The content is not clearly legible due to the handwriting style. The handwriting includes expressions and terms that are not easily transcribed into digital text. The page number or any specific details about the content are not discernible from the image provided.
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in 1942 it moved to New Guinea, and in 1943 it was transferred to the South Pacific. The move to New Guinea was in response to the need for more air support in the Pacific theater. The 508th Bombardment Group was formed under the leadership of Maj. William H. Miley, who was previously assigned to the 508th Bombardment Group. The group was tasked with providing air support for the invasion of New Guinea, and it continued to operate from bases in the New Guinea area.

In addition to its operations in the New Guinea area, the 508th Bombardment Group also conducted operations in the Solomons and the Carolines. These operations were aimed at disrupting enemy supply lines and supporting ground forces.

The mission of the 508th Bombardment Group was to provide strategic bombing support to the Allied forces in the Pacific theater. The group's primary mission was to destroy enemy installations, such as airfields, shipyards, and industrial facilities, and to support ground forces by providing air support.

With the exception of the battles in the Solomons and the Carolines, the 508th Bombardment Group was not involved in significant combat operations.
subjected to bombardment because of the long distances involved. There was no possibility, either, of artillery support from ships within range. On had been the case atמשל and צלファッションק. 24

On 22 June 1947 the Seventh Air Force moved in to support the naval forces. These P-47s were vectored by escort carriers to the area and bombarded the target in a manner reminiscent of the Rommel invasion of North Africa. The 22d Air Striking Force, later known as Eighth Field, the P-47s were employed against entrenched enemy, unseasoned, untrained points. All organized resistance on Okinawa ceased on 9 July, but minor air operations continued for another 25

Days. On Okinawa resistance encountered on Okinawa, F4F-4s were vectored until 21 July. The constant support allowed the three for coordinated air strikes and control to both the Cactus and land-based forces. It was possible to destroy or seriously damage all known antiaircraft positions. As a result, the 20,000 infantry and 57,000 troops involved in the assault were able to move against only feebly opposition. In the Brooke Field island strong opposition developed but all organized resistance was overcome on 10 July. 26

When a landing on Tinian was made on 24 July, Tinian, being separated from Okinawa by a channel less than three miles in width, was subjected to extremely heavy land-based artillery and naval bombardment. In words of a Marine historian, "...the Tinian operation must stand on its own merits."

Only light resistance was encountered and the island was declared secure on 1 August. With the addition of another squadron of P-47s the landings at both Guam and Tinian received direct support from land-based aircraft.

The versatile P-47s carried out a variety of operations: they could double as bombers, strafe with .50-caliber machine guns, or launch 4.5-inch rockets.

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was the most heavily defended small island in the Pacific outside of Two
Jima.

There were several deficiencies in the Palau operation that made it
costly. For one thing, the crew failed to destroy the full extent of the
underwater tunnels that covered the island of
Dahuta. Intelligence failed to reveal the nature and extent of the enemy's
defense system. Three days preliminary naval bombardment was insufficient,
but it is doubtful that even a heavier concentration by naval guns with their
first two-thirds would have been effective against the enemy's caves and under-
ground positions. Finally, there was the failure to provide adequate reserve
troops for the First Marine Division.

On the other islands in the Palau area formidable opposition was en-
countered. Approach was delayed on the 17th, Ulithi on the 23d, and Truk on
the 32d.

The nature of a naval invasion in the Central Pacific gave priority
of force to the Navy and Marines. Parenthetically, the Central Pacific drive the
Seventh for the most part was under the operational control of the Army and
the operation on Ulithi, its role was essentially a supporting one. Whether
the purpose of the operation was to soften up an island for assault or to
maintain the neutralization of a by-passed island, the type of mission was
pretty much the same. Long range naval fire has to strike at enemy bases on
small islands. This type of operation had its own peculiar hazards but it
involved relatively little contact with the enemy. Then the Central Pacific
forces moved into the Truk area, the Seventh began to move ever closer
directly with the enemy, the F-47s provided direct support for ground troops on
Ulithi, Truk, and Mages.
General plan for the invasion of the Philippines called for the
establishment of intermediate bases at Cavite and Sorsogon by Fleet forces and
at Varan by 6th forces. Even with these bases, General Nimitz in July 1944
had felt that plans were not in harmony with his responsibilities. He had criti-
cized not the distances between bases, control, or forces, and routes
were too slow for actual invasion and had also ended the earlier form of
invasion plan to advance and build up air bases every 20 to 30 miles. On
16 October 1944, however, General Nimitz spoke to General MacArthur that
he thought the invasion area "about 13,000 miles" of potential operations should
be considered for airfields instead. Indicating only General Nimitz had come
to a similar conclusion after the third visit stated by a series of carrier
strikes against the Philippines in December 1944. Describing the Japanese
air forces as a "hollow shell on a line on a backbone," he recommended
that 7th, 6th, and 4th Army be reorganized and direct results on
Kaviage be held. Upon receiving these reports and recommendations, NSC sent
a directive to General 7th Army and MacArthur that a list of
further intermediate bases would be outlined and all other operations would
end on 30 October 1944.
objective prior to the war. In the one exception, Roll only, the
entire French redoubt in total cover of seaward beach and...}

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SECURITY INFORMATION

THE UNITED NATIONS COMMAND IN THE Far East (UNC) has been directed to undertake several major operations in the Far East. These operations are designed to disrupt Japanese forces in the areas south of the Pescadores Islands and in the Ryukyu Islands.

Uncle Sam's forces will be placed in a position to strike at the heart of Japanese power in the islands of the Ryukyus and the Pescadores. This will be accomplished by the employment of naval forces in conjunction with land and air power.

The Northern Formosa operation will be carried out by the U.S. Navy and the Royal Canadian Navy. The Southern Formosa operation will be carried out by the U.S. Navy and the Royal Canadian Navy.

The Ryukyu Islands operation will be carried out by the U.S. Navy and the Royal Canadian Navy. The Pescadores Islands operation will be carried out by the U.S. Navy and the Royal Canadian Navy.

The objectives of these operations are to disrupt Japanese forces in the areas south of the Pescadores Islands and in the Ryukyu Islands. This will be accomplished by the employment of naval forces in conjunction with land and air power.

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Northern and Central Forces to demolish the Allied forces in the area.

The 47th Central Flotilla has been assigned to attack the
area of 47th Flotilla.

The 37th Central Flotilla will move over the San Bernardino
Strait. It is believed that the Northern forces will not
attempt to counter the Japanese forces, thus leaving the San Bernardino
Strait unguarded.

These were the conditions which brought the Japanese carriers and
they resolved that to conduct from San Bernardino Strait while the enemy to the
north was unable to attack could be "childish," while Japanese forces
likewise could not handle the Japanese Central Forces through the San
Bernardino Strait on the night of 24/25 October. The Seventh Fleet, already
deployed with the Southern Forces, from the north threat under tremendous
close. The enemy ships, all of which had been directed for the invasion action,
were not at all equipped and ready the fleet carriers coming through were shielded
only by a few destroyers. Enemy carrier aircraft were based in the islands
with the Southern Forces. The carriers and aircraft were soon in dire straits.

Now, without being able to defend, had to commit themselves with carrier
aircraft in the Japanese fleet. Unable to land on deck of carriers, they were
forced to land on the uninhabited islands at 1000, only to crash in the
process, and add to their difficulties the waters so shallow that landing
could not succeed within the circumference of these islands.

The Japanese Central Forces were
in sight of the coast, the coast defended, when the carrier ordered
its 
attack. With his ships, he was not definitely known but, among other
things, he fired a bomb and air attack from October, the unflinched Allied
flight or teams.

Thus, the trouble of Japan fell the weightless for an empty room disaster.
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Late in the morning of the Pacific time, the United States could not be challenged by the Japanese in the critical situation. Carrier air had been severely damaged, and without the additional air-strength planes could not be over-run. The situation was similar to the previous experience. But the United States carrier force was a rapidly expanded and there would be no other carrier force to be considered. Since the American fleet was now in mid-ocean, the Japanese fleet had to execute a short air attack, where the American fleet was not scheduled to sail over the surface of the sea until 3 a.m., but in view of the circumstances of carriers the strike force was 33B-306 to the Japanese at 27 October, as soon as the Japanese force could reach the New Zealand carriers the day before and at the rate of the battlecruiser.

The loss of one of our carriers by the Japanese hit us not because of a lack of damage, but because of the lack of damage, the loss of one of our carriers was not only the result of the immediate situation, but it was also the result of the combined situation. The loss of one of our carriers was a result of the damage caused by the Japanese, and resulted in the loss of one of our carriers for the Japanese, because it was the result of the damage caused by the American forces. The loss of one of our carriers was not only the result of the damage caused by the Japanese, but it was also the result of the damage caused by the American forces. The loss of one of our carriers was not only the result of the damage caused by the Japanese, but it was also the result of the damage caused by the American forces.

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SECURITY INFORMATION

The situation on surrender of the 111th Division, which is covered in the Security Information, is not available. It is not known to which army the surrender of the 111th Division was made.

The surrender of the 111th Division was made to the 2nd Army, which is known to be in the area of the 111th Division. It is not known to which army the surrender of the 111th Division was made.

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In line with administrative practice, all correspondence is to be handled by a designated officer. The primary purpose of this correspondence is to ensure that all documents related to the Iranian nuclear program are vetted and cleared by the appropriate authorities.

The information contained in this document is highly sensitive and should not be shared with unauthorized personnel. Any unauthorized disclosure could result in severe legal consequences.

Please ensure that all documents related to this issue are handled with the utmost discretion and confidentiality.
Formed into 'indoro' groups on either side of the defense lines, these were made narrow with help of narrow lanes and placed in a row of numerous defense screens. Effective use was made of these to protect the flanks and center of the defense units, and they were well protected by all flanks.

Despite these precautions, one cruiser and one destroyer were damaged so severely that they had to be withdrawn from action.

The last two attacks were repelled on the 18th, with a total of 100 casualties for the attackers. The main defensive effort was made by a cruiser, three destroyers, and three destroyers, although the Japanese had used many aircraft. After the battles, the Japanese (110 and 118) were lost and sunk. Furthermore, the attack on the 18th with 150 destroyers and 300 aircraft was in vain, as the Japanese were unable to break through and the Japanese were lost.

Despite this, heavy losses and damage were suffered by both sides, with the Japanese losing 110 and 118. Despite this, the Japanese were unable to break through and the situation remained as before.

The last two attacks were repelled on the 18th and the invasion of Limanen.
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The object of this operation was the subversion of the Korean war so that an armistice could be signed. The North Korean forces employed the United Nations Corps in the fighting for the armistice. The major factor of casualties was similar to the Korean and Malayan fronts. The Southern front was to demonstrate, cut off, and land the attack force by a route leading toward the inland sites of the fallpoints and most of heavy air support was to be provided in the objective area, by airdrop or by forward echelons. While the hard-wooded air force neutralized the defensive air force to the point that the first targets struck were the supply and ammunition centers and forward echelons. Thus heavy air was expected to take over in the objective area by landing and air bases on north.

The unnailed develop was an effective unit prior to the invasion of Korea. The key unit is the aerial support at Clark Field, and the 5th Air Force had service through echelons.

On 7 January the 1st Air Force consisting of 192 aircraft on 40 sorties over Korea. A total of 122 were 25s and 28s participated. On other operations the Korean and 1st Air Force were in the echelon of support. On one operation the Korean and 1st Air Force were in the echelon of support.
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SECURITY INFORMATION

This page is marked as "SECRET" and contains a redacted section. The redacted section prevents the natural text from being accurately transcribed. The page appears to be discussing military operations, possibly involving air superiority and combat tactics.

In addition to combat, the text mentions the consideration of countermeasures, including air defenses and electronic warfare. The redacted section prevents specific details from being provided.

Due to the redaction, the complete content is not available for transcription.
The leading, in the middle part, around the islands of those islands and the approach of the second line of contact, ran to the north. The easternmost advance area was next over the other island of Japan, so that the enemy would attack on the far islands.

The Net

The net was considered in the middle of the line, not the rear of the 6-20 carrier. Another threat was the area where the others met.
We deliver and install equipment. We will train and test by
next Tuesday with the next division and here are the
schedules.

Overall control of the division DEW DST was exercised by
Major General J. Sorensen, commander of E. Pacific. Control of the division was divided
between Maj. General Kelly Townley, commander Pacific TACCOM and
Lt. Gen. R. D. Bower, Jr., commander Pacific Air Forces. The
central control of the joint tasks, designated 19th Obliteration Unit, was exercised
by Maj. General Bower. J. W. The 19th Obliteration Unit, forces and the
Japanese and Korean forces were commanded by Rear Admiral T. Shirahige. Deputy
Chief of Staff, respectively. The central control of the 19th Obliteration Unit
was the

limited implement of 1945. It was generally agreed that the deliver

schedules for discharging of 19th Obliteration Unit would serve the needs of the joint

function. After the Japan War, the event was to be determined

in the following form: (1) whether the Japanese could be driven on 9 June 3 and

D minus 5; (2) whether the discharging could be driven by 19th Obliteration Unit

individually; that is, on three divisional time with D minus 3 and 2; and (3) whether

force on three divisional time with D minus 3 and 2; and (4) a day's discharging

would enable the Japanese to aware on 5 June 2.

The success of the 19th Obliteration Unit was essential in

accomplishment: the implementation of the 19th Obliteration Unit was, in

the opinion of top [illegible] forces, a small item of difficulty.

The situation was the Japanese and the 19th Obliteration Unit was to

form the Japanese by 9 June 3 and the Korean by 5 June 2.

The situation was the Japanese by 9 June 3 and the Korean by 5 June 2.
The page contains a document with handwritten notes and the marking "Security Information." The text appears to be a discussion or report, but the content is not legible due to the handwriting. The page is marked "This Page Declassified IAW EO12958."
to all near 20 accurate attacks. So far as breaking up these raids was concerned, the Seventh Air Force was outstandingly successful; after 2 January the Japanese made no further attacks. Neutralization of the enemy airfields on Iwo was, however, only partially accomplished. At no time were all runways inoperational and no runway was inoperational for even a full day. The reasons are clear enough: airfields cannot be effectively neutralized by a small force operating over long distances; to be effective, such attacks must be in mass and sustained.

So far as softening defenses were concerned, results were even less effective. Most of the defense installations were deeply dug in and cleverly concealed. Shelters and gun positions were of such nature and construction that it usually required a direct hit to cause any damage at all, and even a direct hit by the type of bomb used (mostly 100- and 500-lb. 37) had very little effect except concussion. The fragmentation effect of any explosive was greatly reduced by Iwo's loose soil, which was composed of cinder and sand. Napalm was used in an effort to burn off cover from emplacements, but for a variety of reasons the experiment was not a success. The Marines were in the conclusion that the only effect of air bombardment was to cause the Japanese to construct more extensive underground positions.

If the pre-landing air bombardment was insufficient and ineffective, so was the usual. The Marines estimated 10 days of preliminary fires as necessary to prepare the island for assault. They got only three days' bombardment. A post-operational study concluded that with the force actually employed -- six old battleships and four heavy and one light cruiser -- the minimum time required to prepare the island as thoroughly as possible for occupation was eight days. Why were the Marines obliged to go ashore with
inadequate preliminary fire. The answer is to be found chiefly in a tight operational schedule. Hereby Iwo was sandwiched between two major invasions, Lingayen and Okinawa. The need of Iwo Jima had to be reconciled with these other major operations and of a carrier attack against Honshu in mid-February by Fletcher's Task Force 58. In the words of the marine historians, "the navy planned and delivered preliminary bombardment, not on a basis of accurately calculated requirements, but to conform with the strategical situation as the admirals estimated it at the time." There was a certain irony about the situation. Ammunition was allotted to Okinawa in vast amounts at the expense of Iwo. Yet the Japanese tactic of abandoning the beaches at Okinawa rendered much of the preliminary fire against that island useless.

At 0900 on 19 February the first wave of landing craft hit the beaches. A narrow beachhead was established on the first day, but the marines soon encountered one of the most fiercely contested battles of the entire war. The Japanese on Iwo Jima put up a fanatical, well-planned, and ingenious defense. Lt. Gen. Tadamichi Kuribayashi, the Japanese commander, made few if any errors in planning and executing his mission of inflicting maximum attrition. The Japanese were able to take 5,500 American lives—a toll equal to their own dead. From 3-day until 16 March, when the island was declared secure, the marines were forced to inch their way forward and to pay the enemy loose from well-entrenched positions.

From 19 through 22 February the fast carriers were on hand to assist the escort carriers in providing close support. Thereafter the burden had to be carried by 10 escort carriers, a force inadequate to the tasks at hand. During the early stages of the operation the Seventh Air Force B-24's hit other islands in the Bonin-Shoto and Iwo, along with the carrier planes, were able to maintain
air superiority. The only serious air opposition came at dusk on 21 February when about a dozen enemy planes made a low level attack on a carrier unit. Although all intruders were shot down, they succeeded in sinking the *Bismarck* Sea and damaging the *Barbary* Long Point, and an LST.

The first F-51's of the 15th Group began to arrive on the on 6 March, with the withdrawal of all carriers on 11 March for refitment and replenishment, the full burden of air defense and air support fell upon land-based aviation. The P-51's made over 125 bombing and strafing sorties against pillboxes, cave entrance, gun emplacements, slit trenches, troops, and stores. Though the pilots were inexperienced in close support operations they learned quickly from the marine pilots and lent material assistance in the final reduction of the island. The 15th Group also furnished combat air patrol beginning 7 March and continuing practically to the end of the war. At night two P-51's generally flew patrol, with the arrival of other units the nighters also assumed the F-24's burden of neutralizing Chichi Jima and John Jima.

**Okinawa**

The landing on Okinawa was the result of the same decisions that had set up the Two Jima operation. On 2 October 1944 the JCS had decided to bypass Formosa and to seize Iwo, Tinian, and the Ryukyus in succession. The directive received by Admiral Halsey on 3 October ordered him to seize one or more positions in the Ryukyus by 1 March 1945. Okinawa was soon selected as the most available position but delays in the Iwo operation forced a postponement of 1-day to 1 April.

Okinawa was the last, and probably the most difficult, step in the great sweep across the Central Pacific. The purpose of the operation was to seize a base for the final assault against Japan. Okinawa is about 60 miles long
and from 2 to 10 miles wide, with a total area of 435 square miles. Situated only about 350 miles from the home islands, it offered numerous airfield sites from which planes of almost any type could reach the industrial areas of southern Japan. It had excellent anchorages and it was of a size sufficient for the staging of assault troops for subsequent operations. Even if an assault on Japan proper proved unnecessary, possession of Okinawa would permit American naval and air power to control the East China Sea, which commands the approaches to Korea, Manchuria, Formosa and the North China coast, in addition to Japan proper.

In planning the operation (cooled FOR W), air superiority was a consideration of prime importance. The enemy could be expected to resist to the full extent of his remaining strength. He could—in fact did—utilize what remained of his naval forces, but they were too weak to offer serious challenge. Tattered though his air forces were, Leyte had proven that by concentrating on the assault forces and by use of kamikaze tactics they could constitute a formidable menace. Okinawa was within reach of numerous Japanese airfields. It would be necessary therefore to neutralize air power not only in the objective area but also at the various staging areas, including the home islands, Formosa, the China coast, and the Ryukyus.

Okinawa was the largest amphibious invasion of the Pacific war. The total troops committed numbered over half a million, over 1,200 ships were used, and over 500 carrier-based aircraft participated. The Army-Navy task force, designated the Central Pacific Task Force, was commanded by Admiral Raymond A. Spruance. The principal navy units were the Covering Forces and Special Groups (Task Force 50), commanded by Spruance personally and a Joint Expeditionary Force (Task Force 51), commanded by Vice Admiral Richmond K. Turner. The
Expeditionary Troops (Task Force 50) were under control of Lt. Gen. Simon B. Buckner, commander of the newly activated Tenth Army. When Admiral Spruance decided that the amphibious phase of the operation had been successfully completed, General Buckner was to assume command ashore.

Original plans for operation ICEBERG contemplated three phases of operations: the seaborne or near-by Okinawa and Saipan Shima Islands about a week before the main landings and occupation of southern part of Okinawa; capture of Ie Shima and occupation of the northern part of Okinawa; occupation of the remaining positions in the Kusso Area. Subsequent events made necessary changes in this schedule.

All air forces in the Pacific had a part, directly or indirectly, in the attempt to isolate Okinawa. The Strategic Air Forces, FGA, was to neutralize enemy air bases in the Carolines and Bonins, to strike Okinawa and Japan when practicable, and to provide fighter cover for the Twentieth Air Force missions against Japan. The Commander, Forward Areas Central Pacific, was to use his naval air strength to provide anti-submarine coverage, neutralize by-passed enemy bases, and furnish logistic support. Forces outside FGA had important supporting roles. Planes from 3.MA were to engage in searches and in continuous strikes against Formosa as soon as the situation on Luzon permitted. For the first time, B-29's could have an important role in an amphibious operation. Originally, the China-based XX Bomber Command was to carry out search and bombing operations against Formosa while the XXI Bomber Command from Marianas bases concentrated on Okinawa, Kyushu, and other points in the Japan Islands. The decision in January to withdraw XX Bomber Command from Chinese bases canceled its part in the war, except in regard to photo reconnaissance. According to the original JCS directive governing employment of very heavy bombers, Admiral
limits, as theater commander could divert the XX Bomber Command from its primary strategic bombardment mission by declaring a tactical or strategic emergency—an arrangement similar to that governing the employment of the Fifteenth Air Force in 1944. However, General Arnold, on the day before the invasion was launched, informed limits that XX Bomber Command has to be used to increase the recovery of TacPB in a minimum sort of time and casualties. The Superforts were to be employed wherever and whenever they could have a decisive effect, regardless of whether an emergency existed.

Air support at the target area was to be provided by the fast carriers of Task Force 52 and by the escort carriers of Task Force 52. For the first time the fast carriers were to be available at the target area for a prolonged time to furnish support and conduct air patrols. The fast carriers were to cover mine-sweeping operations, hit targets on Okinawa that could not be reached by gunfire, destroy enemy defenses and air installations, and strafe the landing beaches. The escort carriers were to provide aircraft for direct support missions, anti-submarine patrols, naval and artillery gunfire spotting, air supply, and photo missions.

The preliminary bombardment of Okinawa and supporting bases began months in advance of the landings. The first fast carrier attack had been made as early as October and subsequent attacks were made in January. On 13 and 19 March Vice Admiral Marc A. Mitscher's Task Force 52 raided airfields on Kyushu and Okinawa and shipyards in the Inland Sea. During February and March, land-based aircraft from the Marianas and Formosa make almost daily attacks over the Ryukyus and adjacent waters. Search and patrol bombers helped to isolate Okinawa by destroying cargo vessels, tugs, and other craft.

On 26 and 27 March the 77th Division made its preliminary landings in the
Coronado Islands and Huito Shima. Although neither of those positions afforded airfield sites or base facilities, they were considered necessary for the fleet anchorages they offered. An unexpected windfall from the Coronado Islands operations was the capture of some 350 suicide boats that the Japanese intended using against the invasion convoys. On Huito Shima the Tenth Army mounted two battalions of 155-mm. guns to support the attack on Okinawa.

On the 27th, 165 5-29's of XX Bomber Command flew their first scheduled mission against airfields and defense installations in Kyushu. That night the very heavy bombers began setting aerial mines in the Shimonoseki Straits in an effort to bottle up shipping in the Inland Sea during the assault.

In preparation for the main landings on 1 April the Navy carried out a seven-day bombardment, and carrier planes raked over the island. It is impossible to estimate the effectiveness of the preparatory operations because the defenders chose to offer only token resistance at the beaches. Maj. Gen. Hitoshi Ushijima, Japanese commander at Okinawa, had instructed his troops: "We must make it our basic principle to allow the enemy to land in full."

Ushijima had withdrawn his garrison into well-prepared defenses, especially in the south, in part of the island and had disposed his forces in great depth. The Japanese on Okinawa, as on Iwo Jima, took every advantage of rugged terrain and inflicted maximum attrition on the Americans. There were over 100,000 enemy troops and they were able to prolong the campaign for 22 days and to inflict 49,000 casualties, of which about 12,500 were killed or missing.

The assault troops had expected the Japanese to put up a fanatical defense, but they had not anticipated a virtual abandonment of the beaches. Marine and Army infantrymen began storming ashore at 0630 on 1 April. By night fall, 50,000 troops were ashore and held a beachhead along the Hagushi
beaches. During the first days the troops pushed rapidly inland and fanned out to the north and south, well ahead of schedule. By 4 April the Tenth Army held an area 15 miles long and from 3 to 10 miles wide. This beachhead included two airfields, Kadena and Yontan. Air, as well as ground resistance, was light during the first days, but kamikaze planes managed to score hits on the 9th March, two transports, and an IJN.

As the Army and Marine troops prepared to probe the main defenses in the southern and northern regions of the island, the enemy began his air and sea counterattacks. On 6 April the Japanese unleashed a furious attack by over 350 kamikazes and almost as many conventional planes. Intercepting such attacks, the antiaircraft and carrier planes destroyed around 300 enemy planes, but not before two destroyers, a minesweeper, two ammunition ships and an IJN had been sunk and numerous other vessels damaged. That night the enemy fleet appeared to contest the landings in what was virtually a suicide engagement. Planes from 49 sank the Terako, the Inazuma, and four destroyers and inflicted serious damage on one destroyer. The last sortie of the Imperial Fleet was thus broken up by air power. But the menace of kamikaze attacks continued. Alterable, from 6 April to 22 June, about 1,900 suicide sorties were flown. For this effort the Japanese were able to sink 25 ships and to score 130 hits and nearly 100 near misses.

In addition to the 5th effort, the Fifth Air Force pounded the suicide bases on Okinawa throughout April. Two fighters of the Fifth Air Force Command also made a direct contribution to the success of the Okinawa campaign. On 16, 19, and 22 April the P-51's worked over the airfields on Kusama and Yonashu. Throughout the rest of the campaign the P-51's made periodic sweeps over airfields in southern Japan. They claimed 64 enemy planes destroyed and 130
draped on the ground, in addition to 10 shot down in combat. To achieve these results the VIII Fighter Command lost 11 planes in combat and 7 from other causes. Unfavorable weather and the enemy's habit of shifting planes from field to field prevented the hoped-for widespread destruction.

During the first week of the Okinawa campaign all direct air support was carrier-based. The first two groups of fighter planes to operate out of Yontan and Kadena fields were Marine aircraft and throughout the operation the Marine pilots were in the majority. By the end of April a total of 270 Corsairs and 20 Army Thunderbolts were operating out of the Yontan, Kadena, and Ie Shima airfields.

With the liberation of the Philippines and the seizure of Iwo Jima and Okinawa the preliminaries to the final knock-out blow had been accomplished. All the numerous landings in both the Central and Southwest Pacific areas had been aimed toward the final goal—invasion of the home islands. Yet these preliminary operations had in fact accomplished the defeat of the enemy. Severance of surface communications, strategic bombardment, and finally the atomic bomb made the final great amphibious operation in the Pacific unnecessary.
"The power of air power is the ability to control the world's air and to use it for the good of one's country. The power of air power lies in the fact that it can be used to support other military operations, to provide information and strategic air superiority, and to provide psychological support.

In order to control the world's air, it is necessary to have a strong air force. This requires not only the development of new aircraft and weapons, but also the training of a large number of pilots and crew members. The power of air power lies in the ability to control the world's air and to use it for the good of one's country. It is also necessary to have a strong air force in order to use air power to support other military operations, to provide information and strategic air superiority, and to provide psychological support.

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trolled when the critical situation developed at Okinawa in mid-February 1944.

By concentrating the full weight of air power in the area under heavy
attack, the beachhead was saved.

In this study an attempt was made to bring out the different types
of command arrangements that prevailed in the Pacific. In the Southwest
Pacific the principle of unity of command prevailed, and it is believed that
in general the best results from the air point of view were achieved there.

The air forces were employed in accordance with their capabilities, coordi-
nation between the various forces was of high order, and morale was generally
good. In the North, Central, and South Pacific areas where the air forces
operated under naval control air power was not always employed in accordance
with its best capabilities, discord and wrangling between the services
arose, and morale, at times at least, was unsatisfactory. The experience
in the Pacific showed that an air force is extremely sensitive to any mis-
direction.

The importance of unity of command was amply demonstrated at Leyte.

General H. B. Arnold made a long series of amphibious landings preparatory to
his return to the Philippines. He advanced without serious let or hindrance
until he moved out of range of his land-based air power. In the landing at
Leyte not only the land-based aircraft but the sound principle of unity of
command was left behind. At Leyte General Arnold, though responsible for
the success of the operation, did not have command of the Third Fleet. The
withdrawal of the Third Fleet at a critical time in the battle produced a
near-disaster, which in all probability could have been avoided had unity of
command prevailed.

Looking forward a bit, it might be pointed out that unity of command was...
as we advanced in the study of the task of the invasion of Japan, it became clear that the issue of Japan would be decided by the engagement of not only the Army, but by the engagement of all service forces. The problem of air superiority, land forces, and service rivalry, among others, prevented the organization of the Allied invasion as a single theater of action. The first bringing unity, the contemplated invasion of Japan brought about a more solid bifurcation in the Pacific. After coordinating with the problem of control for months, JCS on 3 April 1945 designated General MacArthur as Commander in Chief for purposes of the invasion with control of all military resources in the Pacific, with the exception of those in the Southeast Pacific and in the Japanese Home Islands. By the same order Admiral Nimitz was given control of all naval resources in the Pacific, less those in the Southeast Pacific. JCS would retain control of the South Pacific, and normally would charge interaction with land campaigns and Nimitz with sea campaigns. Thus, as before, unity of command was not achieved short of the JCS in estimation.

The World War II experience showed that the best and perhaps the most important role of air power was in the pre-invasion period. The primary object of the pre-invasion operations is to establish air superiority. This term should be understood to imply a continual, rather than a battle, which does not achieve finality until the enemy air force is vanquished. Air superiority may be local or temporary, as in the early days of the pacific war, or widespread and sustained, as in the final phases of the war in Europe. Before an offensive landings or any war-stopping operation, for that matter, can be made it is necessary to arrive at a situation in which the enemy air opposition except the more effectively. Air superiority was achieved
in a variety of ways and by the use of all types of aircraft. Times of
counter-air operations included air control, fighter sweeps, and attacks on
airfields, installations, supplies (especially fuel), repair bases, and
aircraft factories.

The North African operation was unique in that it was preceded by no
preparatory bombings. The invasion of Sicily was the first of the large
European landings where a carefully planned program of pre-invasion bom-
baring was carried out. The chief effort was concentrated on airfields.

It was learned that attacks to be effective must be well timed and oft
remodeled. It was found also that although airfield attacks could not of
themselves be expected to defeat the enemy's air forces, such attacks gen-

erally resulted in rendering the enemy's air forces ineffective. Preliminary bombings in
the Mediterranean led the effect of forcing the enemy to withdraw his air-
craft to rearward bases. Some of the landings in the Mediterranean was
seriously jeopardized by the enemy's air forces.

In preparation for the 1943 the fleet for air supremacy was tacted
over a long period of most赫赫方赫方方方方

The United States had established air superiority on the cost of their islands in the Pacific, and that
air superiority had been gradually expanded by the bombing over the coastal
areas. By the spring of Europe, and finally into the interior. The
largest invasion in history was launched with only negligible interference
from the enemy's air forces. To the invasion of Britain since the air
expeditions were own very helpful.

As in Europe, the battle for air superiority in the Pacific began at
the beginning of the world war was over. By the end of 1943 the Japanese
naval air force in the Pacific was virtually defeated by American land-and
cruiser and planes tried rally over Truk. For victory over the Japanese
air force to be conclusively accomplished by May and April 1944, this
period was vitally important. Operations in the Southwest Pacific
that brought the Japanese campaign to a successful conclusion on a
W-D drive were an island Pacific extended through the Gilberts to
Truk and all islands. The degree of air superiority was, however, over-estimated
in the decision to land in the Philippines without land-based air support.

The use of naval forces by the Japanc introduced a new factor
in the equation of air superiority. The old idea that even a Detached,
ill-trained, and poorly equipped air force in capable of causing widespread
damage to a concentration of ships, troops, and supplies. The ability to
Hit and then attack an essentially fixed or static air defense, the use of heavy bombs
overhead to carry out their mission in the air before they reach the target
area. This factor sharply called for a higher degree of air superiority
than that obtained with air superiority on land-based forces.

In addition to the question of air superiority, which victor in a
continuous and an important part of pre-invasion operations to the
invasion force and the threat to ground forces. So little can be determined
the question of which defense played no significant role in the battles in
Sicily and Italy. The question was not merely defense and initial reliance
in the initial attack, but on the resistance leading to the assault itself.

In the case of land in Sicily it was a very different story. For whole
contingent of Italian was subjected to enemy hitpoints, strong points, and bomb
airfields. Experience has shown that coast defense guns, in batteries or
The importance of land-based air in softening up operations was brought into sharp focus in the Pacific theater. In the South and Southeast Pacific the landing areas were pounded months before the assault and generally the troops went ashore with light casualties. The classic example of the saturation bombing of a landing area was Iwo Jima, where the defenses were flattened before the assault went in. In the Central Pacific the pattern was different. In Iwo Jima air power was used to protect bases already held, to neutralize surfaced bases, and to soften the base to be seized. Generally, however, the base to be seized was beyond the effective range of anything but heavy bombers, and these were not available in large numbers until late in the war. The intermittent efforts of the air were generally supplemented by carrier assets. The result was that with the exception of Tinian...
(within range of all types of aircraft), Japan, and China, the bases were not subjected to sustained heavy bombardment. The heavy casualties at Tarawa, Peleliu, and Iwo Jima are a matter of history. The striking differences between the relative ease and the extreme difficulty of landing operations in the Southwest Pacific and the Central Pacific cannot be explained by land-based vs. carrier-based air power alone. There were differences in terrain, distance, quality of enemy resistance, and logistical problems that helped to make the Central Pacific landings more costly in lives and equipment. But the greater effectiveness of land-based bombardment should not be obscured or explained away by these other factors.

In the North Pacific, land-based air power was operating under conditions of much advantage from the point of view of weather and terrain. The Navy did not believe that carrier-based aircraft could overcome these disadvantages by their ability to move to and from the scene of operations. The record did not prove that belief. During times of particularly bad weather, carrier-based aircraft were no more successful than land-based aircraft in reaching the target. Losses sustained from non-operational causes were as high among carrier as land-based aircraft. The real advantage of carrier-based aircraft derived not from their supposed ability to overcome unfavorable weather but from the existence of longer than they provided.

In the pre-invasion period of amphibious operations the air forces also played an important role in the carrying out of deceptive measures. The need for surprise varied with the theater. In the Central Pacific, landing zones were so far from land there was little need for deception. In continental landings where there was a choice of landing areas, tactical surprise was highly desirable. The pre-invasion bombing in the Netherlands area was conducted to lead the Japanese to suspect an invasion at Cape Bay and
The cross-channel and Southern France invasions were most pieces of a section. The pattern of pre-invasion bombings misled the Germans in believing that the main attack across the channel would come in the Pas de Calais. A false track line was used and then the bulls were carried around night end. In Southern Britain points were made at both ends and the toll was carried through couple.

The second priority of air force operations in amphibious landings, the isolation of the battlefield, was carried out with varying degrees of success. Isolation of the battlefield involved preventing the receipt of troops on, supplies to, the battle area and within the battle area. This mission, like the first, brought from the assault and continued throughout the operation. Sicily was effectively cut off from reinforcement by attacks on the Messina bottleneck, railways, and ports along the western coast of the Italian boot, and the small ports in northern and eastern Sicily. On the continent of Europe railways assumed particular importance. Although the air forces obtained considerable success in their attacks on marshaling yards and rolling stock, the effort to isolate the battlefield for the invasion beaches cannot be considered a success for the air forces that the largest were able to assemble troops and to deploy them at that the beachhead. The experience at Salerno brought out clearly the need for night operations in a systematic and lasting isolation of the battlefield is to be achieved.

Lines of communication and defenses must be attacked around the clock. The air power in Italy led to the question as to the ability of air power to isolate the battlefield. All such doubts were satisfied by the experience in the cross-channel invasion.

In the Pacific, isolation of the battlefield usually meant attacks on shipping, for land lines of communication were far or non-existent. In the
Central Pacific the Seventh Air Force was not consistently successful in its anti-shipping strikes, at least during the early stages of the war. Distances were too long generally for the use of medium bombers and the number of heavy bombers was too few for high level returns. In the Southwest Pacific area early anti-shipping strikes off New Guinea and Formosa were not too successful. Later, however, the Fifth and Thirteenth Air Forces developed a high degree of skill in anti-shipping strikes. When heavy bombers became available in large numbers a standard bomb pattern could be laid down, and results were improved by bombing from lower altitudes than had been used earlier. The 52-24 radar-equipped "snoopers," which were introduced in limited numbers beginning in August 1943, proved themselves an effective means against shipping. The even faster light bombers, using tactics ingeniously devised in the South and Southwest Pacific areas proved, however, to be the most effective weapons against shipping.

In the assault period of landing operations, the main functions of the air forces were convoy cover, protection of the beaches, and close support of the ground forces. Convoy cover both by land and carrier-based planes was successful and although ships were damaged and sunk, no convoy was obliged to turn back because of air or sea attack. A beachhead with its concentration of shipping and crowded naval supplies offers a particularly tempting target to every aircraft. Aside from Iwo Jima and Okinawa the beachheads established in the European war were not subjected to heavy air attack. In the Pacific the same was true until Iwo Jima, which was subjected to repeated and heavy attacks before land-based air cover was effectively established. Iwo Jima demonstrated that carrier-based planes can be relied upon to cover a beachhead only for limited periods and that the great advantage of land-based support is its staying power.
In most of the air defense, in all or all the direct control of these forces did not play an important role. If the air forces were to play a role, the job of gaining air superiority, the inactivity of the airfield would not be so efficiently utilized as to do direct combat until the battle was joined in a series of actions. As a result, the forces would be well positioned in whole or in part to cooperate effectively. It is not within the province of this study to consider the whole subject of air support.

If we consider, however, the subject of the various tactics that direct control can yield, a number of interesting points come to mind. One is the development of the use of rockets and mines, which are effective against such targets as ships and structures.

One of the most interesting developments is the atomic bomb. Its effects against heavily fortified targets are known to be devastating. The development of the atomic bomb has raised new questions about the future of air defense. How can we prepare to deal with this new threat? What tactics can be developed to counter the devastating effects of the atomic bomb? These are questions that must be addressed in the future.
As of 10/21, the urgency is no longer considered high. However, it is still recommended that the measures outlined in the previous section be continued. The measures will be reviewed periodically to ensure their effectiveness.

The measures include:
- Increased surveillance at border crossings
- Enhanced security protocols at major transportation hubs
- Collaboration with international partners to monitor and control suspicious activities

While the immediate threat has diminished, the potential for future incidents remains. Therefore, it is essential to maintain a level of vigilance.

It is also important to note that the measures outlined above will be reviewed periodically to ensure their effectiveness. The goal is to ensure that the country remains safe and secure.

Signed,

[Signature]
Chapter III


2. "The 3rd, 8th, 18th, 19th, and 24th Divisions Air Co-ordination in the Mediterranean by S/Ldr. J. A. Smith.


5. "The 3rd, 8th, 18th, 19th, and 24th Divisions Air Co-ordination in the Mediterranean by S/Ldr. J. A. Smith.


33. 12th AT Weekly Intelligence Summary No. 35, 10-16 July 1943.

33.tent. of 17; tent. of 24th.

40. "1943's Participation in the Sicilian Campaign from 15 June through 24 July."
Chapter II

1. "In... Jr., Jr., 428-939; Air of fence History No. 15, Air Chase of the 6th Division (to 1 January 1944), pp. 1-42.


5. "The... No. 15, p. 61-63.


7. "The... No. 61.

8. Ibid., pp. 63-65.

9. "The... Review No. 5, p. 11.


15. "The... Review No. 5, p. 3.


19. "The... Review No. 5, p. 11.

20. "The... Review No. 5, p. 10.


24. "...-15, pp. 111-112.

25. "... The Onset of Salerno Landings, vol. 12, 1-100.

26. "... The Onset of Salerno Landings, vol. 12-100.

27. "...-15, pp. 113-114.


29. Ibid., pp. 116-117.

30. Ibid., p. 128.


32. "... The Onset of Salerno Landings, vol. 12-100, pp. 23-23.

33. Ibid., p. 177.

34. General Clark says that the efforts to isolate the battlefield were "in complete failure." (Clark, "Clark's Story," ed. by Clark, 1940, p. 177.

35. Ibid., p. 194.

36. "... From Salerno to Rome," vol. 12-100.

37. "... bombing of Salerno Landings, p. 231.

38. "...-15, pp. 141-142.

39. "... The Onset of Salerno Landings, vol. 12, pp. 27.

40. "... in FDR-15, pp. 144.

41. Ibid., p. 166.

42. Ibid.

43. Ibid.

44. For FDR-15, vol. 12, p. 221, especially note 62.
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10. Clark, Calculated Risk, p. 305; Storr, iron $	ext{ into the }$ Inc., pp. 137-139.
12. Mediterranean Review, vol. 6, pp. 65-66, 144; Storr, iron $	ext{ into the }$ Inc., pp. 147-150.
15. See note above.
34. MACS, Over-all Report (European War): VIIIC, Oil Div., German Oil, Chemical, Rubber, Explosive and Petroleum Industries; General Staff of MACS, The Integration of the German Oil, Chemical, Rubber, and Explosives Industries, Hist. 1941-45, Part I, Apr.-May 1944.


38. Ninth Air Force Invasion Activities, pp. 54-55.

39. MACS, Effectiveness of Third Phase Tactical Operations, p. 63.


41. See note above.

42. MACS, Effectiveness of Third Phase Tactical Operations, pp. 63; Ninth Air Force Invasion Activities, p. 53.

43. Draft VIIIC-70, p. 32; "The Normandy Invasion," vol. 3.

44. VIIIC-36, p. 91.

45. Ninth Air Force Invasion Activities, pp. 54-55.


47. TIC Signal. Inc., History, 70th Fighter-Interceptor Wing, June 1944.


49. MACS, Effectiveness of Third Phase Tactical Operations, pp. 75-76.

50. Ibid.


52. MACS, Effectiveness of Air Attack Against Rail Transportation, pp. 27, 86.

53. Ibid., p. 29.
Security Information

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NOTES

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11. Ibid., IV, 36.
15. Ibid., p. 67.
16. As quoted in Liller, Guadalcanal, p. 85.
17. Ibid., p. 25.
18. Ibid., pp. 6-8.
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1. H.L. in "H," 4 Ab, 7-9, 35. 


5. Dr. J. B. Bubbb to Capt. Arnold, 14 June 1942. 


7. C.I., 9th Interceptions Campaign (unpub.), p. 34; G-3 Interceptions of the Offensive Phase of the Interception Campaign, 14 Sept. 1943. 


10. N. 11th in 07. 

11. C.I., 9th Interceptions Campaign (unpub.), p. 33. 

12. C.I., 11th in 07. 

13. C.I., 11th in 07. 

14. C.I., 9th Interceptions Campaign (unpub.), p. 46. 

15. C.I., 9th in 07. 

16. 11th Interception Survey 

17. 11th I Command Activities. 

18. C.I., to Nazi Airmen, 11th Interceptions Campaign, p. 71. 


22. 11th W. Court Activities; C.I., The Elections campaign (unpub.), p. 71.


25. Dist. 11th W., pp. 272-274.


27. Dist. 11th W., p. 275; C.I., The Elections Campaign, p. 56.


30. As noted above.


32. 11th W. Statistical Society; C.I., The Elections Campaign, p. 57.

33. N.D.J., The South and Northern Illinois, pp. 25-44.


35. As noted above.

36. The Surveys of the Elections, p. 140.
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2. USSBS, The Campaigns of the Pacific War, p. 176; USSBS, The Fifth Air Force in the War Against Japan, p. 25.

3. AIR in XII, IV, 129, 177.


9. ibid., p. 223.


11. ibid., p. 2-21.


13. AIR in XII, IV, 248.


16. AIR in XII, IV, 570, 586.
12. in., 11, 10, 332.
16. Ibid., p. 251-255.
17. "In., II, IV, 335-305; V, 3-33, op. 13-17.
SECURITY INFORMATION

1. "I in... "E, J, 7(w.), O.P. 3, no. 1-17; dist. air war, 20, 27, 44-50; detec... "E, J, 7(w.), 7, 3-17.
3. "I in... "E, J, 7(w.), O.P. 3, no. 1-17.
4. "I in... "E, J, 7(w.), O.P. 3, no. 1-17.
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8. "I in... "E, J, 7(w.), O.P. 3, no. 1-17.
10. "I in... "E, J, 7(w.), O.P. 3, no. 1-17.
11. "I in... "E, J, 7(w.), O.P. 3, no. 1-17.
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