PARTICIPATION of the NINTH & TWELFTH AIR FORCES in the SICILIAN CAMPAIGN
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IN THE SICILIAN CAMPAIGN

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FOREWORD

This first narrative was prepared by Mr. Harry L. Coles, Jr., of the Mediterranean Section, Combat Operational History Division, AAF Historical Office. Footnote citations and a bibliographical note indicate the principal sources from which it has been drawn. Like other studies in the series, it is subject to revision as additional materials become available.
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Participation of the Ninth and Twelfth Air Forces

in the Sicilian Campaign
Chapter I

THE DEVELOPMENT OF PLANS

The Allied invasion of Sicily on 10 July 1943 was the result of strategic decisions reached at the Casablanca Conference. When the conference opened in January 1943 it had not been decided whether Sicily or Sardinia should be invaded or, indeed, whether any further landing operations in the Mediterranean area should be undertaken after the conclusion of the Tunisian campaign. In accordance with long-held views, the U. S. Joint Chiefs came to the conference with the belief that the most direct way to defeat Germany was by a cross-channel invasion to be launched in 1943, a conviction which was strengthened by the discovery that the British planners thought that an invasion of Sicily could not be mounted prior to 30 August. The U. S. planners were not in favor of an invasion of Sicily at that late date and they were opposed to operations against Sardinia at any time.

The British planners, for their part, maintained that since a cross-channel invasion in 1943 was out of the question a new offensive should be started as soon as possible after the successful conclusion of the Tunisian campaign. They favored the continuation of the main effort in the Mediterranean because of the greater availability of both shipping and manpower in North Africa. Since their own planners estimated August as the earliest date for the Sicilian invasion and since an operation against Sardinia could be mounted in May, the British Chiefs declined themselves in favor of the Sardinian plan. In the
event, however, these conflicting views were compromised and a workable plan of action was produced.¹

The final decision of the Casablanca Conference was that manpower and materiel accumulated in the Mediterranean area should be utilized in further major operations in that theater. The Americans carried their point that "a Sardinian campaign would be equivalent to picking the soft spot first with the danger of making the hard spot harder in the long run."² They were also able to convince the British that it would be feasible to invade Sicily in the early summer in order to divert as much strength as possible from the Russian front during the critical campaign season. At the close of the conference, General Eisenhower was therefore informed that the Combined Chiefs of Staff had decided to attack Sicily in 1943 with the favorable July moon as the target date, and he was to report not later than 1 March whether any insurmountable difficulty as to resources and training would cause delay in the assault later than July. Without prejudice to the July date, the COS would make an intensive effort during the next three weeks to achieve "by contrivance and ingenuity" the favorable June period as the date for the operation. If they were successful, instructions would be modified accordingly. General Eisenhower was to be in supreme command of the invasion of Sicily, with General Sir Harold Alexander as Deputy Commander in Chief charged with detailed planning and execution of the operation.

Development of the Original Assault Plan

In accordance with his instructions General Eisenhower proceeded
immediately after the Casablanca Conference to set up a headquarters known as Force 14l for the planning and execution of HUSKY. The embryo from which the Fifteenth Army Group developed, Force 14l consisted of planners from the American and British armies, navies, and air forces, and was located in the Ecole Normale, at Bouzarea, a suburb of Algiers. Force 14l produced "Tactical Appreciation" which formed the basis for all detailed planning and for the operational outline air plan which was issued on 15 March. This original outline plan contained a brief summary of the assault plan, several paragraphs on policies to be followed with regard to the employment of fighter and bomber aircraft, air action in coordination with naval and ground forces, and an outline of the course of operations in four phases.

Sicily, the largest island in the Mediterranean, forms a natural steppingstone between the tip of Tunisia and the Italian mainland. Triangular in shape, it is approximately 150 miles long from east to west and about 110 miles at its base. The total area of the island is around 10,000 square miles, which is slightly larger than the state of Vermont. The terrain is characterized chiefly by mountains which rise to their greatest height in the northeast. The coastal strip is narrow and the only plain of any size is to the west and south of Catania. The southeastern tip of the island is only about 90 miles from Cape Bon in Tunisia, while the northeastern corner is separated from the Italian mainland by the Strait of Messina, which at their narrowest point are only about two miles wide. The Axis had sent a constant stream of reinforcements across this bridge from Europe to
North Africa. As General Eisenhower remarked, the traffic had all been one way and it was his job to reverse it.4

Obviously the geographical position of the island favored the defender rather than the invader. According to "Tactical Appreciation" there were six train ferry ships operating between Messina and the mainland which were estimated to have a 24-hour capacity of 40,000 men without vehicles or of 7,500 men and 750 vehicles. In addition to these facilities troops could be transported by ordinary steamer at the rate of 12,000 men per 24 hours, while military air transport was estimated to be capable of transporting as much as 1,000 tons daily. There were in Sicily 19 airfields and landing grounds concentrated in the eastern, southeastern, and western portions of the island. All of these fields were within 15 miles of the coast and those in the east and southeast were mutually supporting.5

In choosing areas for assault, two main questions had to be taken into consideration: fighter cover and port capacity. The most important strategic objective on Sicily was Messina; but owing to the fact that the straits were completely closed to Allied traffic and beyond the range of fighter aircraft, it was not considered feasible to launch a direct attack against this point or at any point on the northern coast between Messina and Palermo or on the eastern coast as far south as Catania. So long, therefore, as Allied air forces were operating from North Africa and Malta, possible areas for initial debarkation were limited to the southern shore line between Marsala.
and Syracuse. This area, however, provided no major ports and the question of supply had to be considered in making the assault plans.

Since an amphibious assault against Messina was out of the question, General Eisenhower’s staff was obliged to provide for the capture of Catania and Syracuse in the east and Palermo in the west as the best possible alternatives. As a matter of fact it was estimated that unless the invading forces gained control of both Catania and Palermo they could not hope to maintain a sufficient number of troops in Sicily to conquer the island, whereas with the possession of these ports an equivalent of ten divisions could be maintained. Since all these ports were out of range of fighter cover, the immediate objectives of the assault forces were to be airfields in the southeast and west from which the necessary extension of air cover could be provided for the capture of the ports.

The exact timing of the assaults in the southeast and west was an important consideration. Although simultaneous assaults would have the advantage of achieving a maximum dispersion of the enemy’s air and ground forces, it was decided to stagger the landings. The overriding consideration leading to this decision was the determination to soften the defenses in advance of the landings by the use of airborne forces. Since the number of transport aircraft was inadequate to supply the necessary lift for simultaneous operations, it was decided to employ all available transport to lift the maximum number of troops for each operation in turn.
The original assault plan for HUSKY, then, envisaged a highly refined operation involving several amphibious landings made in succession. The initial attack was to consist of four simultaneous pre-dawn assaults on D-day by an Eastern Task Force with the object of capturing airfields and minor ports in southeastern Sicily from which to support the main assault on Catania. The assault on Catania was to be carried out on D plus 3 by a strong force from Tunisia known as the Kilt Force. The initial landings of a Western Task Force were to take place on D plus 2 and to consist of a shore-to-shore assault by a strong force from Tunisia (known as the Ensa Force) against Sciacca-Marinelli with the object of capturing the Sciacca and Castelvetrano airfields. These attacks were to be followed up on D plus 5 by (a) a shore-to-shore assault by a force from the United States (known as Fish Force) against Castellamare, to cut off Palermo from the west and join with Ensa Force; (b) a ship-to-shore assault by a small force from Tunisia (known as Croc Force) against Traggetto, to advance eastward on Palermo; and (c) a ship-to-shore assault by a small force from Tunisia (known as Hook Force) at Carini Bay.

Proposed Alterations in the Original Assault Plan

Detailed planning had hardly got underway when important changes in the assault plan began to be considered. As a matter of fact, even before the outline plan was issued, Generals Alexander and

* The term "ship-to-shore" implies an assault which is carried in ships to the point of assault and then disembarked into landing craft. The term "shore-to-shore" implies the embarkation of troops directly into their landing craft and procedure to the point of assault in the craft from which they will disembark on the beach.
Montgomery had convinced General Eisenhower that a series of staggered landings would have the effect of spreading Allied forces too thinly. General Eisenhower had originally suggested that all available forces be concentrated in the southeastern area, but this suggestion had been abandoned because of the need for the facilities of the port of Palermo. For the next six weeks General Eisenhower struggled with a dilemma involving two risks—"that of being too weak for our immediate objectives in the Southeast, because of the insurance taken for the early capture of Palermo and the maintenance risk that must be assumed if Palermo were sacrificed for the sake of decisive strength in the Southeast."  

The first efforts at a solution of this difficult problem were in the nature of a compromise. In a communication of 30 March 1943 General Eisenhower informed the Combined Chiefs of Staff that continued study of the HUSKY outline plan had convinced Generals Alexander and Montgomery that the forces assigned to the Eastern Task Force were too weak to attain essential immediate objectives. Recent reconnaissance had shown that the airfield near Gela was one of the most highly developed in all Sicily. In addition, Air Chief Marshal Tedder maintained that the airfield at Pachino would have to be seized at the earliest possible moment after the landing. In view of these developments in the situation, Generals Alexander and Montgomery had become convinced that an additional division was necessary to assure reasonable expectation of success in the vital southeastern area. Since the Commander in Chief had been informed
that the two governments had already allocated to the enterprise
every ship and landing craft available, the only possible course of
action with the available shipping and landing craft was to assign
to one of the American divisions the mission of capturing the Cela air-
fields and to side-slip the British forces to the eastward.

The original purpose of the southwestern assaults was to capture
the airfields at Sciacca and Castelvetrano from which to assist the
attack on Palermo. Under the new conception the idea was to make
every effort to insure the capture of the vital southeastern corner
from which area long-range fighter support could be given the Palermo
attack from the Catania-Cela line. There would be, therefore, no
fixed date for the Palermo attack and the assault against this impor-
tant objective would take place at such time as fighter support could
be assured.

It was recognized that there were several objections to the
proposed changes. One of the main disadvantages was that the two
American divisions scheduled for seizing Palermo must be ready to
attack from D plus 3 onward. With their sailing date dependent upon
the progress made in the southeastern sector, it might be necessary
for the shipping to lie in North African ports for four or five days
or longer with personnel, at least on the large ships, unable to
debar. Another objection to the plan was that success of the assault
on Palermo might be jeopardized by the scrapping of the diversionary
landings in the southwestern area. Yet the salient fact remained that
without the Catania and Gela airfields, the whole plan would become abortive and all later attacks, even if at first partially successful, would merely lead into difficulties which could not be overcome. So long as the necessary craft for landing an additional British division out of Tunisia could not be produced, General Eisenhower could see no recourse except that of accepting the recommendations of General Alexander. 10

The proposed modifications in the assault plans, however, did not materialize. On 25 March 1943 the British Chiefs of Staff made it known that they were very strongly opposed to canceling the assault in the southwestern area by the Buna Force, and if General Eisenhower adhered to the view that the southeast assaults had to be strengthened, an additional division must somehow be provided for him. In addition to the objections raised by the British Chiefs, the planners of Force 141 had to reckon with the problem of serious discrepancies in shipping estimates. Planners in the theater, for example, estimated that 20 per cent of the shore-to-shore landing craft used for training would not be operational on D-day, whereas planners in Washington maintained that 10 per cent was an adequate estimate. Efforts to reconcile such discrepancies were never entirely successful and the Husky planners were unable to see their way clear for assault-landing an additional division. The views of the British Chiefs of Staff were, however, carefully considered and on 11 April General Eisenhower informed the War Department that he had decided to restore the main outline of the original plan which included an assault by a U. S. division
(Elsa Force) in the southwest on D plus 2.11

The Final Assault Plan

Only a few days later, however, a volte face occurred in the plans for invading Sicily. During the latter part of April both the air and naval commanders became insistent that the southeastern assaults should provide for the capture of the airfields at Comiso, Ponte Clivo, and Biscari at the earliest possible moment, in order to prevent prohibitive losses of ships which might endanger subsequent operations in the southeastern area and preclude the western assaults altogether.12 While concurring with the desirability of seizing the airfields, the commander of the Eighth Army objected to dividing his forces for the attainment of such scattered objectives, and maintained furthermore that while his ground forces might deny the use of the fields to the enemy, they were not strong enough to guarantee their use to Allied air forces. Both arguments appeared to General Eisenhower to be equally cogent, and served to bring out the fundamental weakness of the entire strategic plan, "which in attempting—with limited resources—to achieve too much at the same time in too many places, risked losing all everywhere."13 Further conferences resulted merely in convincing all commanders that the airfields in the southeast must be secured in the first rush and that the main strength would have to be concentrated in this area. The arrival at a firm decision was described by General Eisenhower as follows:14
On May 3 we stopped tinkering and completely recast our plan on the sound strategic principle of concentration in the crucial area. I abandoned not only the southwestern assault scheduled for D plus 2, but the assaults west of Palermo on D plus 5 as well, and diverted the entire Western Task Force to the southeastern assault. I deliberately assumed the maintenance and supply risk involved in the sacrifice of Palermo as an immediate objective, because all of us were at last convinced that it was the lesser of two evils.

The new—the final—assault plan was soon afterward submitted to the COS with the pertinent comment that "the lessons we have learned here as to the difficulty of bringing Axis troops from mountainous positions have convinced all commanders that the Sicilian plan should provide concentrated strength at critical points even at the cost of additional risk in maintenance and supply."\(^{16}\) The basic change in plan was discussed at the Trident Conference held at Washington in May 1943. There was expressed a fear that cancellation of the western assaults would have the effect of prolonging the Sicilian campaign, possibly into mid-September. It was generally agreed that the main weakness of the new plan was that it left Palermo open to reinforcements, but it was pointed out that with the enormous Allied air superiority it should be possible to cut off the enemy line of reinforcement and possibly to seal off the island. With this reassurance the COS on 15 May, the day of final collapse of all Axis resistance in North Africa, informed General Eisenhower that they had approved the main outlines of his new plan. At the same time it was decided that no form of an accelerated HUSKY would be attempted. On 11 May, General Eisenhower had informed the COS that no feasible expedients or short
cuts would permit any sort of operation against Sicily to be mounted before the middle of July, and they followed his judgment in this matter. 16

The new outline plan involved a reallotment of objectives between the Eastern and Western Task Forces and completely upset the original logistical plan which was based on the early utilization of the port facilities of Palermo. It did not, however, affect the broad plans for the allocation of resources to the two task forces, and the same general combination of land, sea, and air operations was retained. The objectives of the airborne missions were changed in the final plan from direct attacks against beach defenses to strategic inland points whose capture would greatly facilitate the advance of the seaborne forces.

Eight simultaneous seaborne assaults were to be made along approximately 100 miles of coastline extending from Cap Murro di Forco, just south of Syracuse, around the southeastern tip of Sicily, and westward as far as Licata. The Eastern Naval Task Force, convoying the British Eighth Army under command of General Sir Bernard L. Montgomery, was to land on the eastern shore, while the Western Naval Task Force, convoying the U. S. Seventh Army under Lt. Gen. George S. Patton, was to land on the southeastern shore. The American troops were divided into three assault forces, JOSS, DIME, and CENT. The CENT-DIME assault, 17 under immediate command of Lt. Gen. Omar N. Bradley of II Corps, had three immediate objectives: (1) under cover of darkness on D-day to land in the Gela-Sampieri area and capture the airfields at Ponte Clivo by daylight on D plus 1, the airfield north
of Comiso by daylight of D plus 2, and the air landing field north
of Biscari by dark of D plus 2; (2) to extend the beachhead to
Yellow line; \(^{18}\) and (3) to gain contact with the British in the vicinity
of Ragusa. The JOSS assault under command of Maj. Gen. L. K. Truscott
was to land in the Licata area, capture the port and airfield by dark-
ness of D-day, extend the beachhead to the Yellow line, protect the
left flank of the operation against interference from the northwest,
and on the right flank gain contact with II Corps.

**Allied Air Force Organization in the Mediterranean**
**Theater of Operations**

Arrival at a firm decision on the assault plans cleared the way
for the preparation of the air plan. To appreciate the intricate
problems involved in making plans for the invasion, it is necessary to
have an understanding of the organization of the Allied air forces in
the Mediterranean theater. Although the establishment of special
headquarters and planning staffs further complicated an already in-
volved organization, there was no fundamental change in the system of
command and basic organization set up on 18 February 1943. The air organiza-
tion of the Mediterranean theater, like the strategic plan for the in-
vansion of Sicily, was the result of decisions reached at Casablanca.
After the conference it was announced that there was to be one air
commander in chief for the whole theater who was to exercise his
authority through a headquarters known as Mediterranean Air Command.\(^{19}\)
The man chosen to command the Allied air forces, directly under General
D. D. Eisenhower, the Allied Force Commander, was Air Chief Marshal Sir Arthur W. Tedder. On the command level directly under Mediterranean Air Command (MAC) was the Northwest African Air Forces (NAAF) commanded by Lt. Gen. Carl Spaatz, the Middle East Air Command under Air Chief Marshal Douglas, and the Malta Air Command under Air Vice Marshal Park. Not a part of MAC but under the operational control of Air Chief Marshal Tedder was RAF Gibraltar. The MAC was in essence a small policy and planning staff made up of American and British officers who were to coordinate the requirements of subordinate commands and serve as a sort of “brain trust without executive authority or domestic responsibilities which would be borne by General Spaatz, ACM Douglas and AVM Park.” Setting up his headquarters at Algiers on 18 February 1943, Air Chief Marshal Tedder chose Air Vice Marshal Wigglesworth as his deputy, General Craig as his chief of staff, and Brig. Gen. Patrick W. Timberlake, USA, as his director of operations and plans. Maintenance and supply as well as intelligence officers were drawn from the RAF and were men familiar with the views and methods of Air Chief Marshal Tedder. Their task was to weld the diverse air units in the Mediterranean into a powerful and unified striking force.

The principal operational and executive formation under MAC was the Northwest African Air Forces under General Spaatz. In accordance with experience gained in operations in the Western Desert and with his own conception of an air force subdivided by functions, General Spaatz organized the NAAF into three main sub-commands. Maj. Gen.
James H. Doolittle was placed in command of the Northwest African Strategic Air Force (NASAF) and charged with the direction of all bombers and escort fighters for strategic operations. The main components of the NASAF were the XII Bomber Command and the Wellington bombers of the 330 and 331 Wings, RAF. To coordinate the efforts of the air forces operating in support of ground forces, the Northwest African Tactical Air Force was created under Air Vice Marshal Sir Arthur Coningham. At the time of the Sicilian invasion the Tactical Air Force consisted of the Desert Air Force, the XII Air Support Command, and the Tactical Bomber Force. The responsibility for the air defense and sea-air reconnaissance of Northwest Africa, as well as control over anti-submarine operations, shipping strikes, and the air-to-ground recognition system, was assigned to Air Vice Marshal Sir Hugh P. Lloyd as commander of the Northwest African Coastal Air Force. At the time of the invasion the NASAF consisted of 342 Group RAF and certain units of the XII Fighter Command, including its headquarters and headquarters squadron, as well as the 350th U. S. Fighter Group.

In addition to the above the NASAF included an air service command, a training command, and a photographic wing. The Northwest African Air Service Command consisted of the XII Air Service Command and the British Eastern Air Command Maintenance Organization and was under command of Brig. Gen. Harold A. Bartron at the time of the Sicilian campaign. To coordinate the requirements of the British and American elements a Northwest African Training Command was created under Brig. Gen. John K. Cannon. The photographic needs of the Allied
Air forces were provided for by the Northwest African Photographic Wing under command of Col. Elliott Roosevelt whose priorities were established by Headquarters NAAF in conjunction with Allied Force Headquarters and Mediterranean Air Command. To these commands was added a fourth on 21 March 1943, when the Northwest African Air Forces Troop Carrier Command was activated under command of Brig. Gen. Paul L. Williams.23

Also under the Mediterranean Air Command was the Ninth Air Force, which was the American component of the Middle East Air Command. From the evidence currently available it does not appear, however, that Headquarters RAF Middle East and Headquarters Ninth Air Force ever functioned as a combined headquarters in the same sense as Headquarters NAAF. Close cooperation had been maintained from the first, but by the time of the Sicilian campaign only the 3-24 groups were operating under the control of Maj. Gen. Lewis H. Brereton. The units of IX Fighter Command were operating under the NAAF 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 (24) were under Tactical Bomber Force.

At a meeting of 19 April 1943 at Headquarters Northwest African Air Forces, Air Chief Marshal Tedder, General Spaatz, Air Marshal Cunningham, Air Vice Marshal Lloyd, Generals Doolittle, and Brereton, Air Commodore Foster, and members of their staffs discussed the development of detailed planning. After a brief outline of what had been accomplished and an indication of the requirements for future
planning, Group Captain Fankhurst explained that either detailed plans could be prepared on the NAAF level and completed plans handed down to the commands or they could be made by the commands themselves. It was decided that planning would be done on the level of the subordinate command, and if necessary, available planning personnel would be turned over to them. The question of the responsibility for the Tactical Air Force planning was discussed with special reference to the requirements of Eastern and Western Task Forces. Air Marshal Coningham pointed out the danger of conceiving of the two task forces as separate entities. He indicated, for example, that it would be impossible to predict the exact progress of the operation: one assault might be more successful than had been anticipated while another might be unsuccessful, in which case the bulk of the air forces would have to be concentrated in one place. In order to exploit to the full the inherent flexibility of air power he felt that the Tactical Air Force should exercise centralized control over both operations. In accordance with these suggestions a decision was made that TAF Headquarters be responsible for both, Colonel Hickey representing the Western Task Force and Group Captain Bennet, the Eastern Task Force.

During the course of the discussion there arose the question of the method of handling the U.S. air force units from the Middle East. General Erreton stated that he considered units now part of the Western Desert Air Force to be under the operational control of the Tactical Air Force. The question as to whether units in the Middle East, including two B-24 groups, should be transferred completely to the NAAF was discussed, but no decision was reached.
Shortly after this meeting and during the early part of May, Headquarters NAAF issued Air Planning Memorandum No. 2, entitled "Procedure for Detailed Planning and Action Necessary to Mount Operation Husky." The purpose of this memorandum was to define the responsibilities of the various units participating in HUSKY and to clarify to whatever extent possible the complex organizational set-up of the Allied air forces in the Mediterranean theater. The already complicated organization of the Allied forces in the Mediterranean became even more involved when special headquarters and planning staffs for HUSKY were set up.

Allied Force Headquarters, retaining its normal functions as the supreme military command in the theater, controlled in conjunction with Headquarters North African Theater of Operations, U. S. Army (NATOUSA) the allocation of transportation and the general movement and shipping plan in Northwest Africa. Force 141 was in the position of a subordinate command and was set up by the naval, ground, and air commanders for planning and executive action during the preparatory stages of HUSKY. Force 543 was the name given to the Western Task Force during the planning stage. With its headquarters at Oran, it was responsible for the Western Task Force detailed plan, the training of western assault forces, and the production of loading schedules. Force 545, located at Cairo, Egypt, had similar responsibilities for the Eastern Task Force. A table following p. 19 shows the channels of communication at the highest levels of command.
The agency responsible for the formulation of air force policy on the highest level, and for planning and coordination of subordinate command requirements was Headquarters Mediterranean Air Command. It was this headquarters which issued the "Outline Air Plan," and which by virtue of being in close touch with the military and naval planning staffs issued subsequent instructions and amendments. It had no executive machinery, however, and all executive action had to be taken through Headquarters NAAF, Headquarters RAF Middle East, Headquarters Ninth Air Force, or Headquarters RAF Malta, all of which were to furnish units for the Air Task Force, which was to carry out the operation. Within the NAAF each command was to be responsible for detailed planning and executive action to prepare for its particular tasks in HUSKY. A-5 of NAAF was to be responsible for maintaining contact with Force 141, Mediterranean Air Command, RAF Middle East, Ninth Air Force, RAF Malta, and as necessary, with the air sections of Force 343 and Force 545 in matters pertaining to the general air plan.

Planning Memorandum No. 2 also listed various training centers which had been, or were to be, set up for the combined operations. One such center was to be established in the Ouadja area for the combined training of airborne troops and troop carrier units; others were being set up at Bougie, Arzew, and Kabrit for the combined training of British Army units being mounted in Northwest Africa, U. S. Army formations, and British Army units from the Middle East respectively.
CHANNELS OF COMMUNICATION FOR OPERATION HUSKY

COMBINED CHIEFS OF STAFF

HQ WASHINGTON

ALICE

COMBINED FORCES HQ

COMMANDER SUPREME

HQ FORCE III

HQ FORCE 313

HQ FORCE 315

HQ COALITION MIDDLE EAST

CONFIDENTIAL
The Outline Air Plan of the Northwest African Air Forces

The Plan for the Employment of the Northwest African Air Forces and Attached Air Forces in Operation "Husky" was issued in May. This air plan, which was based on the final assault plan, dealt with general policies to be followed in the application of air power and with the specific missions of the various components of the NAAF. The main ends to be achieved were as follows:

1. The destruction or neutralization of the enemy air forces within range of the operations
2. Air operations intended to prepare the way for the assault and assist its execution
3. Support of naval operation
4. Protection of the assault convoys
5. Support of the assault forces
6. Air operations necessary to launch the paratroop attacks included in the plan
7. Air attacks on enemy shipping and naval forces
8. The protection of Northwest Africa and of captured areas of Sicily against air attack
9. Participation in the cover plan and in diversionary operations aimed at keeping the enemy air forces as widely dispersed as possible

The air forces in the Middle East and Malta were to share tasks "1" to "4" and tasks "7" and "8." The responsibility for task "9" was to be shared also by the air forces in the United Kingdom.

The plan provided that at the earliest possible moment after the initiation of the assault, air forces sufficient to provide local protection for the ground and other forces engaged should be placed...
in Sicily. Prior to the assault phase certain units were to be moved
to Malta and during the assault to operate from there; others were
to operate from Tunisia during that period. Immediately after the
capture of the airfields in the southeastern area, units were to fly
into Sicily from both Malta and Tunisia.

The Air Plan provided for four phases of operation as follows:

Phase I. Preparatory Operations
A. Period from end of Tunisian campaign until D minus 7
B. Period from D minus 7 to D minus 1

Phase II. Period of the Assault

Phase III. Period Covering the Attack on Catania

Phase IV. Period Covering the Reduction of the Remainder of
the Island

Since by mid-May the enemy had been cleared from Tunisia, the
preparatory bombing was to be initiated immediately. It was not in-
tended 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. Until about D minus 7, therefore, a
steady but relatively modest bombing program was to be undertaken with
the object of inflicting as much damage as possible and of interfering
with any build-up of forces which the enemy might attempt in Sicily.
Targets during this phase would be the main German airfields in
Sicily, Sardinia, and southern Italy, together with submarine bases,
communications lines, and industrial plants. Apart from the airfields,
the more important targets would be Naples, Messina, and Palermo.
During this same period the movement of units of the Air Task Force was to be largely completed and the torpedo bomber units stationed in Malta were to be moved to Northwest Africa and the Middle East to make room for them. By D minus 7 all units were to be deployed at their Husky stations.

During the latter part of the preliminary phase, from D minus 7 to D minus 1 the Allied air forces were to step up their offensive against the enemy air force with the object of rendering it impotent to offer serious opposition to the projected landings. German rather than Italian-occupied landing dromes were to be given primary attention. The selection of targets and the scale of attack were, however, to be constantly under review and might be changed as a result of photo reconnaissance. It was hoped that by the end of the period a marked reduction in the enemy's first-line strength, especially in fighter aircraft, would be achieved. It was not contended that this could be done by the bombing of airfields alone. Experience had shown, however, that eventually such tactics had the effect of forcing the enemy to come up and fight, and it was then that heavy casualties might be inflicted on him. Forecasts had indicated that the RAF was likely to be hard pressed to find reinforcements, especially if pressure on the Russian front were continued at its current intensity. Accelerated air activity from the United Kingdom would impose an additional heavy strain and make it unlikely that the enemy could reinforce the Mediterranean theater without dangerously weakening himself elsewhere. The presumption was, then, that the enemy would
be unable to maintain his air strength at a standard high enough to be a decisive factor in the Sicilian battle.

During this same period, the week preceding D-day, the scale of attack on communications leading into Sicily was to be increased. Palermo, Messina, and Catania were the most important of the Sicilian ports and were to be attacked on a scale in accordance with photo reconnaissance results. At a propitious time near the approach of D-day, a maximal-scale day-and-night attack was to be directed against Messina with the object of neutralizing it as a supply base and a channel for reinforcements. Other road and rail communications in southern Italy and Sicily were to be attacked as reconnaissance disclosed profitable targets. All movements of the Air Task Force preliminary to the assault phase were to be completed during this period.

During the assault phase the bomber effort was still to be aimed at denying the air to the enemy forces, and enemy airfields in Sicily were to remain the primary targets. Any attempt, however, by the enemy naval forces to interfere with the movement of the convoys was to be immediately countered by independent air action or by air action in cooperation with Allied naval forces. In addition, antisubmarine activities were to be increased during this period. On the night of D-day-D plus 1 and throughout D plus 1 offensive air action was to be concentrated against enemy airfields and against Palermo and Messina. By D plus 1 it was expected that the airfield at Foggia would be in Allied hands, and as soon as it was in serviceable condition squadrons of the Air Task Force would be flown in from Malta in accordance with the schedule given in Appendix III. Additional airfields at Ponte Olivo, Piscari, Comiso, and Licata were to be in Allied hands by D plus 2.
or D plus 3, and this would permit a heavier scale of attack on the remaining enemy airfields. By this time also it would be necessary to prevent the enemy's reinforcing his land forces by attacking communications centers serving the assault area.

The responsibility for the protection of the assault convoys against enemy air and submarine activity was divided as follows: NAAF was to be responsible for those convoys which sailed from northwest Africa, or which came from the westward; the RAF Middle East, for those coming from the eastern Mediterranean, with some assistance, perhaps, from the NAAF for the last stage to Sicily. The Air Plan directed that a detailed study of the convoy routes and stages be made in order to insure adequate cover with the minimum expenditure of air effort.

During the assault period the primary aim of the air forces was to insure that the enemy did not interfere with ground or naval operations from the air. Until mastery of the air was achieved, the bomber effort was to be concentrated for the achievement of this end. Once the aim was achieved, however, the bombing effort could be switched to other targets, provided the enemy air force remained impotent. Because fighter sorties would have to be made from Malta and Tunisia it would not be possible to offer strong fighter protection for the land forces until airfields on Sicily were captured and made serviceable.

The types of direct assistance to be afforded the land forces were as follows:
1. If required, light bombers and possibly medium bombers would provide a smoke screen during the assault of the beaches.

2. Tactical reconnaissance aircraft and light bombers were to furnish close cooperation with the land forces.

3. When enemy air had ceased to be a factor in the operations, enemy ground forces were to be attacked by offensive sweeps.

4. Medium and heavy bombers were to be used to provide immediate assistance to the land operation provided:
   a. The enemy air forces had been rendered impotent, and the normal targets for heavy and medium bombers, such as communication focal points, enemy concentrations, and depots behind the lines did not exist, or
   b. The military situation was so precarious that all available air power must be concentrated to retrieve it, or
   c. The enemy was in full retreat.

Normally, because of their vulnerability to ground fire, it was considered wasteful to utilize heavy and medium bombardment in low attacks against fleeting targets, since such attacks usually produced only ephemeral results at high cost. A twelve-hour notice would in general be required before attacks by medium and heavy bombers could be executed. The Air Plan provided that a list of known pivotal defense positions and other easily identifiable targets in the assault areas should be prepared in case it were necessary to divert the heavy and medium bombers to the immediate vicinity of the land operations. Each target was to be given a code number, and target maps were to be prepared and distributed by NAAF.

During the third phase of the battle, the period covering the attack on Catania, it was assumed that aircraft would be operating from Pachino (by D plus 2), Ponte Olivo (by D plus 2 or D plus 3).
and Biscari and Comiso (by D plus 3 or D plus 4). Squadrons were to be flown in according to the schedule given in Appendix III. From the captured Sicilian bases and from Malta, fighter protection was to be given the land forces advancing on Catania. As soon as the first fighter squadrons left Malta, two fighter-bomber squadrons were to be flown to Malta from Tunisia, followed by light or possibly medium bomber squadrons which were to "support" the advance of the task forces. It was considered of the utmost importance that radio direction finder be established in Sicily as soon as possible and that night fighters be in operation at the earliest possible moment to prevent the enemy's taking any advantage of the hours of darkness to carry out movements and reinforcements. By D plus 4 the use of the Catania and Gerbini airfields should be denied the enemy, and by D plus 6 or D plus 7 it was considered possible that these airfields would be in Allied hands and ready for use. By this stage of the operation air superiority in the battle area should be firmly established, but the objective of bomber force would still be to prevent the reinforcement of the island and to prevent effective enemy air operations from the remaining airfields in the west and from enemy bomber fields in Sardinia. It was expected, however, that some of the effort of the Strategic Air Force could be directed toward targets which would assist in the reduction of the island. It was planned also at this time to use fighter-bombers from Malta and Sicily in tactical coordination (direct support) with the ground forces.

The fourth phase of operations, the reduction of the island, was
to be inaugurated about D plus 8 or shortly thereafter. It was be-
lieved that by that time it would be possible to support and operate
the following air forces from Sicily:

- **Single-engined fighters** . . . . . . . . 16½ squadrons Spitfires (RAF)
  1 group (3 squadrons) Spitfires (U.S.)

- **Fighter-bombers** . . . . . . . . . . . 1 group (3 squadrons) P-30's (U.S.)

- **Observation and tactical reconnaissance aircraft** . . . . . . . 1 U.S. observation squadron, P-51's
  1 RAF tactical reconnaissance squadron, Spitfires

- **Dive bombers** . . . . . . . . . . . . . . . 2 groups (6 squadrons) A-36's (U.S.)

- **Twin-engined night fighters** . . . . . . 2 half squadrons of RAF Beaufighters

During the fourth phase it was intended that fighter-bombers should be
operating from Malta and that if the tactical situation in Sicily
required it, some of the fighters based on the captured airfields
might be withdrawn and replaced by fighter-bombers. Light and possibly
medium bombers would begin moving onto vacated airfields in Malta.

While the land forces were engaged in the reduction of the island,
adquate air forces should be on hand for the protection of captured
ports, disembarkation beaches, and the shipping, in addition to air
forces necessary to provide strong support to the land forces. As soon
as the enemy was denied the effective use of airfields in Sicily and
prevented from reinforcing elements of his forces in Sicily, the
major part of the heavy bomber effort was to be shifted to Italy and
Sardinia.
The date of the capture of the airfields in the southwestern and western part of Sicily, i.e., the airfields at Sciacca, Castelvetrano, Trapani/Milo, Birizzo, and Palermo/Bocca di Falco, would of course depend on the success of the initial assaults. If things went well it was possible that they might be in Allied hands by D plus 14. The additional airfield capacity thus gained should enable fighters and fighter-bombers to be moved into this area from the south, and light bombers to be moved into Sicily from Tunisia and Malta. With the capture of Palermo it was thought that the enemy would be forced to withdraw his air forces either to the Italian mainland or to Sardinia. If the effective use of airfields in southern Italy could be denied the enemy it was considered probable that enemy air activity would be considerably reduced owing to the fact that the distances involved would make fighter protection difficult. Further resistance would probably be of brief duration.

The fall of Sicily would in all probability be a staggering blow to Italian morale and it would be advantageous to aggravate this slump by concentrating a heavy aerial bombardment against industrial targets on the Italian mainland. To this end the captured airfields in Sicily should be developed with the utmost expedition.

The Air Plan next dealt with the specific tasks to be performed by the principal components of the Northwest African Air Forces. In general the Strategic Air Force was to be responsible for the task of exerting pressure on the enemy up to D minus 1; during phases II and III the effort was to be intensified and continuous. Strategic Air Force
Headquarters was, from time to time, to issue such directives and such special targets as the situation might require. Action to be taken immediately was as follows:

1. All groups and squadrons were to be brought up to and maintained at full strength.

2. All equipment was to be overhauled and made serviceable.

3. New groups and squadrons were to be fully trained.

4. Sufficient stocks of bombs, small arms ammunition, gasoline, etc., were to be established in the vicinity of the operations bases to cover the period from D minus 7 to D plus 14.

It was the policy of the NAFF during HUSKY to concentrate the fighters, light bombers, and where possible, medium bombers as far forward as possible. In view of this general practice it was not planned to move the heavy bombers from their existing bases in the Constantine area (Area 5 as shown on sketch map following p. 30). To the extent that airfield capacity permitted, medium bombers were to be located in the Cape Bon peninsula, otherwise farther inland in the neighborhood of Souk Ahras.

The directive to the commanding general of the Strategic Air Force stated that if the situation demanded it, units of his command might be placed under the operational control of the Air Officer Commanding, Tactical Air Force for specific operations concerned with the support of land operations and requiring close coordination with Tactical Air Force units. In the same manner, units of the Tactical Air Force might be placed under the commanding general of the Strategic Air Force if the situation required it.
The role of the Northwest African Coastal Air Force in HUSKY was essentially defensive. Its responsibility was to protect from air attack the Northwest African territory as far eastward as the border of Tripoli. Within this same area the commanding general was to be responsible for planning and controlling sea-air reconnaissance, anti-submarine air-sea rescue operations, and all air operations for the protection of shipping. Since these activities were to be coordinated with similar activities carried on by the air forces in the Middle East, Malta, and Gibraltar, direct communication was authorized.

The Northwest African Tactical Air Force was responsible for air operations in close coordination with the land and naval forces making the assault on Sicily and for the provision of an Air Task Force to operate in Sicily as soon as the requisite airfields had been established. The Air Task Force was to be composed of combat units of the Tactical Air Force and Middle East Air Force. During the time in which they were based on Malta, the squadrons of the Air Task Force were to be under the command of the Air Officer Commanding, RAF Malta, who in turn would be under the general direction of the Commanding General, NATAF. The units of the Tactical Air Force not included in the Air Task Force were to be employed "in such a manner as to assist to the greatest possible extent the assault on Sicily and subsequent operations by the land forces." 27

The Northwest African Troop Carrier Command, in collaboration with the Army units concerned and subject to directions issued by NATAF, was to develop further detailed plans for the paratroop and glider
operations and to train to a maximum degree of efficiency the units of the Troop Carrier Command for these operations. Arrangements were to be made for all units to take part in combined training and exercises with the American and British airborne divisions. Officers were to be appointed by the commanding general to represent him on the staff of the Combined Training Center, formed under the coordination of the Commanding General, Fifth Army. After the initial paratroop operations, this command was to be prepared to transport equipment and supplies to Sicily and to evacuate the wounded from the battle area.

The Northwest African Air Service Command was required to undertake the following tasks with regard to HUSKY: (a) provide the equipment necessary to bring units of the NAAF up to full strength; (b) insure that all units were supplied with expendable stores, technical spares, etc., and that equipment was maintained at peak efficiency; (c) provide the service command units and complements required to proceed to Sicily in the Air Task Force, and insure that those units were adequately trained to carry out their tasks; (d) insure that the expendable stores and spares required by the USAAF units of the Air Task Force were delivered to the airdromes in Sicily and that those required for the RAF were delivered to the ports or other points of off-loading in Sicily; (e) establish in Sicily as soon as possible the normal supply and maintenance service of USAAF units in Sicily. Since the accomplishment of these tasks would require close collaboration with the operational commands, direct communication with these commands was authorized.
The Air Administrative Plan for HUSKY provided that until the normal channels of supply were established (probably not before D plus 29), special arrangements were to be made for the provision of such expendable stores as gasoline, bombs, small arms ammunition, and oxygen. In general the plan was to send stocks with initial air force ground parties and to build up by means of the follow-up convoys. Since losses were certain to be higher in the assault convoys than in the follow-up convoys, a heavy build-up on the assault convoys was not deemed advisable. On the other hand, stocks were to be divided among the ships of a convoy so that the loss of one ship would not immobilize the air forces served by that convoy. The loading of air force supplies was to be undertaken at the location from which the convoy was to sail, regardless of the origin of the particular units for which the supplies were intended.

Aircraft and crew replacements were to be available from North-west Africa and from the Middle East. During the early stages of the operation only light repairs would be possible and the range of spares would be limited. In order to reduce the call for replacements to the greatest extent possible, a policy of cannibalism was to be adopted, i.e., the removal of serviceable parts from unserviceable aircraft to repair another. Precautions were to be taken, however, to avoid the waste of aircraft; a tally was to be kept of all parts removed from unserviceable aircraft since indiscriminate stripping might at a later stage result in serious accidents if the removal of small but important components was overlooked.
Since spare engines would not be readily available in Sicily during the early stages, it was considered desirable that all engines installed in operational aircraft should have completed less than 100 hours of running time on D minus 7. Particular attention was to be paid to the overhaul and maintenance of aircraft dinghies and life-saving jackets. During the initial stages, also, aviation gasoline and oil was to be in four- or five-gallon cans, and units were to be equipped for refueling accordingly. As soon as practicable, supply was to be by drums, and if possible, in bulk. Refueling tankers were included in the unit equipment of the Air Task Force.

It will be recalled that for the operation HUSKY the fighter and medium bomber groups of the Ninth Air Force were attached to NAAF, only the five F-24 groups remaining under the direct operational control of Maj. Gen. Lewis H. Brereton. The special supply arrangements between the Ninth Air Force and the Northwest African Air Forces were recapitulated in a secret cipher message of 28 May 1943. Replacement aircraft for the 57th, 79th, and 324th Fighter Groups were to be shipped to Casablanca or Dakar, and then flown to Tripoli and handed over to the Ninth Air Force, provided the shipping space taken up was not at the expense of NAAF requirements. Medium bombers for the 12th and 340th Groups were to be flown into Zarzis and from there, under NAAF arrangements, to combat groups. Effective 28 May the NAAF was to be responsible for all classes of supply and maintenance for the 12th and 340th Bombardment Groups (M) and for the 306th Service Group upon its arrival in Tunisia. All classes of supplies for the 57th,
79th, and 324th Fighter Groups, the 315th Service Group, 17th Air
Depot Group, and all other Ninth Air Force units were to be the
responsibility of the Ninth Air Force until D plus 42, after which
they were to be supplied by NAAF as long as they remained in Sicily.

Before undertaking the invasion of Sicily the NAAF was to be re-
inforced by units, some of which would be permanently assigned and
others which would be detached for the period of the operation. The
complete provisional Order of Battle of NAAF for HUSKY is given in
Appendix I. Units operating from Northwest Africa were to be ad-
ministered through the normal channels, extended to cover Tunisia.
Units detached to NAAF forces from the Middle East or Malta and operat-
ing from Northwest Africa were to be supplied and maintained through
NAAF channels, and supplemented as necessary by spares, equipment, and
personnel from Middle East and Malta. Personnel for squadron mainte-
nance (1st and 2nd echelon in the case of U.S. units) were to move
with the units, but personnel administration was to remain the respons-
sibility of the parent command. Units attached to NAAF forces from the
United Kingdom and operating from Northwest Africa were to be supplied
and maintained through NAAF channels. Equipment and a range of spares
to cover the period of operations were to accompany or precede the
units from the United Kingdom. Matters pertaining to personnel ad-
ministration were to be routed through NAAF channels.

It will be noted that the plan described above dealt for the most
part with broad policies to be followed in the application of air
power but that it was not related in minute detail to the Army and Navy plans. No advance assurance, for example, was given to Army and Navy commanders as to exactly how much support they would receive in any particular sector of the battle area on D-day. In fact the Air Plan in comparison with the Navy and Army plans was likely to appear imprecise. To an extent this was necessarily the case. 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 which could not be pin-pointed in advance. Furthermore an operation of the magnitude of HUSKY required a high degree of centralization of air force command which was responsible for giving air cover for all sectors. 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 view of this contingency the Air Commander in Chief naturally refused to allocate a number of aircraft to each landing, for to have done so would have sacrificed flexibility, the chief asset of air power.

Finally, the air planning for HUSKY was done under extremely difficult conditions. Unlike Army and Navy activities, large-scale air operations did not cease with the termination of hostilities in Tunisia. The reduction of Pantelleria represented a heavy commitment for the air forces at a time when the Army and Navy staffs were fully engaged in the planning and preparation for HUSKY. The most experienced air force officers were therefore not available to participate personally
in consecutive and detailed planning during the early stages and were naturally reluctant to delegate authority to less experienced representatives. Recognizing these special conditions, Admiral Cunningham in one of his operations orders emphasized the fact that much of the air support would be in the form of action against enemy aircraft and the bases from which they operated and would be in many cases beyond the horizon of the forces benefiting from such action. ³²
Chapter II
PRELUDE TO INVASION

Air warfare is one of the most difficult departments of military history. A ground campaign usually has a definite beginning and end, and provided the necessary documents are at hand, one can trace the movements of a brigade, regiment, or army. In general, it is possible in dealing with land operations to state with reasonable precision what the objective was and when and how it was gained or lost. Air operations, on the other hand, especially those of the long-range type, usually consist of a series of strikes at widely scattered objectives. Because they are continuous in their application and relative in their effect, it is often difficult to say exactly when an air campaign began and when it ended and even more difficult to evaluate precisely its contribution to the attainment of the over-all objective. It is, however, possible to state the reasons for making a series of attacks, to indicate the degree or intensity of the effort, and in particular cases to estimate the extent of the damage on the basis of photographic interpretation and other sources of information. It is this approach which will be used in connection with the preparatory air phase of the Sicilian invasion.

From the air point of view, when did the battle of Sicily begin? If extremely long-range considerations were taken into account it might be pointed out that since June 1942 heavy bombardment aircraft
of the USAAF had been making attacks on strategic targets in the Mediterranean area and in southern Europe, all of which had a cumulative, though indirect, effect upon the ability of the Axis to prevent the successful invasion of Sicily in July 1943. Practical considerations, however, would compel us to date the preparation for HUSKY from the deterioration of Axis resistance in North Africa in May 1943. It should be borne in mind, nevertheless, that the end of Axis resistance in Tunisia had no immediate effect upon the direction of the air effort outside the battle area. Bombardment aircraft had been striking at targets in Sicily, Sardinia, and southern Italy before the end of the Tunisian campaign, and they continued to strike many of the same targets in preparation for HUSKY. There was, however, a gradual shift in aim and emphasis.

The directive issued to the Northwest African Strategic, Tactical, and Coastal Air Forces made it plain that one of the primary tasks of all units during the preparatory phase, i.e., until about D minus 7, was the build-up of forces for the assault. All commanders were ordered to see that units were refitted and brought up to maximum efficiency. In order to allow time for rest and refit and to avoid heavy losses, no more than steady pressure was to be maintained against the enemy until about D minus 7. Targets, which were spread over a fairly wide area, were to be chosen mainly with the purpose of reducing the enemy's power to offer resistance to the Allied assault or to take any offensive action which would interfere with the build-up of resources.
in North Africa. Defining "sustained effort" as one group mission every third day, General Erleston on 17 May 1943 issued a directive to the IX Bomber Command stating that approximately 30 days of sustained effort would be maintained against the enemy in southern Italy and Sicily with the object of neutralizing his war effort and defensive measures. Operation Order No. 50, issued by Air Headquarters Malta, on 27 May 1943 stated that during the preparatory phase the single-engined fighter squadrons were to be employed in maximum offensive action against enemy air forces operating from Sicily. In addition, fighters based in Malta were to provide the necessary close escort or fighter diversion for the attacks to be carried out by heavy and medium bombers based in Africa.

Reduction of the Islands

A necessary preliminary to the invasion of Sicily was the reduction of Pantelleria and the less important islands of Lampedusa, Linosa, and Lampione. 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 60 single-engine fighters, would help to provide the close fighter support necessary during the initial stages of the forthcoming invasion, especially to those forces landing on the
beaches between Scoglitti and Licata. The airfields on Malta and its satellite, Gozo, were considered inadequate for this purpose and those in North Africa were out of range.\(^4\) Other advantages to be gained from the capture of these islands were the facilitating of the passage of convoys through the Mediterranean and the securing of much-needed navigation points and bases for air-sea rescue.

Despite the undeniable tactical advantages to be derived from the capture of Pantelleria, any unusual expenditure of ammunition, ships, or men could ill be afforded at a time when every effort was being made to build up resources for the major operation against Sicily. Pantelleria was believed to be well defended and manned by a garrison of 10,000, a force which would appear to be more than adequate for an area of 42.5 square miles. The morale of the defenders, however, was not believed to be high; they knew they were isolated, and they were not hardened to the terrors of intense bombardment. In view of these facts General Eisenhower gave orders on 9 May 1943 that an operation be mounted to seize the island. The plan as finally worked out was to launch an intense aerial attack against the island with the idea of so terrorizing and paralyzing its defenders that it could be seized without the use of ground troops. If, however, assault troops were necessary, the air attack would enhance the possibilities of success with a minimum of loss.\(^5\)

No attempt will be made in this account to deal in detail with the scientifically planned operations against Pantelleria since this
is the subject of a separate AAF study. It should be emphasized, however, that the reduction of Pantelleria by aerial and naval bombardment alone was one of the principal contributions of the air forces in the ultimate victory over Sicily. During the period 8 May to 11 June, the day of surrender, the Northwest African Air Forces flew 5,358 sorties with a loss of only 4 aircraft destroyed, 10 missing, and 16 damaged. On 13 June Lampedusa and Linosa yielded to demands for surrender, while the following day Lampedusa followed suit. The capture of these islands cleared the invasion path to Sicily and furnished the first example of the power of intense air bombardment to induce surrender. General Eisenhower in his report of the operations said: "Valuable though the contribution of the Navy had been in silencing individual batteries and strong points, it was the saturation bombing of the Air Force which wrought general havoc among the defenses and broke what little will to fight the enemy possessed."6

In addition to the tactical advantages derived from the possession of Pantelleria, invaluable experience was gained by all who participated in this operation, which amounted to a sort of dress rehearsal for MUSEY. Although it was not expensive in aircraft, the operation did cut deeply into the Allied supply of explosives at precisely the time the air forces were attempting to build up the bombing potential at Tunisian bases to support the invasion of Sicily.7 Despite, however, the unusually heavy demands of the campaign against Pantelleria, on 18 June the Northwest African Air Forces reported to General Eisenhower's chief administrative officer that after initial difficulties the build-up was proceeding satisfactorily.8
Attacks Against Enemy Airfields on D minus 7

The elimination of Pantelleria and Lampedusa cleared the way for concentration on bombing preparatory to the invasion proper. As has already been pointed out, the Air Plan did not envisage more than steady pressure up to D minus 7. The bomber effort, furthermore, was to be distributed over a wide area in order to deceive the enemy as to the main point of attack. Nevertheless the primary targets were to be the main enemy airfields in Sicily, Sardinia, and southern Italy, in addition to ports, bases, and lines of communications in the same areas. Dealing first with the attacks against enemy airfields, Northwest African Strategic Air Force was to concentrate on the western Sicilian and Sardinian airfields, while the IX Bomber Command was to concentrate its efforts on the airfields in the eastern part of Sicily and other targets in the eastern Mediterranean.

On 12 June, the day after the fall of Pantelleria, the Northwest African Strategic Air Force carried out a particularly devastating attack on the airfields at Castelvetrano and Bocca di Falco. At the latter field, which was attacked by 39 B-17's, there were 69 aircraft on the ground at the time of the attack. Photos revealed bursts covering the entire airfield and dispersal areas and among aircraft parked on the perimeter of the field. Forty-six aircraft were seen in the area covered by the bursts. Even more destructive results were achieved by the 34 B-17's which attacked the airfield at Castelvetrano. Photos showed 97 aircraft present during the time of the raid, with bursts starting at the south and extending north along the perimeter tracks.
through the dispersal areas, and across the landing ground. There were 14 aircraft within the area of the bursts and eight others within effective range of fragmentation bombs.\textsuperscript{12}

Striking at Sicily's eastern area, Liberators of the IX Bomber Command hit the airdromes at Catania and Gerbini on 13 June. The 22 B-24's of the 98th Group which attacked the air-drome at Catania dropped 61 tons of bombs on the hangar area and the main runway. At Gerbini, which was attacked by 24 B-24's of the 376th Group, the dispersal areas were covered by bomb bursts, three enemy aircraft about to take off were blown up, and fires and explosions were caused in practically every part of the field.\textsuperscript{13} Comiso airfield suffered its heaviest damage in June as a result of a raid carried out on the 17th by 23 Liberators of the 376th Group. A direct hit was reported on one hangar, while the runway and area east of the field were covered by hits.\textsuperscript{14} This operation was followed by a night attack consisting of seven Halifax and four Liberator sorties. A list of teleprinter signals from Italuft to German Air Headquarters in Rome, captured after Allied occupation, testified to the effectiveness of these missions as follows: "18 June—Comiso only serviceable for emergency night landings. . . . 19 June—Comiso, keep to runway, take great care in taxiing, bomb craters. . . ."\textsuperscript{15}

During the latter part of June a part of the air effort of the IX Bomber Command was shifted to airdrome targets in Greece. On the 24th, 49 B-24's of the 98th and 376th Groups attacked the Souda airdrome in Salonika. Photos taken during the raid showed all three
hangars on fire, as well as portions of the dispersal areas. On 28 June, 24 Liberators of the 96th Group carried out an attack against the Eleusis air-drome in the Athens area. Direct hits were reported on three large hangars. On the same day 22 B-24's of the 376th Group scored direct hits on the Kaleasdi air-drome. The runway and dispersal areas were well covered with bursts. 16

In making these attacks on enemy air-dromes the IX Bomber Command used formations of 24 planes divided into A and B sections. 17 Each section contained two flights of six planes, and each flight consisted of two elements of three planes. The flight procedure, considered most advantageous to combat fighter opposition, consisted of echelon of flights, echelon of elements within flights, and Y of elements. Before being dispatched on a mission against air-dromes, each flight was briefed on a definite target. One flight would, for example, be given the hangar and administration area, while another would be assigned the dispersal area. The type of bombs carried depended on the target assigned. For hangars and installations the 500-pound American GP bomb was considered the best, while both the 100-pound demolition bomb and the 20-pound fragmentation bomb in 120-pound clusters were used successfully against dispersal areas. Five-hundred-pound and 100-pound bombs were usually fused with instantaneous nose and .046 second tail delay. The 500-pound bombs were usually dropped in train at 75-foot intervals with the first bomb bursting slightly short of the target area, while fragmentation bombs were toggled as
fast as possible. The bombardier of the lead ship with elements of three would sight for range and deflection while the other bombardiers sighted for range only.

Pilots of the B-24's of IX Bomber Command felt that in order to take advantage of the sun the best time for attacks on enemy airbases was noon. Attacks so timed also seemed to have consistently surprised enemy defenses. In fact, it was found that anti-aircraft opposition of enemy airbases was less intense than that encountered in attacks against harbors and port facilities. Fighter opposition varied but usually it was found to be less formidable on this type of mission than on others in which the IX Bomber Command engaged. General Brehon felt that the real significance of the operations of the Ninth Air Force preparatory to the invasion of Sicily lay in the fact that heavy bombardment could effectively neutralize from high altitudes enemy airbases which were beyond the range of medium and light bombers. 19

Meanwhile, in accordance with the prearranged plan, components of the Northwest African Air Forces continued their efforts against the western Sicilian and other airfields. One of the heaviest attacks carried out by medium bombers during the preparatory period was made on 15 June against the Borizzo and Sciacca airfields. Seventy-two mediums dropped 2,382 x 20-pound fragmentation and 264 x 310-pound bombs on the Sciacca airbase. Bomb-strike photos showed the target area well covered by bomb bursts, but the quality of the photos and insufficient coverage prevented an estimate of the aircraft damaged
or destroyed. Thirty-six B-26's of the 319th Group dropped 3,616 x 20-pound fragmentation bombs on Borizzo from an altitude of about 11,000 feet. At least 12 aircraft were in the area covered by the bursts on this airdrome.20 On the same day, 15 June, the heavies again plastered Castelvetranò and Bocca di Falco. During the course of the week, 12 to 18 June, inclusive, 220 tons of bombs were dropped on Bocca di Falco, 163 tons on Castelvetranò, 78.4 tons on Sciacca, 76.2 tons on Borizzo, and 72.6 tons on the Trapani/Milo airfields.21

During the following week, 19 to 25 June, the NAAF attacks were concentrated on industrial targets, and attacks against airfields were consequently on a reduced scale. Castelvetranò, Borizzo, and Trapani/Milo were, however, visited with loads of 40.5, 22.8, and 15.2 tons of bombs, respectively.22 During the attack of 20 June on Borizzo the enemy made an unsuccessful attempt to carry out "air to air" bombing of the Marauders.23 The operations of the week 26 June to 2 July were characterized by the "round the clock" nature of the bombing. The attacks of the B-17's, B-25's, and B-26's were supplemented by those of the Wellingtons, which made 345 sorties by night.24 The most concentrated attack against Sicilian airfields occurred on 30 June, when nearly 200 sorties were made against Sciacca, Bocca di Falco, Borizzo, and Trapani/Milo. Indicative of the damage wrought was the signal of 30 June from Italuft to German Air Headquarters in Rome: "Trapani closed for all classes of aircraft owing to bomb craters."25

Although the main weight of attacks was on the Sicilian airfields, after the fall of Pantelleria, the Sardinian airfields received attention
also. As a result of the heavy attacks which had been launched against the Sicilian airfields in May and early June, the enemy's bomber and reconnaissance aircraft had been largely withdrawn to other bases. The attack was renewed, however, on 31 June by 36 B-24's of the 521st Group which bombed Venaflorita, starting five fires and silencing one flank position. This airfield was now being used as a base for fighter and transport aircraft. A follow-up attack was made on 26 June by 119 mediums making simultaneous attacks on Alghero, Decimomannu, Milis, and Venaflorita again. In each case a good pattern of bombs was laid down, and at Alghero and Venaflorita the hangars were left burning.

Attacks on Ports, Bases, and Lines of Communication to D minus 7

During and immediately following the period of intensive operations against Pantelleria, Allied attacks against enemy ports, bases, and lines of communication were on a reduced scale. It is probable, however, that the fall of Pantelleria indicated to the Axis that Sicily was next on the Allied timetable; therefore any attempts by the Axis to rush in troops and supplies to meet the threatened invasion had to be frustrated by a bombing program against certain focal points. 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 smaller ports in southern and eastern Sicily between which coastal traffic was plying. During the period 19 to
30 June aircraft controlled by the NAAF carried out 317 heavy and 566 medium-bomber sorties, while IX Bomber Command sent out 107 effective sorties against these targets with the primary object of nullifying any effort to reinforce Sicily.  

The chief communications target at which the bombing effort was directed was the Messina bottleneck. As the principal entrepot of Sicily, Messina was estimated to have a practical clearance capacity of between 4,000 and 5,000 tons per day. Palermo, the next port in point of size, was rated at only a 2,600-ton capacity per day. 29 Six train ferry ships were reported to be plying between Messina, which had four terminals, San Giovanni on the mainland with its two terminals, and Reggio with one terminal. Following a night attack by 10 Wellingtons of 205 Group R.A.F., 76 B-17's of the 97th, 99th, and 301st Bombardment Groups struck the Messina ferry and marshalling yards on 16 June.  

"Numerous hits" and "several fires" were reported in the area which included the ferry building and slips, the citadel's military stores, railroad yards, the power station, and industrial installations. 30 This mission of the heaviest was supported by one diversionary sweep over southern Sardinia by a force of 44 Warhawks and another sweep by 86 Spitfires from Malta over airdromes and antiaircraft defenses in the south of Sicily. 31 The Wellingtons followed up the attack of 16 June with several night raids; and on 25 June an air armada of 130 B-17's of the 2d, 97th, 99th, and 301st Groups pounded Messina with more than 300 tons of bombs dropped on the ferry slip, railroad
yards, dock installations, warehouse areas, and other targets. Reconnaissance photos taken after the mission showed a 400-foot merchant vessel damaged and several fires, one within the main railway station. Photographic reports revealed that the following damage was inflicted upon Messina during the period 29 May through 25 June: on the Hook, buildings in the naval establishment had been gutted and barrack buildings damaged by explosions; among the railroad tracks and marshalling yards there were seven or eight points of damage, including tracks destroyed and rolling stock derailed; the goods station had received direct hits and the goods sheds had been destroyed; the repair sheds bordering the railroad to the east and west had been gutted; in the harbor a merchant vessel had received further damage; in the town there were approximately 35 points of damage, consisting mainly of buildings partially destroyed by direct hits or severely damaged by fire.

On 19 June, from their Cyrenaican bases, 23 B-24's of the 98th Group bombed Reggio di Calabria, while 16 B-24's of the 376th Group struck at San Giovanni on the mainland side of the Strait of Messina. Photos taken during the attack on Reggio showed the target area well covered by bursts, with a direct hit and a near miss on the operating gear of the train ferry and a possible hit on the engine sheds. Coordinated with this attack by Ninth Air Force Liberators was an offensive sweep over Sicilian airbases by Malta-based Spitfires. Similar attacks on Reggio and San Giovanni were repeated on 21 June.
In addition to the targets constituting the principal line of communication between the island and the mainland, other targets in Sicily and southern Italy received attention. On the night of 16-17 June, nine Wellingtons of 320 Wing visited the port of Naples and the marshalling yards with three 4,000-pound, 10 x 1,000-pound, 29 x 500-pound, and 16 x 250-pound bombs. Following another night attack on 20-21 June, 28 B-17’s of the 99th Group and 29 B-17’s of the 2d Group caused several fires in the oil refinery, the royal arsenal, and torpedo factory. In an attempt to interrupt transportation down the boot, B-25’s of the 310th and 321st Groups struck on the same day at railway marshalling yards at Salerno, scoring several hits on the railroad trestle and yards and at Battipaglia, where 25 hits put out of commission all the approaches to railway sidings. The mediums were escorted on this mission by P-38’s of the 2d and 32d Fighter Groups. The following night 20 Wellingtons carried out a mission against Salerno, dropping in addition to their regular bomb load more than a million leaflets.

A large heavy-bomber mission against the industrial and transportation center of Leghorn in northern Italy was made on 28 June. Ninety-seven B-17’s of the 3d, 97th, 99th, and 301st Groups dropped a total of more than 261 tons of bombs. Most of the damage wrought was concentrated in the industrial area to the north of the town where several plants and railroad sidings were hit. The Italian-American petroleum company was reported severely damaged; while hits were made
on the chemical works, copper smelters, torpedo factory, cotton mill, and main railway station. Against this large bomber formation only one enemy plane appeared to offer battle, and it was driven off. Encountering only inaccurate heavy flak over the target, all the planes returned to their bases without loss.

Another Sicilian base attacked, in addition to Messina, may be mentioned a night attack of 23-24 June on the marshalling yards of Catania and industrial area of Licata by nine Wellingtons of 230 Wing. Most of the bombs were believed to have fallen in the target area and eight fires were observed. On 20 June 40 B-17's of the 96th and 901st Groups attacked Palermo, causing damage to the oil storage installations, the railway station, and the southern and eastern area of the city. 

The main weight of Allied effort against Sardinian ports and bases occurred in May before the intensive operations against Pantelleria. In addition to being an air base, Sardinia was important because of the supplies of coal, lead, and zinc which it furnished to Italian industry. After the fall of Pantelleria, attacks on Sardinian bases were renewed. On 18 June there were two attacks against Sardinian ports, one by three formations of B-29's escorted by 70 P-38's against Olbia docks and shipping, and another by 35 B-26's escorted by 36 P-38's against Golfo Aranci. At the latter place the jetty and warehouses were hit, and near misses were scored on two medium-sized merchant vessels near the pier. Photo taken the day following the attack on Olbia revealed that the commercial mole, once the principal facility
for debarkation of Sardinia's supplies, had been rendered "completely useless." A medium merchant vessel, which was still burning at the time the photographs were taken, blocked the north side of the dock at the end of the commercial mole.\textsuperscript{43}

Although on a reduced scale, attacks on Sardinian ports and bases were continued through June. On the nights of 22-23 June and 24-25 June Wellingtons visited Olbia, causing fires and explosions in the marshalling yards, town area, and docks.\textsuperscript{44} On 24 June 36 B-25's of 310th Group dropped 26 x 500-pound bombs on the shipping and shore installations at Golfo Aranci.\textsuperscript{45} On the same day 44 P-40's of the 325th Fighter Group carried out a very successful fighter sweep over Sardinia. At Camoterra landing ground three out of 20 Italian aircraft were destroyed on the ground; the railroad station and two trucks were seriously damaged at Maddalena; while in the Gulf of Cagliari a 100-foot boat and a two-masted sailing vessel were left burning.\textsuperscript{46} The P-40's were attacked by a formation of about 16 Me-109's and Me-202's which were in turn attacked by the top cover which claimed five of the enemy planes destroyed and three damaged.\textsuperscript{46} On the nights of 30 June-1 July and 1-2 July Wellingtons of the 331 Wing carried out attacks on the main railway station and barracks at Cagliari.\textsuperscript{47}

The main targets attacked by the NAAF during the period 12 June to 2 July and the intensity of the effort are shown in the following table.\textsuperscript{48}

<table>
<thead>
<tr>
<th>Targets</th>
<th>Attacks</th>
<th>Total Weight (Tons)</th>
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<tr>
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<td>11</td>
<td>829.3</td>
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<tr>
<td>Leghorn</td>
<td>1</td>
<td>261.3</td>
</tr>
<tr>
<td>Targets</td>
<td>Attacks</td>
<td>Total Weight (Tons)</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Naples</td>
<td>4</td>
<td>189.2</td>
</tr>
<tr>
<td>Palermo</td>
<td>3</td>
<td>182.9</td>
</tr>
<tr>
<td>Golfo Aranci</td>
<td>3</td>
<td>172.0</td>
</tr>
<tr>
<td>Cagliari</td>
<td>4</td>
<td>166.3</td>
</tr>
<tr>
<td>San Giovanni</td>
<td>1</td>
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<td>127.0</td>
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<td>2</td>
<td>65.5</td>
</tr>
<tr>
<td>Chilivani</td>
<td>1</td>
<td>49.5</td>
</tr>
<tr>
<td>Battipaglia</td>
<td>1</td>
<td>42.9</td>
</tr>
<tr>
<td>Catania</td>
<td>1</td>
<td>20.5</td>
</tr>
<tr>
<td>Licata</td>
<td>1</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Enemy air opposition to the preparatory bombing phase through 30 June was characterized mainly by an inconsistency both in quality and quantity. As might be expected, the greatest number of fighters were encountered over northeastern Sicily and southern Italy since the enemy had resorted more and more to the use of his fighter bases at Reggio di Calabria, Bari, Brindisi, Crotone, and Capodichino. Due possibly to the fact that the enemy was saving what remained of his dwindling force for more crucial future operations, the few attacks on northern Italy met only slight opposition. The mass attack on Leghorn of 23 June, for example, met negligible opposition. During the period from mid-May through 30 June the American bombers, according to one report, shot down 62 enemy fighters with a loss of only seven. In addition, however, a few bombers crash-landed and a considerable number were damaged. The heavy bomber groups of the IX Bomber Command which carried out attacks against enemy airfields, ports, and bases claimed 41 enemy fighters destroyed without suffering any loss.
Role of Malta During the Preparatory Period

During the preparatory phase of OVERLORD, as indeed throughout the entire operation, Malta played an important role. At one time the most besieged island in the world, Malta by the spring of 1943 had been transformed into an effective base for offensive operations against the Axis. This transformation may be accounted for by three main accomplishments. (1) By June 1943 the work of improving the existing airfields and constructing landing strips capable of housing and operating up to 26 squadrons of fighters was completed. During June also, the U.S. Army engineers succeeded in constructing in the record time of 20 days a landing strip capable of accommodating three additional squadrons of fighters on Malta's satellite, Gozo. (2) The island was stocked and provided with adequate stores, supplies, spares, and accessories necessary for the operation and maintenance of an air force of the size indicated above. (3) Existing RDF stations were improved and additional stations set up. Fighter control facilities were expanded by the addition of a new fighter control room hewn out of the rock and a new and larger filter room.

These improvements made it possible for the reinforcing squadrons scheduled for OVERLORD to move in by about 10 June and to devote the rest of the month to bringing both personnel and equipment up to combat efficiency. New squadrons were gradually conditioned to operating over the sea and over the terrain where the battle was to be fought. Malta-based aircraft were not engaged exclusively in
preparation and training, however, for both the original garrison and
the new arrivals were steadily employed against the enemy. During
the period from the end of the Tunisian campaign up to D minus 7 a
large part of the effort was devoted to cover and close escort work
for the bombers of the AAAF and the Ninth Air Force. Malta-based
aircraft provided fighter escort for all attacks within a 100-mile
radius of the island and furnished fighter diversion for many attacks
on targets beyond that radius. In addition, offensive sweeps were
carried out and Spitfire bombers added their weight to the onslaught
against enemy airfields in southern Sicily. The importance of the
small islands in the central Mediterranean can be gauged from the fact
that by the time of the invasion, 33 squadrons with approximately 670
first-line aircraft were concentrated in Malta, Gozo, and Pantelleria.

Preliminary Reconnaissance

The Air Plan for the invasion of Sicily stated that the task of
the Northwest African Reconnaissance Wing would be "continuous and
exacting, both during the preparatory phase and while the operations
were in progress." On 1 March a detachment of the 12th Photo Recon-
naissance Squadron was sent to Malta to assist 248 Wing RAF in the work
of mapping the whole island of Sicily in preparation for the invasion.
This unit also supplied special reports and photographs for the
planning staff of Force 141. The other photographic units of the
Northwest African Reconnaissance Wing, including the 5th and 18th
American Squadrons continued to function from North Africa. Col. Elliott Roosevelt, commanding officer of the wing, estimated that approximately 500 missions were flown in preparation for SICKY. 57

The entire area of 12,000 square miles of Sicily was mapped, a mosaic measuring 19.5 x 12.5 feet being produced to the scale of 1 to 50,000. This accomplishment is all the more remarkable when it is considered that during the winter and spring of 1943 the units were engaged in the Tunisian campaign and the main strength of the Axis air forces in the Mediterranean area was located in Sicily. Colonel Roosevelt estimated that not more than one-tenth of the 500 missions was accomplished without interception. Furthermore, areas such as Palermo and Trapani were heavily defended by flak installations which, by the use of their box-type barrages, were considered accurate up to 35,000 feet. 58

In addition to the reconnaissance work required by the planning staff, missions were performed also for the air and naval forces during the preparatory period. The naval requirements included photographs every day of all important ports in the Mediterranean area from Gibraltar to the eastern part of the Adriatic (from Corfu on a line directly down to Tripoli) and twice a day of the major ports in which the Italian fleet was located, including Spezia, Leghorn, and Genoa, in addition to all ports in Sicily and southern Italy. The smaller ports which lay between larger shipping centers and which could be used only by coastal craft were photographed at least once a week. Ports in southern Italy which might be used to reinforce Sicily were given particular attention and were covered once a day. 59
For the air forces the Photographic Wing was required to cover all airbases in the Mediterranean area up to the 40th parallel in Europe and to 100 miles east of the eastern shore of the Adriatic, an area including all airbases in Sicily, Italy, Sardinia, and Corsica. Once a week the reconnaissance squadrons were required to photograph all airbases within a four-hour period in order to get an exact reading on the location of Axis air power at a given time. According to Colonel Roosevelt, the Axis strength as revealed by photo reconnaissance of the airbases never varied more than 5 per cent from the estimates of Axis strength based on all other sources. He felt that this differential could be accounted for by the fact that there were always some aircraft in the air at the time the photographs were taken. Harbors, industrial areas, and communications lines, in addition to the airbases, were photographed to provide information for the Strategic Air Force in the selection of targets.

Role of the Northwest African Coastal Air Force During the Preparatory Period

At the time of the reorganization of the Allied air forces in North Africa on 18 February 1943, the Northwest African Coastal Air Force was formed to take over certain duties including coastal defense, convoy protection, shipping strikes, antisubmarine activity, general reconnaissance, and air-sea rescue duties in the western and central Mediterranean which had been formerly carried on by the RAF Eastern Air Command and the USAF XII Fighter Command. Diversity of personnel, equipment, and type of operation characterized the Coastal Air Force.
from the beginning. Broadly speaking, its function can be described
as the exercise of air power in close cooperation with sea power over
both friendly and hostile sea routes so as to control the air over
these routes. Essentially defensive in function, the Coastal Air
Force has also an offensive role, merely, to disrupt and destroy the
enemy's supplies before they could reach their destination. These
varied functions were exercised over a vast area extending from
Cecil Spring to the border of Tripoli. Among the types of aircraft
employed were the Spitfire, Lightning, Beaufighter, Black Widow,
Wellington, Walrus, Liberator, Fortress, and Albreck. From time to
time units of the USAF, RAF, RAF, SAAF, RAAF, and the Brazilian Air
Force have been included in Coastal Air Force.

At the time of its organization the Coastal Air Force had a total
of 18 squadrons, seven of which were USAF and the remainder RAF and
SAAF. By the time of the invasion, however, the Coastal Air Force
had more than double the number of original units, there being 33
squadrons, 11 of which were American, 24 RAF and SAAF, and 3 RAF.
The American units included the 52d Fighter Group, consisting of the
26th, 4th, and 5th Fighter Squadrons flying Spitfires; the 11th Fighter
Group, consisting of the 91st, 92d, and 93d Fighter Squadrons flying
P-38’s; the 360th Fighter Group, consisting of the 345th, 346th, and
347th Fighter Squadrons flying P-39’s; and 1st and 5th Antisubmarine
Squadrons flying P-51’s. About the first of July the 416th and 418th
Fighter Squadrons arrived in North Africa from England, making
a total number of 13 American squadrons in the Coastal Air Force. The night fighter squadrons, however, did not fly their first operational missions until about the middle of July, and hence did not participate in the operations preparatory to HUSKY. 64

In the table on the following page there is a statistical summary of the activities of American units of the Coastal Air Force from 24 June to 14 July 1943.

In general it may be said that the full contribution of the MACAF cannot be measured alone in terms of ships sunk or aircraft destroyed. Largely through its efforts, however, the merchant navy was able to build up without serious molestation the great reservoir of supplies necessary to launch the invasion, and the greatest amphibious force ever assembled down to that time was ferried to its objective without serious interference from enemy submarines or aircraft. Also, the continual threat to the enemy's supplies and ships undoubtedly caused a great diversion of his air and surface forces at a time when he needed to conserve every ounce of his strength to counter the main blow.

One of the main responsibilities of the MACAF during the preparatory phase of the Sicilian campaign was the escorting of convoys through the Mediterranean. During June, although convoys passed almost daily, the enemy made few attempts to attack them. During the assault on Pantelleria a motor torpedo boat and a water carrier were destroyed, and on 26 June the enemy made a determined attempt to destroy an east-
### Operational Data—USAAF Units of NAGAF
Period 24 June to 14 July 1943

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<td></td>
<td></td>
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<td>282</td>
<td>556</td>
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bound convoy as it passed Cape Bon on the tip of Tunisia. The NACAF fighter protection was ready, however, and although over 100 enemy planes including Ju-88's, Cant Z-1007's, and Fw-190's made repeated attacks beginning in the afternoon and continuing through the night, no serious damage was inflicted on any vessel. According to their report day and night fighters destroyed six enemy aircraft, damaged several, and caused many of the enemy aircraft to jettison their bombs before reaching their target. During the nine days preceding 10 July aircraft of the NACAF flew a total of 1,426 sorties on convoy escort duty. On 8 July 150 fighters, including 90 Spitfires of the 52d Fighter Group, furnished continuous protection to five convoys in the Tunis-Dantelleria area. On 9 July, 61 fighters of the 81st and 350th Groups gave air cover to three convoys continuously from Oran to Djidjelli. None of these convoys was molested by the enemy.

As a matter of fact the enemy devoted most of his bomber effort to attacks on harbors during June and July 1943. Every Allied port from Oran to the Tripolitain border was laden with shipping for the Sicilian invasion, and the enemy attempted to strike at these targets by a series of night attacks. Because, however, of the constant vigil kept by fighters of the NACAF not a single ship was sunk, and only one was damaged in North African harbors by enemy attack.

Though it is not possible in this narrative to trace in detail the antisubmarine effort of the NACAF, it may be stated that the general policy was to furnish direct escort to convoys and to institute intensive hunt procedure in conjunction with naval surface forces wherever
the presence of submarines was known or suspected. 69 According to one estimate, during the three-month period April to June 1943, some 1,074 ships passed in convoy along the coast of North Africa with the loss of only six vessels. During the first week of July, however, the enemy submarines took advantage of the weather—repeatedly 10/10ths cumulus at 500 feet—and sank three ships. 70 During the next week, 8 to 14 July, antisubmarine patrols continued and a total of 23 convoys was escorted by aircraft of the NAFLT. Two empty ships of a westbound convoy were torpedoed by hostile submarines, but both were towed into harbor. 71

The activities of the Coastal Air Force were not, however, entirely of a defensive nature. In addition to guarding the life lines of the Allied armies, it was equally necessary to dislocate and destroy those of the enemy. During the first three weeks of June there were available to the NAFLT no suitable bomber aircraft for ship-striking duty. By the latter part of June, however, such a force was organized under 338 Wing RAF at Pratville near Bizerte. This force consisted of three day-torpedo Beaufighter squadrons and one night-torpedo Wellington squadron, together with a flight of night-reconnaissance Wellings and day-reconnaissance Baltimores, in addition to the original Marauder squadron. 72 The purpose of this augmented force was primarily to maintain a constant watch over the Italian fleet based at Spezia and Genoa, to harass Axis shipping, and to destroy any attempt to reinforce the islands of Sicily, Sardinia, and Corsica. The ship-striking force went into action immediately, and on 18 June
a torpedo-bomber Wellington of 458 Squadron attacked and damaged a
tanker. On 21 and 23 June the torpedo Beaufighters sunk a 4,000-ton
merchant vessel east of Corsica and a tanker north of Sicily.73
Victories scored between 24 June and 9 July included two large merchant
vessels damaged, at least one 800-ton schooner sunk, and a 6,000-ton
cargo vessel, a 3,000-ton auxiliary craft, and several armed trawlers
damaged.74

**Attacks Against Enemy Airfields: D minus 7 to D-day**

An account has been given above of the scale of effort developed
against the enemy's airfields, bases, and lines of communication dur-
ing June and the first few days of July. The Air Plan provided, however,
for more intensive operations, especially against enemy airfields,
during the period D minus 7 to D-day. By the end of this period it
was hoped that the enemy's first-line strength, especially in fighters,
would be markedly reduced. It was realized that this result could not
be achieved solely by the bombing of airfields. But "previous experience
has shown," it was maintained in the Air Plan, "that sooner or later
these tactics compel the enemy to come up and fight; it is then that
it is hoped to inflict heavy casualties. In view of the severe strain
on the enemy's air resources by the heavy scale air operations under-
taken from the United Kingdom and by the needs of the Russian front,
it is highly probable that he will have considerable difficulty in
finding replacements, and it is hoped that he will not be able to main-
tain his air strength at a level which would make it an important factor
in the Sicilian battle.75
According to General Eisenhower's report, the 19 Sicilian fields accounted for in "Tactical Appreciation," drafted in March, had been increased to more than 30 and further expansions were under way. The Gerbini system near Catania took on primary importance as the one major airbase and nine satellite landing grounds were increased to 13 during the week preceding the invasion. As mentioned above, the original plan provided that the NAAF should concentrate on the western Sicilian airbases, while the IX Bomber Command was to concentrate on those in the east. However, after the operation of 30 June on Palermo and the two western Sicilian airbases, aerial reconnaissance disclosed that the German fighter force had been largely withdrawn to the east. It appeared that the force of 40 bomber types and 120 fighter types observed on the Gerbini fields on 26 June had been increased by an additional 60 fighters by 1 July. The plan was accordingly changed to follow the enemy, and the combined weight of the NAAF and IX Bomber Command was concentrated against the eastern Sicilian airbases.

During June the scale of effort developed against the enemy had been carried out largely by the Northwest African Strategic Air Force supplemented by heavy bomber missions carried out by the IX Bomber Command from bases in Cyrenaica. From approximately D minus 7, however, the Northwest African Tactical Air Force was to augment this scale of attack, the operational plan being fully coordinated with Strategic Air Force to achieve maximum effect on the enemy and for mutual benefit.
in splitting the enemy defense system. Because of the limitations of range the bulk of the Tactical Bomber Force, employing fighter escort based in Tunisia and Pantelleria, was limited to attacks against airfields in western Sicily, while the B-25 groups, with fighter escort based in Malta, were capable of dealing with the airfields in the central area. In practice, then, during the intensive preparatory operations, the Tactical Bomber Force concentrated on targets in the eastern and central areas, leaving the Strategic Air Force free to deal with the main enemy airfield system in the Germini-Catania area.

It is not intended in this account to deal in detail with the many missions flown by the USAAF during the intensive period preceding the invasion. Rather an attempt will be made to point out the main emphasis of the attack and to indicate the results of some of the more important missions. The effect of the effort developed against the enemy's airfields 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 the airdrome at Grottaglie and San Pancrazio, where German Air Force bombers were based, and also at Lecce, a German fighter base. Results achieved in this raid included many bursts among aircraft on the ground, damage to one hangar at Lecce and possibly two at Grottaglie. The formation which attacked Lecce was intercepted by 45 hostile fighters, 12 of which were destroyed. Losses of the Ninth Air Force as a result of
this mass attack amounted to four Liberators.\textsuperscript{80}

The following day, 3 July, bombers of the Northwest African Strategic Air Force attacked all the advance landing grounds in Sardinia.\textsuperscript{81} 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, inclusive, aircraft under the operational control of Headquarters NAAF flew 2,944 heavy- and 560 medium-bomber sorties against Gerbini and near-by grounds, while 3-21's of the Ninth Air Force flew 79 sorties.\textsuperscript{82} Some idea of the effectiveness of these attacks can be gained from the blitz against Gerbini and its satellites by bombers of the NAAF on 5 July 1943. A detailed interpretation report revealed that on Gerbini itself, which was attacked by 52 B-17's of the 97th and 99th Groups, no fewer than 50 aircraft of the 54 present during the time of the raid were destroyed.\textsuperscript{83} In other attacks against the various Gerbini satellites on the same day numerous enemy aircraft were destroyed. At Satellite No. 6, which was attacked by 24 B-17's of the 2d Bombardment Group, 10 of the 33 aircraft present at the time of the raid were destroyed, while at Satellite No. 7, 24 single-engined aircraft were reported destroyed.\textsuperscript{84} In all, during the week 5 to 9 July 1,323.7 tons of bombs were dropped on Gerbini and its satellites by aircraft of the NAAF, and 197 tons by bombers of the Ninth Air Force.\textsuperscript{85}

At Catania airdrome, which was attacked by 45 B-17's of the 2d and 301st Bombardment Groups on 4 July, nine medium aircraft were destroyed,
and one medium and two single-engine aircraft damaged.\textsuperscript{86} An outstanding attack of the medium was that of 71 B-25's of the 310th and 321st Bombardment Groups on 6 July 1943 against the Biscari airfield. Bomber craters on the eastern and northern sides of the airfields were observed and one single-engine and two medium bombers were reported destroyed.\textsuperscript{87} 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. Gerbini airfields and Satellites 1, 4, 5, 6, 7, 8, and 12 were reported unserviceable, as were Comiso and Bocca di Falco. Castelvetrano appeared to have been abandoned by D-day.\textsuperscript{88}

Although the main weight of attack fell upon the eastern Sicilian airfields since they were now of primary importance, the western Sicilian and Sardinian airfields were not entirely neglected. Of these the most persistent attacks were delivered against the Sciacca landing grounds which were the objects of continuous night and day attacks, mostly by fighter-bombers and mediums of the Northwest African Tactical Air Force. During the period 3 to 9 July, inclusive, nine attacks were made and 130.7 tons of bombs were dropped.\textsuperscript{89} Trapani/ Milo landing grounds seem also to have been within the special province of the Tactical Air Force. At least four attacks were made by A-20's, Baltimores, and Bostons, and according to the weekly operational report, 72.3 tons of bombs were dropped.\textsuperscript{90} Other western Sicilian airfields
bombard and strafed included Borizzo and Castelvetrano.\footnote{1} Operations against Sardinian airfields, which were largely neutralized after the attack of 3 July, consisted mostly of night attacks by Wellingtons against Villacidro and Fabilliuno, upon which sites 55.2 and 5.2 tons bombs were dropped, respectively.\footnote{2}

The above account has shown a tremendous scale of effort developed by the USAF and RAF against enemy airfields as a preliminary to the invasion of Sicily. It seems warranteed to conclude that the effects achieved by these constant attacks more than justified the degree of effort expended. The preinvasion blitz not only forced the enemy air force to seek more remote bases in Italy but had the effect of denying for days on end the use of many landing grounds to the Sicilian-based fighters. It should be emphasized, however, that this was achieved only by repeated attacks, as the enemy was ingenious and quick at carrying out repairs. By the time of the invasion photo reconnaissance indicated that approximately one-half of the enemy air force had been driven out of Sicily and forced to seek shelter elsewhere. Although no figures are available as to the exact number of aircraft destroyed on the ground during the preinvasion period, one report states that up to 13 August approximately 1,100 enemy aircraft, including those abandoned as well as destroyed, had been examined by Allied personnel on the island.\footnote{3} A further important effect of the persistent bombing of airfields was that the enemy was forced to come up and fight.

During the week before the invasion, 3 to 9 July, 139 enemy aircraft
were destroyed in air combat as compared with 31 destroyed during the
week after the invasion.

It was undoubtedly these losses, coupled with those sustained on
the ground, that forced the enemy to withdraw his remaining aircraft to
bases from which he was unable to interfere seriously with the battle
area. During the preinvasion period, 76 per cent of the total Allied
bomber effort was devoted to airfield attacks, over 3,000 tons of
bombs being dropped in more than 2,000 sorties. So successful was
this 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 and
thus to liberate the bomber force to a marked degree from purely counter-
air force activities during the assault phase. 95

Since the Sicilian campaign demonstrated the importance of the
attack of enemy airfields in any attempt to gain air superiority as a
preliminary to the invasion or occupation of territory, the methods
and techniques considered particularly applicable to this type of
operation should be discussed briefly. As a preliminary, it may be
stated that the experience of Sicily showed that attacks, to achieve
maximum results, must be well timed and often repeated. Spasmodic
attacks, though capable of causing the enemy temporary damage, seldom
produced decisive results. Although of course the ultimate aim of
all attacks on airfields is the destruction or neutralization of the
enemy air force, it was found essential to define clearly the aim
of each attack, as the immediate aim varied from time to time. It was found desirable to divide the airfield area into definite sections and to assign these to certain formations. In attacking airfields over a wide area, one device adopted was to concentrate upon all airfields in a given sector with the exception of one or two with the purpose of causing aircraft still in the air to be diverted to those fields which were left unscathed. A concentrated attack would then be made against the latter. The methods and tactics used by the heavy bombers of the NAAF appear to be very similar to those which have already been described in connection with the participation of the IX Bomber Command in the preinvasion blitz against Axis airfields. In addition to the heavy bombers, approximately 50 per cent of the night effort of the versatile Wellights was employed against Axis airfields. Owing to the shortage of Wellights, light and medium bombers of the NAAF 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" as bases for his aircraft. To counter this move, mass strafing attacks by fighter-bombers (principally P-40's and P-39's) against Foggia and against Cerbini, which had 14 satellites, were employed with excellent results. In one such attack the target area was divided so as to allot a certain number of airfields to each group. Training was carried out two days prior to the operation in order to give pilots practice in low-level navigation, speedy identification of targets, minimum-altitude attack, and withdrawal. In order to achieve maximum surprise the flight was routed
in such a way that the enemy radar station could not detect it, pro-
vided the aircraft did not fly above 100 feet. As a result of the
faithful execution of this carefully worked out plan, the enemy was
catched completely by surprise. This is verified by the fact that
personal were still on the airfields when they were attacked, and it
was believed that from 200 to 300 were killed.\footnote{98} Sixty-four aircraft
were reported to have been destroyed on the ground and 86 damaged,
70 per cent of them being Ju-88's. The strafing mission was followed
approximately one hour later by a fragmentation attack.\footnote{99}

During the Sicilian invasion it was found that the U. S. 20-pound
fragmentation bomb was particularly effective against grounded air-
craft. Owing, however, to the shortage of the supply of this weapon,
the SAAF was forced to reserve it for crucial targets.\footnote{100} During the
last two days of the preinvasion attack against airfields, demolition
bombs were used on a greater scale than fragmentations in order to
make the fields unserviceable by cratering.\footnote{101} The fusing was usually
either instantaneous or short delay (up to one second). Five-hundred-
 pound bombs with six-hour and 12-hour delay fuses were dropped in small
numbers.\footnote{102}

**Attacks on Ports, Bases, and Lines of Communication, D minus 7
to D-day.**

The greater part of air effort having been directed against enemy
airdromes during the intensive period D minus 7 to D-day, attacks
against other targets were confined almost exclusively to night
attacks by Wellingtons and fighter-bombers. Strafing raids were also undertaken by the RAF in addition to its normal commitments such as bomber escort, offensive sweeps, and shipping protection.

Ports attacked by the night-flying Wellingtons included Cagliari and Olbia in Sardinia and Palermo and Trapani in western Sicily. Railway transportation centers at Cagliari were the objects of attacks on the nights of 30 June-1 July and 1-2 July. On the third night, 2-3 July, similar targets at Olbia were attacked with fires and explosions resulting. Marshalling yards and military installations were attacked at Palermo on the night of 1-2 July, at Trapani on 2-3 July and 3-4 July, and again at Palermo on 6-7 July. Target areas were reported well covered by bomb bursts. A-36's of the 37th Fighter-Bomber Group carried out a series of bombing and strafing missions from 3 to 9 July against targets in central and southern Sicily including Caltanissetta, Agrigento, Sciacca, and Porto Empedocle.

The plan for the invasion provided for an attempt by bombing, strafing, and jamming to put German radar on Sardinia and Sicily out of action before and during the assault. Radar stations at Alghero and Pula in Sardinia, and Marsala, Licata, and Noto in Sicily were accordingly attacked during the weeks preceding the invasion. Some time after the occupation, the sites bombed and strafed were examined with the idea of assessing the damage. Owing to the fact that in practically all cases demolition charges had been exploded in or around the radar gear and in many cases a portion of the equipment had been removed, it was not always possible to differentiate between
damage inflicted by bombing and that inflicted by strafing. So far as
could be ascertained, however, no damage was discovered in Sicily on
any Freya, Chimney, or Wurzburg. Hits were apparently scored by means
of strafing on at least two Wurzburgs and a Nixie, but no conclu-
sion as to the extent of the damage could be reached. The station at
Licata, certainly, and the stations at Pachino and Marsala, possibly,
were put out of operation by hits scored on the operations huts. 106

Practically all the heavy bombardment of ports, bases, and lines
of communication during the intensive period was carried out by
literators of the Ninth Air Force. In addition to their contribution
to the effort against the airfields the B-24's carried out heavy attacks
against Messina, Catania, and Taormina. On 5 July 86 B-24's of the
98th, 375th, 44th, and 93d Groups made a mass attack against the
harbor installations and rail yards at Messina. 107 Many hits resulting
in fires and explosions in various sections of the target area were
reported. 108 A force of approximately 40 bombers of the 44th and 376th
Groups attacked Catania on 8 July, splitting their effort between the
telegraph and telephone buildings in the northern part of the town and
the railroad marshalling yards. 109 Photos revealed damage in the
railway depot and several large oil fires. The section of the town
around the telephone and telegraph buildings was obscured by smoke as a
result of numerous bomb hits. 110 A third important attack of the
week made by heavies of the IX Bomber Command was on 9 July, the day
preceding the invasion. Eighteen B-24's of the 376th Group made a
successful last-minute onslaught against Axi. headquarters and the
post, telephone, and telegraph office at Taormina in an attempt to
terrorize and confuse the enemy staff at a most critical moment. Photos
revealed direct hits on the San Domenico Hotel in which head-
quarters was located.

Enemy opposition to the intensive preinvasion operations was
sporadic and inconsistent. On occasion Allied attacks were met with
strong and persistent opposition while at other times our aircraft
carried out their missions in the same area practically unchallenged.
It is probable that this inconsistency was due to the fact that the
enemy, lacking both aircraft and personnel, was not able to meet the
attack at every point and was "picking his shots" where he thought
they could do the most good. A few examples will serve to illustrate
this generalization. Over Sicily on 4 July medium and heavy bombers
of NAF were intercepted by an estimated force of 110 enemy fighters
including both German and Italian aircraft. They attacked the Allied
formation persistently and by means of incendiary aerial bombardment
succeeded in bringing down one B-17. Similar missions, carried out on
the same day in the same general area, met only negligible opposition.
Again on 5 July B-17's attacking the Gerbini airfield were intercepted
by a force estimated at over 100 fighters. Aggressive attacks and
aerial bombs this time brought down two B-17's. Thirty-five enemy
fighters were, however, reported destroyed. Only a short while after-
wards, another force of B-17's and B-25's encountered no enemy
opposition. A third Allied attack by medium one and a half hours

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later was met by a small force of about 10 German and Italian fighters. The next day, 6 July, American bombers observed approximately 25 enemy aircraft in the air and taking off. Only nine offered combat—and that of a rather unaggressive nature. On the 7th two enemy aircraft were encountered by American bombers, while approximately 30 were flushed by P-40’s. On the two days prior to the invasion about 30 fighters were encountered each day by USAF bombers and fighters, but passes were made only half-heartedly.

In addition to the above intercepted missions the enemy maintained sea reconnaissance on a normal scale and his customary fighter patrols over Sicily, Sardinia, and parts of Italy. The coast of Northwest Africa was covered by two to three reconnaissance planes every morning and afternoon, some planes flying as far west as Oran. Two of these reconnaissance planes were reported "probably destroyed" during the week. Despite several alerts along the Northwest African coast and on Pantelleria, the enemy’s bombers actually crossed the coast on only one occasion during the period of intensive preparatory operations. This single attack occurred on the morning of 6 July when an estimated 75 dive bombers dropped HE and incendiary bombs. A few casualties to personnel and some property damage were suffered as a result of this raid. Although it is not possible to give absolutely reliable figures as to the total number of victories gained and losses sustained during the preparatory operations, it appears that the Twelfth Air Force (including RAF units under its control) destroyed about 250 enemy aircraft against the loss of 70 aircraft of all types.114
Relative Air Strengths on the Eve of the Invasion

The invasion of Sicily was undertaken by the United Nations with overwhelming air superiority. On the eve of the invasion the German and Italian Air Forces were estimated to have a total of between 1,500 and 1,600 aircraft based in Sardinia, Sicily, Italy, and southern France, compared to a force of approximately 4,000 aircraft of the United Nations. There were approximately 113.5 British and 146 American squadrons. The RAF provided a majority of the single- and twin-engine fighter and coastal aircraft, while American units made up the bulk of the bomber and air transport contingent. The night bomber force, however, consisted mainly of RAF Wellingtons, Liberators, and Halifaxes.

The enemy's fighter force was based mainly in Sardinia, Sicily, and southern Italy. In Sardinia he is estimated to have had 130 German SE fighters and fighter-bombers and 100 Italian SE fighters, while in Sicily and Italy south of 42 degrees north he had 260 German and 260 Italian fighters. Of an estimated total of 225 German long-range bombers, 175 were based in northern Italy and southern France. Only 15 of the 120 Italian torpedo-bombers were based in Sardinia, Sicily, and southern Italy, the remainder being at more remote bases in northern Italy and southern France. In addition to the above-mentioned aircraft located in the central Mediterranean, the Axis was estimated to have 265 German and 130 Italian aircraft located in Greece, Crete, and the Dodecanese. Axis aircraft in the Mediterranean theater were believed to have an average of 50 per cent
serviceability, though probably in the battle area it was even less. 123

**Opposing Land Forces on the Eve of the Invasion**

Prior to the actual invasion there was of course no way of knowing accurately either the number or quality of enemy troops defending Sicily. The "Tactical Appreciation" estimated the total Italian garrison at 153,000, consisting of field formations and coast defense formations. The field formations, which from the point of view of both training and equipment were rated the better, were estimated to total 73,000 men distributed in three main concentrations in the western, central, and southeastern part of the island. The coastal defense formations, numbering presumably about 75,000 and organized in 84 static infantry battalions and various artillery and machine gun units, had the duties of defending the beach, guarding vulnerable points, and dealing with the initial shock of invasion. In addition to the Italian contingent, it was estimated that there were possibly 5,000 German troops on the island and 24,000 GF ground troops. There had also to be taken into account the fact that the Axis might carry out a voluntary withdrawal from North Africa and might succeed in getting into Sicily 20,000 troops with personal equipment but without many tanks or vehicles. The total garrison on D-day was therefore estimated as follows: 124

1. Five Italian divisions
2. Two German divisions, one of which was probably evacuated from Tunisia and might be fully equipped or armed
3. The equivalent of six static coastal divisions (84 battalions).
Although the combat efficiency of the Italian formations was naturally rated much lower than that of the German, the Allied forces had no way of knowing they would be an entirely negligible factor. It was thought that the German divisions would be held in reserve as a mobile force for counterattack when it was determined where the full weight of the Allied blow was to fall and that the very presence of German troops would have the effect of stiffening Italian formations.\textsuperscript{125}

At the conclusion of the Sicilian campaign it was estimated that the Italian military personnel numbered 216,000 men, exclusive of militia and carabinieri, at the beginning of the invasion.\textsuperscript{126} The total German forces were variously estimated at from 60,000 to 90,000. The formations which provided the hard core of resistance were the reformed Hermann Goering Division and the 16 Panzer division, both of which were well-equipped and were believed to have a total of some 300 tanks.\textsuperscript{127}

The Allied invasion force consisted of the reorganized British Eighth Army and the U. S. Seventh Army. Backed by overwhelming naval and air superiority, they were confident of success.
Chapter III
THE AIRBORNE OPERATIONS

The airborne operations which preceded and followed the seaborne landings on Sicily were the first large-scale undertakings of their type to be carried out by the Allied Nations. Paratroops had been used on a relatively small scale and with some success in the initial landings and subsequent operations in the North African campaign. Previous to the Sicilian campaign, however, the largest Allied airborne operation involving a drop at night was a raid of 27 February 1943, carried out against a German radio station at Bruneval, France, by one infantry company launched from 13 aircraft. In contrast, the seaborne invasion of Sicily was preceded by an airborne assault involving a flight of more than 350 aircraft and 130 gliders transporting upwards of 4,000 men over a route of some 400 miles. The initial assaults were followed by further airborne operations, some of which took place as late as D plus 3.

The Northwest African Air Forces Troop Carrier Command had been activated in March 1943 and placed under command of Brig. Gen. Paul L. Williams, with the primary missions of transporting airborne troops into combat and of training paratroops insofar as it was an air force responsibility. Secondary missions included the evacuation of the wounded, the resupply of airborne units after they had reached the ground, the delivery of reinforcements into the combat area, and the transport of
cargo. For these operations C-47's and C-53's, commercial type planes which were unarmed and without bullet-proof tanks, were used. At the time of the Sicilian invasion the command was organized into two wings, the 51st Troop Carrier Wing, under command of Brig. Gen. Roy A. Dunn with headquarters at Mascara, Algeria, and the 52d Troop Carrier Wing, under command of Col. Harold A. Clark with headquarters at Oujda, French Morocco.

Under the original plan for HUSKY, which called for a series of staggered assaults in the southeast and on the west coasts of Sicily, British and U. S. airborne troops were to attack specified objectives in connection with the separate attacks. With the change in plan, which substituted simultaneous assaults in the southeastern area by both the American and British armies, the plan for the employment of airborne forces assigned an entire wing of the Troop Carrier Command to each of the airborne units. The 51st Wing was assigned to lift the 1st British Airborne Division, while the 52d Wing was to lift the paratroops of the 82d U. S. Airborne Division. The objectives to be seized by the airborne troops were changed from beach defenses to inland points whose capture would be of assistance to the advance of the ground forces.

The Operations LADBROKE and HUSKY NO. 1, 2 to 10 July

In compliance with the directive issued as Annex M to the Air Plan, Brig. Gen. Paul L. Williams, the Commanding General, on 29 June 1943, issued the detailed plan for the participation of the Troop
Carrier Command in HUSKY.³ On the night of D minus 1, 100 American aircraft of the 1st Troop Carrier Wing, together with 25 Alsemaries and 8 Halifax of the 38 Wing RAF,⁴ were to tow 133 gliders, which were to be manned by British troops of the 1st Airborne Division. The British airborne troops were to be released in two separate zones in the neighborhood of Syracuse; the one just south of the city was to capture the bridges over the canal and prevent their destruction by the enemy, and the other in the western suburbs was to advance toward the city if little opposition developed.⁵ This mission, which was to be flown from the El Djez area and which was known by the code name LABERKE, was to proceed westward from the Kuriate Islands to the southeastern corner of Malta, north to the southeastern tip of Sicily, and on up the east coast to the release point just south of Syracuse.

On the same night, D minus 1, 227 aircraft of the 52d Troop Carrier Wing were to depart from the Kuriate Islands and about two hours later to deliver paratroops of the 82d Airborne Division to their objectives in Sicily. The U. S. paratroops were to land east of Gela to capture the high ground and road junctions controlling the exit from the beaches where the U. S. 1st Division was to land. This mission was known by the code name HUSKY NO. 1. The route to be flown was a complicated dog-leg course: east to Malta, north to the coast of Sicily, west along the coast to a check point provided by a river mouth and a small lake in the Gela region, and then inland to the drop zones to be identified from air photographs.⁶
To the difficulties and hazards naturally involved in a new and experimental operation there were added other complications peculiar to the particular situation. During the planning stage it was realized that the quarter moon, due to set shortly after midnight on D-day, would hardly provide ideal visibility for the drop and assembly of airborne troops. As General Eisenhower in his report pointed out, the "favorable moon period" selected as the target date was not favorable in any absolute sense but represented the best compromise between the irreconcilable demands of the Navy for darkness and of the airborne forces for light.\(^7\) Because of the necessity for radio silence, visual aids to navigation were considered essential and this resulted in a complicated route of flight. In addition, a high wind which came up in the afternoon of 9 July increased the natural hazards for tow and glider pilots alike.\(^8\)

The 133 transport aircraft and 123 gliders which were to execute the LABORIE mission initiated their assembly in the El Djen area at approximately 1800 on 9 July 1943.\(^9\) High and low fighter cover was furnished until darkness by Seabirders, Hurricanes, and P-39's of the 1st Air Defense Wing over the assembly area and along the route. No interceptions by enemy aircraft were encountered. Because of a stronger wind than was anticipated and resulting errors in navigation, most of the aircraft missed their first check point at Malta. General Swing, who was at Delimara, stated that he observed only about 30 airplanes passing within view of that check point and that other aircraft were heard farther to the east.\(^10\) An altitude below 800 feet was
maintained and a loose formation of four ships echelon to the right was flown en route to the release zone. After passing Cape Passero, the tug aircraft began climbing to the release altitude of 1,500 feet for Waco gliders and 800 feet for Horsa gliders. Some pilots, however, taking cognizance of the velocity of the wind, released gliders at 1,800 feet instead of 1,500, as planned. Tug pilots reported considerable congestion in the release zone, probably due to the fact that several aircraft were obliged to make two or three passes before release because of the poor visibility.

Of the 133 gliders released, only 12 landed in the general vicinity of the landing zone, at least 47 landed in the sea, and the remainder somewhere ashore in the southeastern part of Sicily. British naval vessels of the Eastern Task Force reported observing the “depressing sight of large numbers of gliders floating in the water” in the area directly south of Cape Murro di Porco.

Despite the wide dispersal of the glider-horse troops, the eight officers and 65 enlisted men who did land in the drop zone performed their duties in an exemplary fashion. This fistful of men succeeded during the night of 9-10 July in reaching their objective at the canal bridge south of Syracuse. In the face of overwhelming odds, they held the bridge until only four officers and 15 enlisted men were left unwounded. By 1630 hours an enemy force estimated at a strength of one battalion supported by field artillery and mortars had forced the small party back to the south bank of the canal, almost to the edge of the sea. The enemy gained control of the bridge and doubtless
would have demolished it had not the advanced patrols of the landing force arrived in time to drive him back. Again the glider troops took over the defense of the bridge while the 17th Infantry Brigade of the British 8th Division moved across. Even these airborne troops which landed in the wrong places managed to contribute considerably to the success of the initial landing operations. Gropping about in the dark, they attacked what enemy positions they could find and, according to reports, contributed to the general disorganization of the enemy's defenses and reserves. 14

The RAMSDEN mission was carried out without the loss of any tow aircraft. No enemy interceptions were reported, and although aircraft and gliders entering the release zone flew over friendly naval craft they were not fired upon. Light and heavy flak was reported at various points along the coast of Sicily, but there appears to have been no flak within several thousand yards of the glider release point. Despite this fact, many of the inexperienced tug pilots, seeing the flak coming up from other points, had a tendency to swing away from the fire. 15

This and other factors help to explain the limited degree of success which was achieved in the airborne operation. The 239 subsequently emphasized the effect of the high wind which it maintained had not been previously predicted. "The greatest error," according to its official report, "in wind came from releasing gliders on predetermined release zone and gliders having to fly to the north found they had released too low in relation to the head wind from the north,"
consequently they could not reach the shore and had to land in the sea. Pilots who realized the velocity of the wind released gliders at 1800 feet instead of the planned 1500 feet. The wind was recorded to be 25 to 30 miles per hour from the north, twice that of the actual forecast. The weather service took exception to this statement and pointed out that although the surface wind was forecast at about 12 miles per hour, the forecast at 1,500 to 2,000 feet was predicted at 25 to 30 miles per hour, exactly as found. Whether the wind velocity was correctly predicted does not, however, appear to be a matter of great importance, the salient point being that the rough weather did seriously handicap the undertaking. General Dunn, Commanding General of the 51st Troop Carrier Wing, maintained that the pilots were briefed on the strength of the wind, but the glider pilots had had very little training in navigation and high wind operations and did not know how to handle the gliders in wind of that velocity. In an interview in Washington Secretary of War Stimson asked General Dunn whether he considered it possible to carry out successfully glider operations in a wind of the velocity encountered without a very large loss. General Dunn replied that he considered it possible, and that had the height of the release been estimated a little differently and the gliders released at a higher altitude at some distance from the shore, all of them could have made the shore very easily. General Dunn went on, however, to point out that a high wind caused the glider to bounce around a great deal and could cause both the pilot and the combat crew to become ill in flight.
Other considerations must also be taken into account. In the LABERCE mission the TCG was operating with British glider pilots. According to General Dunn, the British pilots arrived in Africa with very little training, many having reached only about the first solo stage of instruction. The TCG had only three weeks in which to give training in night flying and navigation to these inexperienced pilots. Many of the reports on the execution of the LABERCE mission were confused and conflicting. Nervous tension was high, and in some cases the gliders released before receiving the signal from the tug pilot and in others the gliders were ordered to release before the glider pilot thought he was in position. Some of the glider pilots actually turned in a reverse direction to their proper course, a fact that can be explained only by the scant training and lack of experience in night flying.

The paratroop operation, HUSKY NO. 1, carried out on the night of D minus 1, has a history closely paralleling in some respects that of the glider operation. The 226 aircraft of the 61st, 314th, 313th, 316th, and 64th Troop Carrier Groups carrying 2,781 paratroopers and 291 parachutes, assembled in the Kairouan area and were over the Kuriate Islands between 2152 and 2158 on 9 July. The take-off was well executed, but the planes soon ran into heavy wind and they too missed the important check point at Malta. High and low fighter cover was furnished the aircraft by the 1st Air Defense Wing along their route until darkness descended, but no interceptions were encountered.
during this time. The dog-leg course which ran east to Malta, north to Sicily, and west along the coast to the drop zones was complicated because of the necessity of avoiding contact with naval vessels which were under orders to open fire on any aircraft in their vicinity. 22 In order to avoid enemy RDF the aircraft held an altitude under 500 feet and flew a "V" of threes in a nine-ship formation.

Because of delay attributable to navigational difficulties, the troop carrier aircraft approached their drop zones in the Gela area in virtual darkness and were unable to identify their check points. Some pilots reported that fires and smoke caused by a previous bombardment by Allied air forces obscured drop zones. As a result of these difficulties and faulty navigation, the paratroopers were dropped in widely scattered areas and many were unable to form up with their units as originally planned. 23

Despite their fouled-up descent, the paratroopers fought well once they reached the ground. Their primary mission was to seize the high ground and road junction six miles east of Gela, a position which commanded the exits from the beaches to the south over which the American Ist Division was to land. 24 The 3d Battalion of the U. S. 505th Parachute Regimental Combat Team succeeded in seizing the high ground and holding it until reinforced by landing forces against counterattacks by a Panzer battalion equipped with Mark VI tanks. The 2d Battalion of the 505th, which landed near Marina di Ragusa beyond the easternmost point of the American landings, destroyed road blocks and strong points, captured the town of Marina di Ragusa, and made contact
with the U. S. 45th Division on D plus 1.  

Both the glider and paratroop operations carried out on the night preceding the seaborne invasion were accompanied by various diversionary aids. To neutralize the effectiveness of enemy radio direction finder, B-17 aircraft especially fitted with obstructive devices were over Sicily during the airborne invasion. Over 600 paratroop dummies dropped in various places were believed to have added to the confusion of enemy defenses. Diversionary bombing by aircraft carrying incendiaries was reported to have been effective, but in the Cela area fires and smoke caused by these bombings interfered with the pilots' vision.  

HUSKY NO. 2. 11 July 1943  

Subsequent airborne operations had been planned for the reinforcement and resupply of the initial landings but were of course subject to revision in accordance with the unpredictable developments of the land battle. On D-day British glider troops towed by C-47's of the 51st Troop Carrier Wing were to capture a key bridge and high ground commanding the approaches to Augusta from the west. However, this mission, known by the code name, GLUTTON, was cancelled because of the rapid disintegration of the defense and the rapidity of the 5th Division's advance. Plans were also laid for the reinforcement of the paratroopers of the 82d Airborne Division on the night of 10-11 July, but these were postponed because of the confused situation prevailing in the battle area on D-day. It was decided, however, to fly the mission JACKAL WHITE or HUSKY NO. 2 on the following night, 11 July.
This reinforcing mission consisted of 144 C-47's of the 52d Troop Carrier Wing carrying approximately 2,000 paratroopers of the 504th Regimental Combat Team. The decision to mount this operation was not reached until the day it was to be carried out, and insufficient time was allowed for warning the naval vessels along the route. This second force of paratroopers were to fly the same complicated dog-leg course which the first had traveled but with the additional hazard of traversing the actual battlefront for about 35 miles. The crews had been told that they would fly through a safety corridor which was to extend from an entrance near Marin di Ragusa to an exit north of Monte and was to be four miles inland from the Gulf of Gela. The drop zone was to be the Gela-Farello airport. Only too late was it learned that a friendly corridor had not been cleared and that the Gela-Farello airport had been taken by the enemy in a strong counterattack. According to the report of the 316th Troop Carrier Group, as soon as the airplanes approached the designated corridor the shore batteries opened fire and "the entire corridor became alive with deadly machine gun fire and heavy flak." As the planes approached the drop zone the fire became so intense that many formations which had so far managed to survive broke up, each aircraft seeking openings through the heavy curtain of fire, with the result that paratroops were scattered all the way from Gela to the east coast. Some pilots refused to drop the paratroops at all, feeling it would be murder to do so in such concentrated fire.
In addition to fire from both friendly and enemy troops, casualties were suffered from friendly naval and merchant vessels. All groups participating in HUSKY NO. 2 reported heavy naval fire at varying locations. The 53rd Troop Carrier Squadron reported that as they approached Sicily about five miles south of Donnalucata a group of ships opened fire on them. "These ships were most certainly friendly vessels," they maintained, "but no amount of recognition signals had the least effect on their fire."

The 316th Group reported that all its planes survived the intense fire from ground troops and headed out to sea only to be met by a barrage of fire from naval vessels. The pilots reported that ". . . as rapidly as they passed over one vessel, the next took up the fire, and so it continued some 20 miles out to sea. In desperation the pilots expended their pyrotechnics signals but it only aided the massacre. . . . Several of the C-47's were shot down in the sea. The survivors, in most instances, were saved and taken aboard naval vessels."

Losses suffered in HUSKY NO. 2 in both aircraft and personnel were heavy. A total of 23 aircraft failed to return and over half of those which did return were so badly damaged as to be out of commission. One pilot voiced the opinion of many airmen when he said: "Evidently the safest place for us . . . while over Sicily would have been over enemy territory."

Nor did the paratroops which reached the ground accomplish their mission. The unheralded descent of the 504th PCT at many points led
to disastrous confusion. Road blocks were alerted to be on the lookout for German parachutists; brisk flourishes were exchanged between airborne and ground troops; and even the 1st Division, in whose combat area the drop was scheduled, carried the 504th ECT as an unidentified German parachute regiment in its G-2 report. As a consequence of all these mishaps the 504th ECT suffered heavy casualties which General Eisenhower considered to be "in excess of any real damage inflicted on the enemy."35

A total of approximately 5,000 American paratroopers were employed in the two operations in the Gela-Licata area, with casualties estimated at from 39 to 25 per cent. Owing to the scattered dropping of troops, the execution of the plan for the employment of paratroops in Sicily achieved only limited success. However, the results achieved by the 505th ECT after its drop near Gela would seem to have more than justified its employment. Its aggressive action produced an adverse effect upon the morale of the Italian soldiers, some of whom after being captured estimated that between 10,000 and 20,000 paratroopers were dropped on D minus 1. In the area around Marina di Ragusa the paratroopers were believed to have caused the withdrawal of enemy units about 10 miles. On 14 July the 505th and 504th Combat Teams were assembled in a bivouac area near Gela. A reorganization was carried out whereby the division was reinforced by an infantry ECT. Support artillery was assigned; and assuming a position on the extreme left of the American sector, the 82d Airborne Division was prepared to act as an infantry division.36
When the first reports of the airborne operations, and especially the story of our transport planes, which were shot down by friendly fire, reached Washington, General Marshall cabled General Eisenhower that if the reports were correct it indicated that better coordination must be obtained in the future. General Eisenhower replied that the report of 42 planes being shot down by fire from friendly ground and naval forces was incorrect. As a matter of fact the total number of transport planes lost during the entire airborne phase of \footnote{XXX} was 43, half of which may have been shot down by friendly troops. The airborne landings had unfortunately taken place during a very confused battle situation in which there was an enemy air attack and a ground counterattack. In a later evaluation of the airborne operations General Eisenhower concluded that the blame for the "inexcusably high losses" was about equally distributed among the several services, with a large measure falling upon him for his failure to make better provision against misunderstandings, particularly in the follow-up operations. In regard to clearing a corridor through an organized battle area, Air Chief Marshal Tedder maintained that the plan for transporting airborne troops over 30 miles of an actual battlefront was unsound in principle. "Even if it was physically possible," he maintained, "for all the troops and ships to be duly warned, which is doubtful, any fire opened either by mistake or against any enemy aircraft would almost certainly be supported by all troops within range--AA firing at night is infectious and control almost impossible."
FUSTIAN, 13 July 1943

The British airborne mission FUSTIAN, carried out on the night of 13 July, encountered many of the same difficulties but accomplished more decisive results than its American counterpart. The objective of FUSTIAN was to seize and prevent the demolition of the bridge over the Simeto River, which provided the best exit from the high ground into the Catania plain to the northward. The plan called for a surprise attack against the defenders in order to seize and hold the bridge until the British XIII Corps could get across. According to General Dunn, 107 transport aircraft and 17 tug aircraft with gliders lifted a total of 1,250 troops. Fifty-six of the transports succeeded in dropping their paratroops on or adjacent to the correct drop zones, and 13 of the tug aircraft released their gliders at the proper point for accurate landings. Because, however, of the heavy flak encountered from both friendly and hostile batteries, some 27 aircraft returned to their bases with complete or partial loads, and 24 released paratroops at considerable distances from their correct drop zones. Three of the 17 gliders, being damaged on the take-off, did not complete the mission, and one landed in the sea.

Again the airborne troops, despite their dispersion, displayed grim determination in achieving their mission. Approximately 200 parachutists with five antitank guns managed to get into action against the bridge, captured it, and removed the demolition charges. As in the previous action in the Syracuse area, the British airborne troops
were forced to withdraw in the face of a superior force during the night, but advance elements of the XIII Corps arrived the next morning in time to retook the undamaged bridge. 42

The FUSTIAN mission was scheduled for the night of 13 July, but it was not possible to determine the exact routing until 12 July, and again not all the convoys were given notification. The senior officer of H. S. Wishart, for example, reported that although warning of the approach of friendly aircraft had been received at approximately 2130 on D plus 3, this did not allow the commodore sufficient time to get the message to all his ships before dark. Although the naval escort made an effort to prevent it, some merchant ships opened fire on the aircraft flying above them. As in the case of the Western Task Force area, a very confused situation prevailed over the battle area at the time chosen for the airborne attack. "Ironic commentary," as General Eisenhower put it, "was furnished by the incident of the Greek destroyer Kamaris which, having just rescued British and American victims of their own flak, signalled two messages in rapid succession, the first to warn the convoy against firing on friendly aircraft and the second to state that she was under attack by enemy planes." 43 During the FUSTIAN operation 11 aircraft were destroyed and 40 per cent of the total number put out of commission, primarily as the result of friendly AA fire. Mission reports speak of enemy fire as "inaccurate" and Allied fire as "very accurate." 44
In addition to the three large-scale missions described above, there were a group of small missions called CHESTNUT, designed to attack and harass enemy lines of communication and rear areas in northeast Sicily. The four separate missions were flown on 12, 13, 14, and 19 July, with two Albenmarles of the 51st BG participating in each mission except the last, in which there was only one Albenmarle involved. In CHESTNUT NO. 1 one of the planes dispatched carried out its mission successfully; in CHESTNUT NO. 2 neither of the planes completed its mission; in CHESTNUT NO. 3 both planes completed their missions; while in CHESTNUT NO. 4 the one plane failed to complete the assigned mission.

**Contribution of the Airborne Operations**

Despite the errors made and the heavy losses incurred, the airborne operations made an important contribution to the success of the initial stages of the invasion of Sicily. General Patton, commander of the Seventh Army, stated that at least 49 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 Catania accelerated his advance by no less than a week.

These achievements were accomplished, however, only at a high cost in both men and material. During the USKEY operation more than...
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**Calculated Total:**

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*Certified by: [Signature] Confidential Transmission Date: 15 July 1945*
600 sorties were flown with the loss of 42 troop carrier aircraft, approximately 25 of which were shot down by Allied naval and ground forces. Forty-seven gliders, or 35 per cent of the total number employed, landed in the sea. Approximately 5,000 troops were carried, 60 per cent of whom were dropped in the wrong place and failed to reach their correct destination. On 24 July the number of personnel casualties for the SAAF TCC was reported as follows: 9 dead, 116 missing, and 43 wounded.

It was evident that much remained to be learned about airborne operations, and immediately after the invasion steps were initiated both within the TCC and higher headquarters to review the Sicilian experience in order that lessons learned might be put to good use in future operations. Staff officers of both TCC and Airborne Headquarters took part in discussions and prepared critiques on various phases of the operation. Regarding the failure to drop a large percentage of parachutists on the assigned pin-point drop zones, the TCC maintained first of all that the plans "were too ambitious and based entirely too much on precision." Sicilian experience had shown that "it is practically impossible to fly over strange territory at night at extremely low altitude and drop parachutists with precision on pin-point drop zones." In the second place, it was maintained that the routes "imposed upon us by the Navy, and the navigational problems encountered because of this routing, proved too difficult for our crews. These crews were flying at night at an extremely low
altitude and making dog-leg turns on a time and distance basis over
water before picking up a landfall or an 'initial point' for the run
in to the drop zone. 53 In regard to the release of gliders the same
was true. It was felt that the landing zones were too small and too
rough even for crash landings. Unless gliders could be released on a
reasonably level and a sufficiently large area, jeeps and other heavy
equipment would tear away from their moorings and crash through the
fuselage of the glider. Difficulties encountered which the TCG felt
were beyond its control included the poor weather conditions, diffi-
culties of navigation over the target areas caused by haze, smoke,
and blinding lights, unanticipated enemy air attacks during HUSKY NO. 2
and EUSTIAN, and "most important," the disastrous results sustained
from fire from friendly naval and ground forces. 54

Since HUSKY was the first operation in which the Allied Nations
had carried out large-scale operations at night, General Eisenhower on
23 July appointed a board of officers to review the Sicilian experience
and to see what lessons might be drawn. 55 After a thorough analysis
of the operations a training memorandum was produced and circulated
to all forces in the theater, both British and American. 56

An important doctrine laid down in this memorandum was that the
use of airborne troops should be confined to missions suited to their
role, and "the force commander's decision to use them must be made only
after he is positive that the mission cannot be accomplished by other
means more economical or equally well suited to the mission. In weigh-
ing the decision, it must be recognized that airborne operations are
both hazardous and difficult of coordination, and can be justified only by a situation which clearly shows the use of such troops to be imperative.\textsuperscript{57} The decision must be made in time to permit notification to all air, ground, and naval forces, including minor naval craft and merchant ships. Although of course the minimum time of advance notice would vary according to the size and nature of the operation contemplated, in large-scale airborne operations over friendly ground and naval forces, a minimum of 12 hours was considered a good rule.\textsuperscript{58}

Certain principles of control and staff were also laid down in the memorandum. In the first place, since the questions of fighter protection, routing, height, time of dispatch, and the use or non-use of recognition signals are air matters, the final decision as to whether or not the operation can be carried out should rest with the Air Commander in Chief. Secondly, control and planning of all airborne matters, aside from the necessary detailed planning in conjunction with ground formations, should be centralized in one headquarters. Thirdly, in order to simplify command and communications, the Troop Carrier Command should operate under the direct control of the Air Commander in Chief.

Certain operational principles were also dealt with in the training memorandum, only a few of which will be mentioned here. The experience in Sicily taught that for overwater operations a zone of approximately five miles on either side of the route should be established and surface vessels should be kept clear of this zone so far as operationally possible. Whenever feasible the corridor should be
marked by naval vessels, particularly at points where the course changes. Aircraft crews should understand the special hazards involved in flying over friendly surface vessels and should realize that there is a fundamental difference between the vulnerability of naval craft and ground forces to attack by small numbers of enemy aircraft. Well dispersed troops can accept a small-scale air attack with comparative equanimity, whereas a single bomb or torpedo can sink a valuable ship and its cargo. For this reason naval vessels cannot accept the presence of friendly aircraft in their vicinity unless they are positively identified. Air crews should be warned that naval vessels are instructed to fire without warning on unidentified aircraft.

Finally, realistic and thorough combined training for air forces and airborne troops should be provided to include not only the technical aspects of the projected operation but also details and contingencies that may arise. Preparatory training should culminate in a rehearsal of the operation with conditions simulating as nearly as possible the actual battle situation. Special attention should be given to training in low-flying navigation at night, especially over coastlines. If possible, the troop carrier crews should make a flight over the drop area in order to familiarize themselves with the features of the terrain.
Chapter IV

THE ASSAULT FEAST, 10 TO 16 JULY

For the invasion of Sicily one of the largest fleets in history—over 5,000 ships ranging from battleships and heavy transports to LST's and motor launchers—was assembled in the Mediterranean from all parts of the globe. From 8 July onward the protection of the assault convoy represented a heavy commitment of the air forces. Off the coast of Algeria and Tunisia, the convoy was protected by aircraft of the Northwest African Coastal Air Force assisted by the 336th Fighter Group based on Pantelleria. A record number of 574 sorties were flown on 8 and 9 July in protection of westbound convoys, in addition to 540 flown on local defense. Malta-based aircraft took over the protection of the convoys as they came within 50 miles of the island. After mid-day on D minus 1 and during the night, two-thirds of the available fighter force based on Malta was employed in this task, the remainder being employed in close escort and top cover to bombers operating from Libya and Tunisia against enemy aircrews. The enemy made no attempt to attack the convoy while en route to their destinations, and as a matter of fact, the only enemy aircraft encountered on D minus 1 was a small flight of perhaps a half dozen Ju-88's and He-219's near Augusta. The Spitfires shot down two and probably destroyed one of these. Admiral Hewitt in his report on the operations of the Western Naval Task Force spoke highly of the protection accorded the convoys by the air forces.
and stated that this role was "the most carefully planned and most successfully executed of all. The Coastal Air Force deserves great credit for the planning and execution of the protection of the many convoys involved in the operation."

On the night of 9 July the USAF carried out some of the most intensive as well as some of the most varied operations in which they had participated down to that time. In addition to protection of convoys and the dropping of real and dummy paratroops as well as gliders, the USAF carried out bombing attacks to soften the resistance generally to Allied shock troops, to provide diversionary aid 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 the island, the U. S. Mitchells concentrating mainly on the Piazza-Armerina-Caltagirone-Biscari area but extending their range as far as Sciacca in the west and Floridia in the east. In addition to the diversionary attacks which have already been discussed in connection with the airborne operations, RAF Wellingsons, Halifaxes, and Liberators bombed targets in southeastern Sicily in order to weaken resistance to the initial assault.

Air Cover for the Landings

" \text{h-hour was set for 0245 on 10 July. Planning and execution of the approach from the standpoint of navigation and seamanship was, according to General Eisenhower, one of the highlights of the operation and} \]
"left nothing to be desired." The Western Task Force consisted of three sub-task forces which were to attack on a sector covering 57 miles of beach. The sub-task force \textit{CENT} (45th Division) went ashore on the right flank covering the beaches from Scoglitti to Fiume Agata, 10 miles southeast of Gela; the \textit{DIEM} force (1st Division minus the 18th FMT) landed between Fiume Agata and Gela, with the Danger Force assaulting Gela frontally; the \textit{JOSS} Force (composed chiefly of the 3d Division reinforced by CCA of the 2d Armored Division), attacked a sector extending from six miles east to six miles west of Licata.

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 8-hour was postponed a full hour. A large degree of tactical surprise was achieved. The Germans apparently were not certain where the main weight of the attack would fall, for on both the day preceding and the day following the attack there was frenzied marching and countermarching from east to west of the island. General Eisenhower was of the opinion that the troops defending the assault beaches got little more than a one-hour warning. An outstanding feature of the Sicilian landings was the use of naval gun fire to neutralize beach defenses and shore batteries. At \textit{CENT}, where destroyers were employed to cover and support the landings, the 45th Division landed practically unopposed and was able to proceed to the establishment of its beachhead more rapidly than had been planned. In the \textit{DIEM} area opposition varied on some beaches from light to fairly
heavy on others. In the JOS area, after an initial delay caused by bad weather, the landings went forward successfully in spite of enemy counterfire on some beaches. By 0930 on 10 July all landings had been successfully accomplished.\textsuperscript{15}

It was believed that the enemy air force would exert every effort to attack the shipping and beaches early on the morning of D-day, with the object of disorganizing and disrupting the invasion forces at the outset. The number of Allied fighter aircraft available was not adequate, however, to provide continuous cover over all the 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 Île de France, (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.\textsuperscript{14} 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, from 1030 to 1230, and for the last one and a half hour of daylight, from 1600 to 1730; that a reserve wing should be kept at a high degree of readiness to reinforce any area as the situation demanded.\textsuperscript{15} The following allocation of strength was made in order to regulate as closely as possible the employment of the fighter force:\textsuperscript{16}
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During the assault phase all fighters, including those operating from Pantelleria, were under the control of ACSI, Malta. The U.S. **Monrovia** provided forward direction with VHF/FT in the DME and JOSS areas and the U.S. S. **Ancon** in the CMT area. Subordinate to the **Monrovia** and providing visual direction over DME and JOSS beaches were the U.S. S. **Chase** and **Biscaya**, respectively. On D-day the XII **Air Support Command (advance)** began active operations, with head-quarter and fighter control aboard the **Monrovia**. According to the report of the Western Naval Task Force commander, the U.S. Army fighter director units placed aboard the flagships were sent from the United States, especially for the Sicilian invasion. They were highly trained personnel but had no experience in a war zone and had had no opportunity for training as a team. In spite of these handicaps, however, and in spite of the fact that the plan covering the fighter protection of the assault area was not completed until after the assault convoys put to sea, Admiral Hewitt stated that it was his "considered opinion that a most creditable performance was turned in by the fighter director units, particularly by the unit aboard the USS **Monrovia**."** Fighter director facilities, however, were in general inadequate. Those in the U.S. S. **Biscaya** and the **Chase** had been wholly improvised in the
the theater, while the elementary facilities in the Monastir were improved "in so far as time and available equipment permitted."30

Requests for air support involving A-36's and P-40's were sent by radio from divisions to the U. S. S. Monastir, where they were filtered and ordered through VIII Air Support Command (rear), located on Cape Bon peninsula. Requests which required light and medium bombardment aircraft were passed by VIII Air Support Command to higher headquarters. Tactical reconnaissance was furnished by 11th Reconnaissance Squadron, which flew predetermined route. Spot reconnaissance was also provided by diverting a part of the fighter cover, while special reconnaissance missions were treated as air support requests.32

During the assault phase, 10 to 13 July, the 31st and 33d Fighter Groups were located on Goro and Pantelleria, respectively, and the other units were on the Cape Bon peninsula. The initial order of battle was as follows:33

<table>
<thead>
<tr>
<th>Organization</th>
<th>Type of Aircraft</th>
<th>Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>31st Fighter Group</td>
<td>Spitfire</td>
<td>Goro</td>
</tr>
<tr>
<td>33d Fighter Group</td>
<td>P-40</td>
<td>Pantelleria</td>
</tr>
<tr>
<td>38th Fighter Squadron</td>
<td>F-40</td>
<td>Bizerta</td>
</tr>
<tr>
<td>326th Fighter Group</td>
<td>P-40</td>
<td>Bizerta</td>
</tr>
<tr>
<td>27th Bombardment Group (D)</td>
<td>A-36</td>
<td>Korba</td>
</tr>
<tr>
<td>36th Bombardment Group (U)</td>
<td>A-36</td>
<td>Korba</td>
</tr>
<tr>
<td>111th Reconnaissance Squadron</td>
<td>P-51</td>
<td>Korba</td>
</tr>
</tbody>
</table>

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,"34 whereas the Northwest African Air Forces 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 ONI, DND, and JOS2 was approximately 10 aircraft; that there were several "holidays" in the schedule when no cover existed over one or two areas, and on two occasions there were no fighters in any of the areas; that with the limited amount of cover, patrols could be maintained at one level only, thus making interception of both high- and low-level attacks difficult. Finally, even when requests for close air support mission were granted, the time lag was excessive, sometimes as much as 12 hours.

In support of its views the HAP pointed out that on the day of the invasion Spitfires and P-40's flew 1,000 sorties and that, although the Navy was prepared for a loss of up to 500 ships during D minus 1 and D-day, the number lost from enemy air attacks up to nightfall on 10 July was only 12. The majority of those losses occurred in the JOS2 and DND areas where the air attack was strongest and where the anchoring of ships as far out as six miles had the effect of overstretched fighter patrols and permitting the enemy to get through the screen. Furthermore, fighters on patrol on D-day 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 which height friendly fire was less hazardous but the danger of enemy aircraft breaking through was enhanced. So far as is known no Spitfire was shot down by friendly fire but several were hit and damaged.
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 three days from 0245 on 10 July to 1815 on 13 July, approximately 320 enemy flights were plotted on the operations board. Of this number, over half were inland flights which did not reach the CEZT, DME, or JCSS areas. There were 39 plotted enemy raids aimed at the assault areas, of which 30 were intercepted and driven off prior to entering the areas while the remaining 63 raids were, in most cases, engaged by the fighter cover. Most not included in these 39 plotted raids were frequent low-level attacks which could not be picked up by radar. These raids achieved a good deal of surprise by coming down the valleys, and then darting over the ridge of hills onto the beaches. Nevertheless the relatively light losses sustained by the Navy would seem to be testimony to the high degree of air superiority which the Allied air forces achieved prior to the invasion.

Establishment of the Beachhead

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 on the American sector were secure. The II Corps was firmly established on the sector running from Gela to Scoglitti. On the left the 3d Division had captured the town of Licata and was sending strong
combat patrols in the direction of Palma di Montechiaro and
Campobello. The two distinct beachheads of the Seventh Army extended
to a depth of from two to four miles inland. The British forces
likewise succeeded in securing their beachheads, the Pachino landing
field falling on the afternoon of D-day and the port of Syracuse
later that night. The fact that no demolition had been carried out
at Syracuse would seem to be further indication of the tactical sur-
prise attending the invasion. 29

On the 11th the enemy launched his major effort to throw the
American invaders back into the sea. The main weight of the counter-
attack, which began early in the morning and lasted throughout the
day, fell against the 1st Division near Cela. Enemy infantry, spear-
headed by Mark IV tanks, at one time broke through to within 2,000
yards of Cela before being stopped by artillery and small arms fire. 30
Naval gunfire was brought to bear successfully against the German
tanks of the Hermann Goering Division. 31 The attacks against the
45th Division were also repulsed, and on the extreme right, Comiso
and Ragusa were taken. On the left flank the 3d Division extended its
beachhead beyond Mesina and accomplished its initial mission ahead
of schedule by reaching the Yellow line. 32 By the end of the day,
then, the Seventh Army had extended its beachhead on both the right
and the left flanks and had withstood determined counterattacks against
the center.

In the British sector Allied troops advancing from Syracuse took
Priolo on the 11th, while to the south Porto and Avola fell. The
beachhead was advanced on the Ficino peninsula against slight opposition. 33

On the 18th the enemy renewed his attempts to prevent the establishment of a firm beachhead by throwing his tanks and infantry against the Ist U. S. Division south of Niscemi. By late afternoon, however, the attack was repulsed and the army was forced to abandon his attempt to cross the beachhead. The Ponte Olivo airfield was captured during the morning, while on the extreme right, elements of the 45th U. S. Division contacted the British Eighth Army. Except for one gap south of Niscemi the Seventh Army by the end of D plus 2 held a convex sector which was eight miles deep at Cela and extended 15 miles on either flank. During the afternoon the advance army command post moved ashore from the Lampedusa and established itself near Cela—proof, if any were needed, that the critical phase of the assault was over and the Seventh Army was in Sicily to stay. 34 In the British sector Augusta was occupied on the night of 12-13 July after an intense naval bombardment.

After the “Outline Air Plan” had been agreed upon it became evident to the Army that the rate of disembarkation of supporting arms for the land forces would not be rapid enough during the first few days to assure the security of the beachheads. Meanwhile it would be necessary to interdict the enemy’s movements from the interior toward the assault area. Because of the peculiar terrain features of the island it was believed that the bulk of the enemy’s movement would be by road
and would radiate both from the enemy's concentration area around
Tana, which is approximately in the center of the island, and along
the coastal road from the west. Although this new commitment of
the air force was not envisioned in the original plan it was met by
the temporary transfer of two groups of P-38 fighter-bombers from the
Strategic Air Force to reinforce two groups of A-20's of the Tactical
Air Force. The P-38 groups were assigned to the eastern area, while
the A-20 groups were to concentrate on the western and central areas.
With orders to attack all movement, the formations were dispatched
every 30 minutes throughout the day beginning at first light.

During P-day excellent targets on the enemy roads were presented
and a large number of enemy motor transports were destroyed. On the
11th a total of 90 P-38's of the Twelfth Air Force were sent on fighter
sweeps to bomb targets, while 100 A-20's were dispatched to attack
motor transport columns, trains, and airfields on the island. In
these attacks it was claimed that 249 motor transport, 2 locomotives,
and 21 x-109's on the ground were either destroyed or damaged by bombs
and machine gunning. On the following day, 12 July, nearly 1,000
sorties were flown by day fighter and fighter-bombers of the Twelfth
on sweeps and strafing missions against the enemy's rear lines of
communication in southern and central Sicily. Good results were
achieved by these attacks which were made in the vicinity of Galtanissetta,
Catania, Enna, and Castel Torreli. Under this scale of attack the
enemy's road movements were seriously hampered and the Allied armies
were able to strengthen and enlarge their beachheads.
In encounters with the enemy air force during the assault, Allied fighters were conspicuously successful. Of the estimated 100 or more enemy fighters which were airborne on D-day, the Spitfires shot down 12, probably destroyed 3, and damaged 11 for the loss of 11 of their own number. On the following days the enemy's casualties were even greater. In 872 sorties on patrol over the Sicilian beaches on 11 July, Allied aircraft shot down 23 enemy planes and probably destroyed 5, for the loss of 1 Spitfire and 1 P-40. On 12 July, 24 enemy aircraft were destroyed, 9 probably destroyed, and 21 damaged. At this point the enemy began to diminish his day effort but at the same time to increase the scale of his night attacks.

The Allied air force, however, were prepared to meet this contingency. To protect the beaches and shipping against night attacks, three ground control intercepts (GCI's) were installed in LST's for employment in the ASD, DE, and MFA areas. These seaborne GCIs were in operation during the first two nights following the landing, and although the time available for installation and training was inadequate, the results achieved by the experiment promised well for the future. In addition, night patrol lines of a minimum of three aircraft at a time were maintained on definite patrol lines by the night fighters operating off Malta. One 20-mile line ran north and south off Syracuse, another for the same distance 20 miles off Gela, and a third off Catania. Some indication of the success attending the efforts of night fighters is indicated by the bag.
taken on the night of 12-13 July: five Ju-88's, two C-109's, and one Do-217 destroyed, and one Ju-88 probably destroyed.

As the above account indicates, the effort of the Tactical Air Force in support of the landing operations and the securing of the beaches was intensive. Below there is summarized in statistical form the activity of the Tactical Air Force during the assault stage, 10 to 13 July:

**LOCAL TACTICS**

**Tactical Bombard Force (operating from Tunisia)**
- Day: 26
- Night: 205

**III Air Support Command (operating from Tunisia)**
- Fighters: 280 (includes 26 sorties by 325 Group of NATAF)
- Fighter-bombers: 1,777 (includes 829 sorties by F-28's of the NASAF)
- Tactical Reconnaissance: 60

**Resort Air Force (operating from Malta)**
- Fighters: 3,022 (includes 31st U.S. Group at Gozo and 33rd U.S. Group at Pantelleria)
- Fighter-bombers: 93
- Tactical Reconnaissance: 72

**Losses**
- 1 F-25
- 10 A-36's
- 11 P-38's
- 3 P-40's
- 2 Hurricanes
- 15 Spitfires
- 1 Mosquito
CHARTS

<table>
<thead>
<tr>
<th></th>
<th>Destroyed</th>
<th>Probables</th>
<th>Damaged</th>
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<tbody>
<tr>
<td>Ju-88</td>
<td>17</td>
<td>3</td>
<td>2</td>
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<tr>
<td>He-109</td>
<td>31</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Ju-97</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
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<td>He-20C</td>
<td>7</td>
<td>5</td>
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</tr>
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<td>He-200</td>
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<td>4</td>
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<tr>
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<td>-</td>
<td>5</td>
</tr>
<tr>
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<td>-</td>
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</tr>
<tr>
<td>Fw-190</td>
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<tr>
<td>Cant Z-1007</td>
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<td>-</td>
</tr>
<tr>
<td>Do-217</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>He-210</td>
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</tr>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>P-108</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>He-110</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
</tbody>
</table>

Strategic Bombing During the Assault Period

In addition to the fighter and fighter-bomber effort which was put forth to protect the seaborne invasion force, the full weight of the Strategic Air Force was brought to bear against the enemy during the assault period to neutralize his air force and prepare the way for the Allied advance. From D-day onward the main emphasis was on communications targets, and four groups of B-17’s and five groups of medium bombers of the Twelfth Air Force as well as five groups of B-24’s of the Ninth Air Force were in almost continuous daily operation. On the day of the invasion, 10 July, 79 B-17’s of the 26th, 99th, and 301st Groups delivered an attack in three waves against the Corbini air-sea drone and its satellites which for all practical purposes rendered the air-sea drone as well as most of its satellites unserviceable.43 Thirty-seven B-25’s of the 301st Group attacked Paleazzo barracks while 71
B-25's bombed the Axis airfields at Sciacca and Trapani/Milo. On the afternoon of the same day 28 Liberators of the IX Bomber Command attacked the marshalling yards at Catania, causing great damage to the railroad facilities; while 28 B-24's of the 92d Group attacked the airfield at Vibo Valentia, causing many explosions and fires in the airfield area. During the night of 10-11 July medium and light bombers of the Twelfth Air Force continued the unceasing pounding of airfields and communications.

On the 11th, 76 B-17's of the 2d, 97th, and 99th Bombardment Groups (Twelfth Air Force) followed up the work of the Liberators of the Ninth Air Force with a concentrated attack on the marshalling yards at Catania, in which many hits on the yards, repair shops, and industrial installations were scored. Around 25 enemy aircraft were encountered by the heavies which shot down four He-109's, two He-210's, and one Re-2001 without loss. The Sciacca airfield was struck by 36 B-25's of the 510th Group whose pilots reported craters on the landing area resulting from bomb bursts. On the same day 43 Liberators of the 376th and 360th Groups (Ninth Air Force) attacked the airfield at Reggio on the Italian mainland, covering it with bursts, while a smaller force of 25 B-24's of the 98th Bombardment Group struck the near-by airfield of Vibo Valentia.

On the following day, 12 July, the Liberators of the Ninth again visited Reggio, but this time their aiming points were the harbor, the marshalling yards, and the ferry slip. Photos taken subsequent to the
attack by 47 B-24’s of the 44th and 309th Groups showed a 50-foot crater, five sets of tracks blocked, and the main line to Giovanni impassable. Forty-two aircraft of the 93d and 98th Bombardment Groups (H) attacked the ferry slip and marshalling yards at San Giovanni, scoring several hits. Striking at the Sicilian side of the straits, 70 B-17’s of the Twelfth Air Force attacked the railroad bridge at Terrina, further disrupting the enemy’s transportation facilities. Meanwhile the medium kept up their pounding of airfields, Gerbini and its satellites receiving their daily attack. Fifty-eight B-26’s of the 319th and 323rd Groups attacked Agrigento and Caricati, respectively, reporting hits on the barracks area and railroad station at the former and in the marshalling yards at the latter. On 13 July, B-17’s of Twelfth Air Force attacked communication targets at Enna, the airfield at Trapani/mile, the Carcitta landing ground, and the marshalling yards at Randazzo, where 11 direct hits were reported. The heavies of the IX Bomber Command concentrated on the Axis airfields at Crotone and Tibo Valentina in the “heel” and “toe,” while 18 B-26’s of the 340th Group scored a direct hit on one ship in the harbor and started several fires in the town of Terrina.

The inevitable result of the combined efforts of the Strategic and Tactical Air Forces was a reduction of enemy air resistance, the 18th being the last day on which he was able to put up any effective opposition in Sicily. The loss of his coastal radar stations and other vital installations on D-day meant that the enemy had recourse
to spotty coverage only. His night effort increased temporarily, but as has already been shown, that too was effectively countered. 54

AIR COMBATINATION WITH GROUND OPERATIONS, 13 to 16 July

On the American sector the men of the Seventh Army continued their advance on the right and center along a line running northwest of Corle to the high ground three miles north of Ponte Olive, while the 3d Division on the left flank extended its aggressive reconnaissance toward Agrigento and the north. 55 The 2d Armored Division reached a point eight miles northwest of Gela and advanced toward Butera. With its beachhead firmly established, the Seventh Army began immediately to put the captured airfields and communications into operation. By this time the Axis had lost six airfields and landing grounds in Sicily, including Ponte Olive, a glider strip northwest of Gela, and a landing strip west of Alcamo. On the 13th the first fighter squadrons flew into Sicily, the 244th RAF (less the 417th Squadron) landing at Fasano. 56 On the following day the 111th U. S. Reconnaissance Squadron moved to the Licata air strip while 324th R.A.F. took up residence at Comiso. On the 13th the 31st U. S. Fighter Group landed at Licata, while the 33d Group flew into Licata. One week after D-day there were a total of 16.5 squadrons of the RAF on Sicily. The schedule of build-up through 6 August is given in Appendix IV.

In cooperation with ground operations the aircraft of R.A.F. continued their attacks against all enemy road movement. Bombing-
Strafing missions were flown by 134 A-36's of 37th and 38th Fighter Groups in central and northern Sicily on 13 July. Farms attacked included Catania, Terrana, Corleone, and Piazza Armerina. Thirteen missions were flown against enemy transports by 74 P-38's of the 71st Fighter and 64 P-38's of the 14th Fighter Group. An estimated 29 vehicles were claimed destroyed and 63 damaged, in addition to 6 locomotives and 45 cars destroyed at Trapani.57 The same day a force of B-24's of 14th Squadron from Coastal Air Force attacked an enemy convoy about 100 miles north of Palermo and succeeded in sinking a large merchant ship. The same day two destroyers were attacked with cannon fire.58 On the night of 13-14 July 3-25's of the 18th Group bombed the important transportation center at Enna and attempted to create a road block at Piazza Armerina.

By the end of the first week of operations the Seventh Army had accomplished its initial objective, which was to reach the Yellow line. The capture of Biscari airfield on the 14th meant that the southeastern system of airfields was in Allied hands. It had become apparent that the repulse of the counterattacks near Gela on the 11th and 13th had persuaded the enemy to withdraw, fighting only delaying actions and making local counterattacks. Air reconnaissance showed the withdrawal to be in the general direction of the Catania plain. A new boundary which extended from Vizzini along the road to Caltagirone, Piazza Armerina, and the road junction 10 miles southwest of Enna was established between the American Seventh and British Eighth Armies.
For the Seventh Army the way was thus clear for a major drive northward through the island. On the British sector the Canadians took Caltagirone on the 16th and Piazza Armerina the following day, while the Eighth Army extended its Primosole bridgehead north of the river against determined Italian resistance. This meant that all the enemy's effective forces were now north of the line Primosole bridge-Piazza Armerina-Bon Catania.

For the remainder of the first week of the invasion Tactical Air Force continued its attacks on enemy movements and positions, concentrating particularly on the transportation arteries leading from central Sicily to the east and south. On 14 July bomb-carrying P-38's of the Twelfth Air Force carried out attacks against targets of opportunity in the Noto area. The town of Noto was reportedly raided during the day and night by Bostons and Baltimores; torpedoes sent by hit one merchant vessel of about 7,000-ton capacity with two torpedoes; three torpedoes hit another of 3,000 to 5,000-ton capacity, while a smaller vessel was shot up with cannon and left blazing fiercely. In addition, torpedo-carrying Wellingtons sank a merchant vessel of about 5,000 tons near Gibia. To add to the day's varied activities the mediums of the IX Fighter Command participated in the following activities: 19 P-40's of the 13th Group dropped over 50,000 pounds of bombs on roads in and around Noto; 21 P-38's of 340th Group dropped approximately 70,000 pounds of bombs on Palermo; while 24 P-40's of 32nd Fighter Group carried out patrol missions over the beach of Licata.
By the 15th the enemy's dwindling air resistance in Sicily was broken. Spitfires on offensive patrols over the Catania and Gerbini areas encountered no opposition, and few enemy aircraft were reported by fighters escorting Allied bombers and fighter-bombers. The bombing of enemy positions and transport was kept up on a 24-hour basis, the Wellingtons and mediums supplementing at night the heavy attacks delivered by day. On the night of 15-16 July, for example, Bostons, Baltics, and B-24's carried out missions comprising 110 sorties against railheads and road areas in Sicily. Armed reconnaissance covered strategic roads throughout the night and reported and attacked a total of 290 transports of various kinds. Railyard yards and junctions, supply and ammunition dumps, and other targets of opportunity were bombed by fighters and fighter-bombers of the Twelfth Air Force on 15 July.

Air Offensive Against Southern Italy

The first establishment of the beachhead and the neutralization of the enemy air force left a large part of the Allied air force free to attack on a larger scale strategic targets farther afield. Following an attack by 45 Wellingtons on the night of 15-16 July, a mass daylight attack was made against Messina by a mixed force of 129 B-17's, B-24's, and B-26's of the Twelfth Air Force and 73 B-24's of the Ninth Air Force. This force of 312 medium and heavy bombers dropped approximately 600 tons of bombs, causing extensive damage to this vital port. While Messina remained a first priority target, an
increasingly heavy air offensive against communications, supply, and air bases in southern Italy was undertaken. On the 14th 32 B-17’s struck at Naples in an attack considered entirely successful, hits being scored throughout the dock area, the Royal Arsenal depot, stores, and marshaling yards. The attack against Naples was continued during the night by 44 Wellingtons and the following day (15th) by 72 B-17’s. Photographs taken after the raid disclosed severe damage to marshaling yards and rolling stock, no fewer than 16 trains being hit. Most of the tracks in the central portions of the yards were damaged and blocked, while on the eastern and southern sides they were either covered or blocked by debris. To prevent the build-up of enemy air resistance the bombardment of the southern Italian airfields was renewed by Liberators of the Ninth Air Force during the same day, none 69 B-24’s taking off from their Tyrrhenian bases to bomb the important base at Foggia.

Following an attack on the night of 15-16 July by Wellingtons, the heaviest of the Eighth Air Force concentrated their efforts against San Gennari on the Italian side of the Strait of Messina. Over one hundred B-27’s caused extensive damage to the marshaling yards and railway facilities. On the same day the Liberators of the Ninth continued their bombing of Italian airfields, this time striking at the enemy’s bomber base at Fari, while 123 B-25’s and 3-26’s of the XIXth were dispatched to bomb the fighter base of Vibo Valentia in the toe of Italy. Photographs taken subsequent to the attack on the latter
disclosed that out of 78 aircraft present during the attack, 50 were destroyed and two damaged. 71

Review of the Air Phase at End of the First Week

By the end of the first week of fighting in Sicily the land forces had occupied approximately one-third of Sicily, while the Allied air forces had effectively neutralized the enemy air resistance based on the island and had carried its offensive with great fury and power onto the mainland of Italy. At this point it is well to review briefly the air plan and to note to what extent it had been carried out. The plan made the following assumptions: 72

(1) That Comiso, Ponte Olivo, Biscari, and Fiume would be captured or denied to the enemy by D plus 1, enabling on D plus 2 a heavier scale of attack against airfields still occupied
(2) That, inter alia, bombing action would prevent reinforcement of Sicily and movement of forces from west to east across the island
(3) That by 14 July the use of Catania and Gerbini airfields should be effectively denied the enemy
(4) That by 16 July Catania and Gerbini might be in our hands and ready to receive aircraft on that day or the day after, and that when this stage had been reached air superiority over the battle area should be assured
(5) That the western airfields of Trapani, Castelvetrano, Nulo (Trapani), Brizza, and Enna Livorno (Palermo) should be occupied by 24 July if things went well.

The record shows:

(1) Occupation of Comiso on the night of 11 July, Ponte Olivo and Biscari on the 12th, and Fiume by noon of D-Day, with all serviceable except Enna by 13 July
(2) Enemy bombardment of Città di Castello, Agrigento, Palermo, Enna, Scilla, Piazza Armerina, and Rossana Faldia, all important centers on the main roads across the island, and San Giovanni on the Italian mainland, an embarkation reinforcement point
Continuous attack on Catania and Corbara airfields so that they were untenable to the enemy by 14 July.

Failure of the ground forces to cut the north coast road and the first of the inland roads, with the consequence that, despite the light and fighter-bomber effort by RAFs, the Air Forces were able to redistribute their forces and reinforce the 16th Army area from the north and northwest, and thus were able to prevent the fall of Messina before Palermo despite Allied efforts to bring it about.

The rapid occupation by U.S. forces, of Sciacca, Castelvetrano, Trapani, Erice, and Palermo, as the result of the withdrawals from the west side of the Island and the power of the air attack.

This chapter having dealt with the air phase of operations on a day-by-day basis in order to indicate its direction and emphasis as well as something of what it accomplished, it is well at this point to summarize statistically the air effort during the first week of the invasion, 10 to 16 July.

Strategic Air Forces flew 1,720 bomber sorties, of which 1,021 were against enemy positions and lines of communication; and 827 fighter sorties, of which 524 were on bomber escort.

Cinereal Air Forces flew 769 bomber sorties, of which 510 were against enemy positions and lines of communication; and 7,026 fighter and fighter-bomber sorties, of which 570 were by fighter-bombers. The bulk, 4,577 fighter sorties by day and 2,461 fighter sorties by night were flown. Effort before the invasion was concentrated on airfields and landing grounds, but after the landings it was immediately switched to enemy positions and lines of communication.

Coastal Air Force. During the same period fighters of the Coastal flew 1,295 sorties on convoy escort, 397 on defense patrol, 47 on air-sea rescue, 1 sortie on sea reconnaissance, and 2 on antisub hunts—a total of 1,582 fighter sorties. Coastal-type aircraft also flew 437 sorties, of which 235 were antisub hunts and shipping strikes, 134 convoy escort, 74 reconnaissance, and 66 air-sea rescue. Night fighter strength had now been augmented by the 414th and 415th Nightfighter Squadrons.
Reconnaissance. Much valuable work was accomplished during the week by reconnaissance squadrons, RAF Spitfires, RAF Mustangs from North Africa, TFU Spitfires, and sea Reconnaissance Wellingtons and Stirlings, all playing a vital part in building up the daily picture of enemy activity. A total of 615 sorties were flown. Air-sea rescue craft searched continually for missing aircraft.

Serviceability over the week:

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<th>Type of Aircraft</th>
<th>Effective Sorties</th>
<th>Serviceability per cent</th>
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<tr>
<td>Medium bombers</td>
<td>1,688</td>
<td>64.12</td>
</tr>
<tr>
<td>Light bombers</td>
<td>357</td>
<td>76.00</td>
</tr>
<tr>
<td>Fighter-bombers</td>
<td>1,320</td>
<td>69.14</td>
</tr>
<tr>
<td>Fighters</td>
<td>2,742</td>
<td>77.46</td>
</tr>
</tbody>
</table>

Figures exclude 335 non-effective bomber sorties. In addition to the above, 5,093 fighter sorties and 270 fighter-bomber sorties were flown from Malta.

Total tonnage dropped.

During the week 10 to 16 July a total of 4,650.85 tons were dropped on enemy objectives in the Mediterranean theater of operations.
Chapter V
THE ADVANCE TO PALERMO, 17 TO 23 JULY

After the firm establishment of the beachheads during the first week of the invasion, the next task was for the British Eighth Army to reduce Catanico and for the American Seventh to make a major drive northward and westward with the object of seizing the important port of Palermo. On the right of the American sector the 36th Division continued its assault against Agrigento and by the morning of 17 July had captured the city. Moving forward on its sector, the II Corps encountered stiff opposition from the enemy who was again using tanks in support of local counterattacks. Facing the Seventh Army there were, from west to east, the following enemy units: 207th Coastal Division (Italian), the 4th Livorno Division (Italian), the Hermann Goering Division (German), and the 54th Napoli Division (Italian). ¹ To aid the advance of the Seventh Army the XII Air Support Command assigned targets of opportunity in the northern and western parts of Sicily.

Nine missions by A-36's of the 37th Fighter-Bomber Group on the 17th strafed 62 trucks, 2 tanks, and 2 half-tracks. Forty A-36's of 36th Fighter-Bomber Group strafed 16 motor transport, 10 to 15 tanks, 15 locomotives, and 65 to 70 freight cars. ² During the night of 17-18 July the enemy broke off contact along the entire front, enabling the Seventh Army to advance against slight resistance. Nevertheless, many mines and booby traps were encountered along the way. In the
II Corps area the 1st Division advanced toward Villarosa and Enna, while the 85th Division occupied Culturato and pushed northward, reaching a point two miles northwest of Caterina by sundown. Along the central section in the west the American 5th Air Force Division reached an area northwest of Lentille. Among other activities of the Tactical Air Force on 18 July were 33 sorties flown by A-36's of the 85th Fighter-Bomber Group, in attacks on locomotives, cars, and other targets of opportunity at Catterina, Alana, Lercara, and Terrinici Invecchi.

Requests for air support were forwarded direct from division or corps to Headquarters XII Air Support Command. Corps monitored the net but did not filter any requests. Requests for missions were accepted and flown, provided aircraft were available and the target was still suitable for air attack. An up-to-date map was kept to show reconnaissance and attack mission flown, all requests being checked and coordinated with current operations. Fighter control had shifted from the U. S. S. Lambda and on 18 July was established at Cala.

Shipping patrols, however, in the vicinity of Lentille and Agrigento continued to be controlled from the U. S. S. Neosho until 20 July, when an advanced operations room was set up at Agrigento, with wire connection to the main operations room at Cala. The units of the XII Air Support Command and their locations during the period of the advance from the bridgehead were as follows:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Type A/A</th>
<th>Base</th>
<th>Date of Arrival in Sicily</th>
</tr>
</thead>
<tbody>
<tr>
<td>85th Fighter Group</td>
<td>Spitfire</td>
<td>Ponte Olivo</td>
<td>15 July</td>
</tr>
<tr>
<td>114th Reconnaissance Squadron</td>
<td>F-51</td>
<td>Ponte Olivo</td>
<td>15 July</td>
</tr>
</tbody>
</table>
Meanwhile, on the British sector the plan for reducing Catania by systematic bombing of the town and its approaches was being put into effect. On the night of 16-17 July four Bostons of 326 Wing and 30 B-25's of the veteran 15th Bombardment Group (C) attacked enemy positions at Catania, laying down an excellent bomb pattern and dropping 102,000 incendiaries. That same night A-20's of the 27th and 36th Fighter-Bomber Groups attacked the Lipoto railroad station and Libero. The following day a total of 116 Spitfires sortied were flown from Malta over the Catania area, while 24 B-25's of the 340th Bombardment Group struck at Pineto, to the west of Catania.5

At the close of the last chapter it was pointed out that the failure of the British to cut two of the west-to-east lines of communication had enabled the Germans to reinforce their position at Catania and to detain the Allied advance in spite of bitter fighting. Nevertheless, on 12 July the vital bridge-head at Primosole, which commanded the entrance to the Catania plain, was extended. With the bridge firmly secured the British troops were able to operate north of the Cornalunga, and by the evening of the 18th had succeeded in getting two brigades across the Cineto River. British troops took 2a/1/54.
to the west of Catania, and on the 18th a flight of 28 P-38's had a field day. Dispatched in escort to three Sunderlands on a search, a formation of 16 Ju-88's, German-type transport planes, was spotted on the way back. At a point 30 miles northwest of Ustica Isle the P-38's attacked and brought down the lot.

By the 19th the American Seventh and British Eighth Armies were operating under a new directive, whereby the Eighth Army was to drive the enemy into the Messina peninsula by three main axes: (a) northward from Catania; (b) along the Leonforte-Ragalzio-Mirano line; (c) along the Nicotera-Raimondo-Rocuzzo line as shown on the map following page 136. The mission of the Seventh Army was to drive north and northwestward to capture Palermo. The II Corps was to establish a strong base at the rear of the Eighth Army and to advance north and northwest and be prepared to attack Palermo from the east. The I Provisional Corps was to advance northwesterly and be prepared to attack Palermo from the north and southwest. The 2d Armored Division was to follow the Provisional Corps and be ready to exploit a break-through or extend envelopment to the west.

In accordance with this directive the envelopment of Palermo gathered momentum against ineffective opposition on 19 July. The 1st Division, which was now on the right of II Corps, was obliged to mop up a strong pocket of enemy resistance south of Enna. On the left of II Corps the 10th Division advanced to the north and west, sending strong patrols as far as Maricopolis. To assist the advance of the
Seventh Army 49 F-10's of 336th Fighter Group (MSF) carried out bombing and strafing missions against communications targets near Maceo and Castelnuovo in the west, scoring strikes on railroad yards, workshops, and warehouses. 10

On the British sector a determined counterattack aimed at the Barletta bridge was repulsed, while considerable progress was made in the direction of Erice. Continuing the attack against the approaches to Catania, 21 B-25's of the 13th Bombardment Group (C.) with four Bostons as pathfinders attacked Bari on the night of 18-19 July, while 12 Bostons of 303 Wing carried out ariel reconnaissance over Stilo, Erice, and Erice, bombing and strafing motor transport, roads, and the town. 11 Air activity on the 19th, however, was overshadowed by the mass attack on Rome which is discussed later on.

On 20 July the Seventh Army continued its progress northward and southward. The 1st Division took the centrally located point, Enna, establishing contact with the Canadians. During the period 10 to 13 July, inclusive, this important supply base was attacked by 301 medium, 39 light, and 107 fighter-bomber sorties. 12 The 45th Division encountered less than par the strongest opposition of the day at Palizzi, but pressed on toward Piazza. The 3d Division on the left continued a rapid advance, reaching the high ground three miles north of Massenili, while the 3d Airborne Division took Caltanissetta and advanced along the coast. The following day the advance met serious opposition only on the II Corps front.
By this time it was apparent that the low-grade Italian troops had no heart for the battle and were only too eager to pass into captivity. Reports of enemy movements to the north and east also disclosed the enemy's probable intentions. The Germans, who had borne the brunt of the fight and who in all probability had by this time taken over the direction of the battle, evidently intended to hold a sector in the northeastern part of the island which, even if it could not be used as a springboard for counterattack on a large scale, would contain large Allied forces, present the full strategic use of Sclavias airfields, and gain time for organizing the defenses of Italy. As the central post of Seventh Army was moved from Gela to Agrigento and the I Provisional Corps moved for and along its entire front it became apparent that a break-through to the north and west was likely. On the 21st both St. Blighard and Cast-Bretagna in the west fell.

With its left and rear covered, the 3d Motorized Division moved rapidly northeastward from Cast-Bretagna to the high ground five miles below Palermo. In the meantime the 3d Division was deploying along the high ground southwest of the city, while to the right in the II Corps area the 107th Infantry reached a point six miles east of Terrinini. 

Inert. The 109th FFI, moving from San Jytitana, reached the outskirts of Palermo where it contacted the 3d Division. A coordinated attack by these units was planned, but resistance held to Montibelli. On 20 July the 3d Motorized Division entered Palermo, and the commanding general of the I Provisional Corps received the surrender of the city. With the capture of this important port the actual phase of the mission
of the Seventh Army in Sicily was practically accomplished. There remained only the job of closing up isolated pockets of enemy resistance before the Seventh Army could proceed to the accomplishment of the final phase—driving the enemy into the Messina Peninsula. On the 23d a big step in the final clean-up was taken by the capture of Cugneti and the resulting disintegration of resistance in the Cefalà-Dragone area. On the 26th the Seventh Army took its greatest bag of prisoners—11,547, most of them Italians rounded up in the west by Provisional Corps. By this time, however, the drive for Messina was getting underway as the II Corps turned eastward to face a more determined foe.

Because of the rapidity of the advance of the Seventh Army and the absence of any air opposition of a serious nature, close air support on a large scale was not present. Air activity in the area of the Seventh Army's spectacular advance consisted almost entirely of strafing and bombing missions by fighters of the Strategic Air Force against communications facilities and other targets of opportunity. On the 29th 17 F-101s of 355th Fighter Group, 29 of which carried bombs, attacked railroad yards at Pattiéné in which there were 30 to 60 railroad cars, and dropped fragmentation bombs along the railroad from Messina to Trapani. In addition gas positions near Castellammare and a radar station near Strocone were strafed. The following day successful attacks were made by F-94s and A-26s against railroad yards in the vicinity of Partinico and against troops, vehicles, and artillery in the Petralia area.
While the Seventh Army was making its spectacular drive for
L'Aquila, there was heavy fighting on the Eighth Army front south of
Catania, but very little change in the enemy's advance locations. The
hard-pressed German units were fighting strenuously in the coastal
area to prevent enlargement of the bridgeheads on the Straits and the
Pistone. North of the railway running between Catania and Catanusova
the enemy held strong defensive positions, and on the whole of the
British sector he had multiplied his defense works and laid extensive
mine fields. Against bitter opposition near ground was yielded on
the central front west of Catania. On the 23rd and 24th Canadian troops
engaged the 25th Panzer Division, and on the 25th, Acireale, south of
Leonforte, fell. The following day Leonforte was captured and the
15th Panzer, under cover of heavy flak, withdrew northward. On
the 26th the Canadians advanced to a point ten miles northeast of Leon-
forte and on the following day fought their way to the outskirts of
Acireale, only to be forced back by a strong counterattack.

During the grim struggle in the Catania area the major effort of
the 1st Air Force was directed toward the alleviation of the
ground situation. The air plan called for the isolation of the battle-
area by the systematic bombing of all lines of approach and reinforce-
ment. The principal Axis targets formed a circle around Mt. Etna:
Sorrento, Caserta, Caltanissetta, Catania, Troina, Enna, Caltanisetta,
Regalbuto, Palermo, Milazzo, Palermo, and Reggio. Against these
targets, excluding the port cities of Catania, Reggio, and Acireale,
a total of 84 medium, 705 light, and 1,170 fighter-bomber sorties
were flown from the night of 19-20 July to the end of the month.
Rundazza probably received the most consistent attention. This impor-
tant road junction which connected the Axis positions in the north with
those to the east was attacked night and day by a total of 43 medium,
46 light, and 178 fighter-bomber sorties from 20 to 31 July. An out-
standingly successful raid was carried out on 22 July by 56 U. S.
Warhawks whose pilots claimed they destroyed 40 enemy vehicles and
damaged 25 others.¹⁹ Banking next in the scale of attack was Troina.²⁰

Activities of the Coastal Air Force, 17 to 24 July 1943

While the Seventh Army smashed its way to Palermo and the Allied
air forces took the air offensive to the Italian mainland, the Coastal
Air Force continued its ceaseless but unspectacular work. After the
establishment of the beachheads, however, its activity was less strenu-
ous, for the enemy was forced to divert some of his air and sea forces
from the North African coast and to concentrate them in the battle
zone.²¹ Antisubmarine escort to safeguard the passage of men and
material along the North African coasts continued, while the usual
reconnaissance over the west and east coasts of Sardinia and Corsica,
the Tyrrhenian sea, and Italian coastal waters continued. In recog-
nition of the contribution of the MACAF, Admiral of the Fleet Sir
Andrew Cunningham, Commander in Chief of Allied Naval Forces in the
Mediterranean, sent the following signal to Air Vice Marshal Sir Hugh P.
Lloyd:²²
We have been watching the efforts of the Coastal Air Force both in the offense and on their routine work with much interest and admiration. They are doing a first class job. Please convey my thanks to all concerned.

Air Offensive Against Italian Communications Targets,
17 to 24 July

By the time the Eighth Army reached Palermo enemy air activity from Sicilian bases was non-existent. The only airfield available to the enemy was believed to be the unimportant landing ground at Taormina. During the week 17 to 24 July the German ground forces had no fighter-bomber support, nor did Allied bombers over Sicily encounter any fighter opposition. As previously pointed out, the overwhelming air superiority of the Allies enabled the Allied air forces to strike at airfields, communications, and industrial targets in Italy.

As Commander in Chief of the Allied Forces, however, General Eisenhower made it plain to General Marshall that it was his policy to give priority to air operations which had an effect on the land battle and the neutralization of land forces. Any strength over and above that required for these operations, he declared, would necessarily be used against the most critical points in the enemy's communications system.

The two chief communications targets attacked during the week 17 to 24 July were Naples and Rome. Following a night attack by 31 Wellingtons on 16-17 July, a force of heavy and medium bombers from the Ninth and Twelfth Air Forces struck the marshalling yards at Naples in one of the largest air attacks of the Sicilian campaign. Naples derived its importance as a target from the fact that it was the rail
ITALIAN TARGETS ATTACKED BY AIRCRAFT
1ST JULY TO 17TH AUGUST 1943
center and chief port of southern Italy. Its large triangular marshalling yard bottlenecked the bulk of peninsular traffic and constituted a large concentration of locomotives and cars. The air armada making the attack consisted of 97 B-17's, 72 B-25's, and 107 B-26's from the Twelfth Air Force, and 77 B-24's from IX Bomber Command, a total of 363 aircraft in addition to 164 Lightnings serving as escort to the mediums. Carrying out their attack during the morning, the Ninth Air Force Liberators succeeded in placing a heavy concentration of bombs in the target area which resulted in numerous fires and explosions. Considerable enemy fighter opposition was encountered, and 12 enemy aircraft were claimed destroyed for the loss of two Liberators.

In the afternoon the heavy and medium bombers from the Twelfth dropped a total of 545 tons of bombs. A damage assessment report covering both day and night attacks showed extensive destruction over the entire marshalling yards and central station, the industrial areas north and south of the railroad, and the fuel installations east of the marshalling yards. "Damage in all parts of the marshalling yards," according to the report, "appears so widespread that it is improbable that any effective use can be made of the system until most extensive clearance and repair amounting to almost complete reconstruction have taken place."

The aircraft of the Twelfth Air Force encountered intense and accurate flak as well as a few formations of three to five enemy fighters, but only six B-26's were lost in this mass attack.

Some idea of the effects on enemy morale of the bombing in southern
Italy can be gained from captured documents. Oberfeldwebel Hessler noted in his diary on 18 July 1943:

Few days ago, leaflets were dropped with the message that Naples would be bombed day and night unless the Italians would throw out the Germans. A sign that we haven't much, is the fact that the enemy air force does exactly what it wishes to do. In spite of big words from our leaders we have nothing left. Our leadership does not function any more... We have too few aircraft and because of bombardment of gasoline storage dumps, we lack fuel.

The German officer was right; the Allied air forces could do as they pleased, and two days after the attack on Naples practically the entire strategic air force in the Mediterranean was concentrated against the capital of Fascist Italy. The decision to bomb Rome was based upon both political and military considerations, with full recognition of possible reactions of religious opinion throughout the world. The geography of Italy made its railroad system a particularly vulnerable target, for the Apennines, which bisect the country lengthwise and rise to an average height of 4,000 feet, make it difficult to provide the country with railroads adequate for war requirements. In fact all traffic between northern and southern Italy, with the exception of that which is routed direct from Bologna to such places as Foggia, Bari, and Brindisi, passes through Rome. Its two large marshalling yards, the Littorio and the San Lorenzo, were therefore communications targets of prime importance. Rome, however, was no ordinary target, for a small but important part of it was neutral. By the Lateran Treaty of 1929 the Vatican palace and its gardens (an area of about 109 acres) were constituted into an independent state known as the Vatican City, with the Pope as sovereign.
More important perhaps than the legal aspect was the fact that to Catholics the world over Rome is, to borrow the language of the Treaty, "the Eternal City, Episcopal seat of the Sovereign Pontiff, center of the Catholic world and place of Pilgrimage." Every precaution had therefore to be taken to bomb targets of military significance only. Evidence of the extreme importance attached to this fact and of the care with which the attack was planned is found in the cables which passed between the Combined Chiefs of Staff and General Eisenhower. As early as 19 June 1943 a message from the CCS stated that across the Tiber from the Vatican City there are three important basilicas: St. John Lateran, Santa Maria, and St. Pablo. The exact locations of these basilicas were given, and it was stressed that the Combined Chiefs of Staff desired that no damage be inflicted on them. 32

It was recognized also that an attack on the "cradle of civilization" might redound to the advantage of Axis propaganda ministries. On 25 June the CCS cabled General Eisenhower that when it was decided to attack the marshalling yards of Rome he should issue communiques and guidances to press correspondents, with the following in mind: a clear distinction should be made between the bombing of Rome itself and the bombing of this most essential railroad objective; emphasis should be placed on careful selection and training of crews; the Allied story should be released as quickly as possible after the event and before the enemy version had a chance to gain hold. 33 As the time approached for carrying out the long-planned mission, General Eisenhower cabled that in order to scoop the Axis and at the same time insure against
any false announcement in the event that the mission were postponed for any reason, immediate information that the bombing had begun would be passed simultaneously to Arnold and Portal by Mediterranean Air Command. Coincident with the issue of a communiqué, supplementary news releases would stress the nature of the objective and the care taken in briefing those participating in the attack.

Because of the special character of Rome, no attack on the military headquarters in the city was made, and all targets chosen lay in the suburbs. The plan called for an attack on three vital areas: (a) four B-17 groups of the Twelfth Air Force were to attack the Lorenzo marshalling yards and steel works adjoining, which lay on the east side of the city boundary; (b) five B-24 groups were to attack the Littorio marshalling yards and airfield adjoining, which lay a considerable distance to the north of the city; (c) two groups of B-25's plus three groups of B-26's escorted by three groups of P-38's were to attack the Ciampino airfields southeast of the city. The attack on the marshalling yards was to be carried out in the morning, while the medium bombers were to attack the airfields in the afternoon. To create a favorable psychological effect the 205 Group RAF was to drop leaflets over Rome on the night of 18-19 July.

Carrying out the mission substantially as planned on 19 July, more than 500 U. S. bombers dropped about 1,000 tons of bombs in a very successful attack against the three target areas. The two marshalling yards, as well as the airfields at Ciampino and Littorio,
were made temporarily unserviceable. Photographic coverage five days after the attack (24 July) showed that many hits in all parts of the Lorenzo marshalling yard had caused widespread and severe damage to tracks, rolling stock, and installations. Apparently no traffic could proceed from the central station, and so far as could be ascertained there had been no activity in the yards five days after the attack. 37

The industrial plants near this target which were hit included the Tabonelli steel works, a rayon factory, and the Fiat distribution center and workshops. 36 At the Littorio marshalling yards tracks were destroyed by direct hits in at least 44 places, while a large number of wagons were destroyed and many trains burnt out. The railroad bridge connecting the marshalling yards with the reception sidings was believed destroyed, but it was thought possible that one set of tracks was usable. The main line to Florence was destroyed by direct hits in five places, and as a result of this widespread destruction the whole system of the marshalling yards was put out of action.

The effect of the damage to the railroad facilities should be viewed in conjunction with the raid of 17 July on Naples. These two raids produced a gap of some 200 miles in the Italian railroad system between points north of Rome and south of Naples, thus preventing for a period of at least several days the movement of Axis troops and supplies by rail from central to southern Italy.

In regard to the airdrome which was situated along the west side of the Littorio marshalling yards it may be said that severe damage
was inflicted on the hangars, administrative buildings, and other installations. The northeast corner of the landing area was closely covered by approximately 100 craters, and 15 aircraft were reported destroyed on the ground. Very much the same story was true of the two airfields at Ciampino. Both airfields were made temporarily unserviceable by numerous hits on buildings, stores, facilities, and grounded aircraft. At Ciampino North there were around 600 craters on the landing and dispersal areas, while at Ciampino South approximately 200 craters, not including small ones, were made by fragmentation bombs. 39

Despite the fact that warning had been given that an attack against Rome was imminent and although American aircraft approaching the city were traced by enemy radar, no effective opposition from the Axis air forces was encountered. The heavies encountered some nine enemy aircraft, while the mediums were engaged by approximately 20 Axis planes which failed to make any aggressive attacks. The flak over Rome was only slight to moderate and mostly inaccurate, while over Ciampino it was heavy, intense, and very accurate. Two enemy aircraft were destroyed for the loss of one B-25 and one B-26 out of an invasion force of over 500 aircraft. 40

There was only slight damage to non-military objectives. A small church, the Basilica of San Lorenzo, together with its cloisters, received considerable damage, while a few houses and other buildings were hit; but no major religious or historic shrines were touched. Certainly
the mission of 19 July 1943 against Rome is a monument to American precision bombing. In transmitting a report to General Arnold on this famous attack, however, General Spaatz said: "It should prove of particular interest to our Air Force supporters, but definitely has very little interest from an air force standpoint. It was too easy."41

With the bombing of Rome the five B-24 groups of the Ninth Air Force were withdrawn from participation in HUSKY to begin their training for the famous low-level attack against the Floesti oil refineries which was to be carried out 1 August 1943. The Twelfth Air Force, however, continued its attacks against communications targets in southern Italy. The period of intensive operations, 17 to 24 July, included a return visit to the Naples marshalling yards on the night of 20-21 July by a force of 27 Wellingtons, together with daylight raids on 22 July against railroad targets at Foggia, Battipaglia, and Salerno. The mission against Foggia marshalling yards was carried out by 71 B-17's of the 97th and 99th Bombardment Groups which dropped a total of 213 tons in the target area. Reconnaissance photos showed that all the main lines running through the town were severed, leaving undamaged only a loop line running between Naples and Bari. As a result of a violent explosion approximately three and a half acres of the marshalling yard were completely destroyed, while a large quantity of rolling stock and debris was heaped around the devastation. Numerous buildings, car repair sheds, and workshops, as well as the main station and freight depot, suffered heavy damage.42 The enemy air force put up no more aggressive opposition against the raid on Foggia than it did
in the attack against Rome, but one B-17 was lost as a result of enemy aircraft fire. 45

In order to extend farther the devastated gap in the Italian railroad system running down the west side of the boot, 52 B-25's on the same day (22 July) dropped 311 x 500-pound bombs on the Salerno bridge and marshalling yards, while 48 B-25's dropped 282 x 500-pounders on the Battipaglia marshalling yards which were just a few miles south of Salerno. 44 Photographic reconnaissance subsequent to the raids showed that at Salerno all rail traffic appeared to be stopped, while at Battipaglia all traffic through the junction was stopped. Rerouting of traffic at either place did not appear feasible, and reconstruction of the main lines would have to be done before a return to normal conditions. Thus rail traffic to southern Italy was virtually cut, pending the necessary repairs at the vital junctions. 45

**Attacks Against Southern Italian Airdromes**

Like the communications targets the enemy airdromes in southern Italy were attacked night and day. By the beginning of the second week after D-day (17 July) the enemy had virtually no serviceable airdromes in Sicily. The bulk of his bomber force was by this time based at Foggia with other formations scattered at Grotaglie and San Pancrazio, in the heel of Italy, and at Viterbo and Ciampino in the vicinity of Rome. The bulk of the enemy fighter and fighter-bomber force in the central Mediterranean was by this time located in the heel and toe, while the twin-engine fighters were based in the Naples
Besides the attacks on the Littorio airfield and the airfields at Ciampino discussed above in connection with the attack on Rome, hits on the following airfields in Italy were made during the period 17 to 24 July 1943.

<table>
<thead>
<tr>
<th>Location</th>
<th>Attacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pomigliano</td>
<td>21 Wellingtons on night of 17-18 July</td>
</tr>
<tr>
<td></td>
<td>2 Wellingtons on night of 20-21 July</td>
</tr>
<tr>
<td>Montecorvino</td>
<td>33 Wellingtons on night of 17-18 July</td>
</tr>
<tr>
<td></td>
<td>72 B-25's during day of 20 July</td>
</tr>
<tr>
<td>Aquino</td>
<td>20 Wellingtons on night of 19-20 July</td>
</tr>
<tr>
<td></td>
<td>49 Wellingtons on night of 20-21 July</td>
</tr>
<tr>
<td></td>
<td>57 B-25's during day of 23 July</td>
</tr>
<tr>
<td>Capodichino</td>
<td>5 Wellingtons on night of 19-20 July</td>
</tr>
<tr>
<td></td>
<td>39 Wellingtons on night of 20-21 July</td>
</tr>
<tr>
<td></td>
<td>8 Wellingtons on night of 21-22 July</td>
</tr>
<tr>
<td>Vibo Valentia</td>
<td>55 B-25's during day of 20 July</td>
</tr>
<tr>
<td>Crotone</td>
<td>36 Wellingtons on night of 20-21 July</td>
</tr>
<tr>
<td></td>
<td>72 B-25's during day of 23 July</td>
</tr>
<tr>
<td>Grosseto</td>
<td>77 B-17's during day of 21 July</td>
</tr>
<tr>
<td>Leverano</td>
<td>70 B-17's during day of 23 July</td>
</tr>
</tbody>
</table>

Of the air bases listed above, Pomigliano, Montecorvino, Aquino, and Capodichino were located in the Naples area and were used by the enemy principally as bases for twin-engine fighters. Vibo Valentia and Crotone, in the toe of Italy, and Leverano in the heel, were bases principally for single-engine fighters and fighter-bombers. Grosseto, a bomber base, was located to the north of Rome, halfway to Pisa. In the raid of Wellingtons against Aquino on the night of 19-20 July considerable damage was done to hangars and administrative buildings, and 36 aircraft were damaged or burned out. The 72 B-25's attacking...
Lambda strike the following day placed practically all their bombs in the target area, destroying or damaging 26 grounded aircraft, among which were 13 He-110's and six large aircraft.\textsuperscript{43} Cloud cover prevented an accurate estimate of the damage inflicted by the 70 U. S. Fortresses which attacked the bomber base at Croceto on 31 July, but available evidence indicated at least one He-219 and four medium bombers destroyed on the ground, and many direct hits on barracks, repair shops, administration buildings, and a hangar. Then reconnaissance reported increasingly large concentrations of single-engined aircraft at Leverano airfield in the heel of Italy, a force of 70 B-17's were dispatched to drop 928 x 500-pound bombs. As a result of this raid the airfield was made unserviceable and subsequent reconnaissance disclosed at least 18 of the 39 He-109's around the perimeter of the field derranged or burnt out. The heavies encountered a force of enemy aircraft, 12 of which were claimed destroyed.\textsuperscript{49} The cumulative effect of these intense attacks against Axis airfields further reduced his declining air strength in the central Mediterranean and deprived his land forces of effective air support in Sicily.
Chapter VI

THE REDUCTION OF THE ISLAND, 24 JULY TO 17 AUGUST 1943

As the Seventh Army faced eastward after the capture of Palermo, there were indications that future operations in Sicily would be principally against German units. Air reconnaissance which reported an increase in the flow of reinforcements across the Strait of Messina made it apparent that the rapid withdrawal of the previous 10 days had come to an end and that the enemy intended to impose a maximum of delay in the American advance. Units of the 29th Panzer Grenadier Division were arriving from southern Italy and were opposing the advance on the north coast road; while the 15th Panzer Division was on the Seventh Army's right flank. Despite determined enemy resistance, the 1st Division captured Nicosia on 28 July and the 45th advanced along the coastal sector to a position five miles west of San Stefano. Meanwhile on the British sector Allied forces continued to hold their considerable bridgehead north of the Simeto River with little change in advanced positions. The Canadians, however, swinging on the Catania position as a door on a hinge, were making progress in the central sector against stiff opposition and succeeded in capturing Agira on the 26th.

The stage was now set for the main assault against the Etna line. The enemy held a triangular section of Sicily in the area San Stefano-Troina-Regalbuto-Cantagnenuova and thence to the sea south of Catania. The terrain of this 80-mile front favored the defender and presented the Allies with a situation resembling that which they had faced in
Tunisia. Although they were fewer in numbers than they had been in Tunisia, the Germans in some respects stood an even better chance of delaying the ultimate decision. Mt. Etna dominated the eastern position and narrowed the front on which the attack could be launched. The wild mountain country provided few roads, and several hilltop towns commanded the principal routes, which a handful of Germans were able to hold against superior numbers. Even when they were driven from one position to another, a few well-placed mines and demolitions were capable of impeding Allied advances and affording the Germans opportunity to prepare other positions farther back. 3

As the Seventh Army faced eastward to drive the enemy into the Messina area all units of the 64th Fighter Wing in Sicily, except the 111th Tactical Reconnaissance Squadron, were being used almost exclusively as fighter-bombers. The majority of missions flown were either against ground targets located by tactical reconnaissance or against enemy shipping. If other suitable targets were lacking, fighter-bomber sweeps were flown over the northeastern area of Sicily in search of targets of opportunity. 4 Targets attacked included Milazzo, Troina, Stefano, Regalbuto, Catania, Messina, Randazzo, and targets of opportunity along the coast road. 5 Excerpts from the daily Operational and Intelligence Summary of 25 July 1945 illustrate the type of tactical air operations being carried out at this time.

8 A-36's bombed supply dump near Orlando.
12 A-36's bombed road between Orlando and Stefano.
36 A-36's bombed Milazzo harbor. Direct hit scored on Merchant vessel; near misses on small craft; a beached barge also strafed; and in Stefano area 3 motor transport destroyed and 4 damaged.
12 A-36's bombed bridge in same area; direct hits scored on road.

12 A-36's bombed vessels reported as Italian cruiser and 2 destroyers in Messina harbor; 3 direct hits on aft deck of cruiser, starting fires; both destroyers hit once, one burning.


During the last week in July considerable effort was concentrated against Milazzo, which was at this stage one of the enemy's busiest harbors as well as his most active seaplane base. Between 24 and 30 July 38 sorties were flown by B-25's, 196 by Bostons and Baltimores, and 251 by fighter-bombers. Another target which received considerable attention during this period was Regalbuto, an important communications center. On 25 July 215 sorties were flown against this target at approximately 40-minute intervals in waves of 12 aircraft each. Flying the missions detailed were 24 Baltimores and 48 Bostons of 3 South African Air Force Wing, 72 A-30's of 47th Bombardment Group (L), and 24 Baltimores and 12 Bostons of 232 Wing. The roads approaching the town were well covered, while the town itself was reported to have suffered heavy damage.6

On 31 July a directive was issued by the Seventh Army which laid down the general plan for the final phase of the Sicilian campaign. The enemy was to be driven out of the peninsula by two main lines of advance in the Seventh Army sector, one along the north coast road and the second along the road from Nicosia to Randazzo. The II Corps was to drive the enemy out of Sicily, while I Provisional Corps was to organize
and consolidate the west portion of Sicily, defend Palermo, and support the advance of the II Corps by moving reinforcements to the east.7
This regrouping of units is shown on the map following page 144.

Moving along its two axes of advance, the 45th Division of II Corps, with the U. S. S. destroyer Hovem furnishing naval fire support, took the coastal town of San Stefano on the night of 30-31 July, while the "Fighting First" moved to within five miles of Troina. The 3d Division, which had been designated to relieve the 45th, took over in the coastal area on the afternoon following the fall of San Stefano. The stage was now set for some of the bitterest fighting of the Sicilian campaign.

Beginning the first of August there were coordinated Allied attacks on all sections of the front, and within a week Catania, Adrano, and San Fratelio, key positions in the enemy's outer rim of defense, had fallen. The main weight of the Allied offensive was against the center, with the penetration effected there compelling the enemy to withdraw on both flanks.8 On the British sector the main Allied attacks were launched on 2 August through the Bittaino bridgeheads. Despite his stubborn resistance the enemy was forced to withdraw from Centuripe and Regalbuto and by 3 August he was fighting a heavy rearguard action on the outskirts of Adrano, the capture of which would mean the severing of enemy communications around the base of Mt. Etna. To meet this serious threat the enemy began a withdrawal from the Catania area, and two days later--5 August--British forces entered what had been the main stronghold of the island without firing a shot.
The Air Plan for reducing Catania by systematic bombing of all lines of approach and reinforcement has already been discussed. It needs only to be emphasized here that Catania provides an excellent example of the isolation of the battlefield through air power. The communications nexus formed by Paterno, Misterbianca, Adriano, Regalbuto, Troina, Cesarò, Bronte, Randazzo, and Fiumefreddo was relentlessly attacked, while connecting roads were strafed by fighter-bombers. From 10 July to 5 August there were 39 sorties flown against Catania itself by heavy, 172 by medium, and 10 by light bombers, and 309 by fighter-bombers.9

As the enemy evacuated Catania, the British increased the pressure against the center of this line. After very stubborn resistance Adriano fell on 6 August. As the Canadians pressed closer to this strong-point, the air effort was intensified—122 medium, 233 light, and 24 fighter-bomber sorties being flown in attacks on the town, troop and gun concentrations, ammunition dumps, and roads in the vicinity during the period 1 to 6 August.10 On one occasion the enemy was using three 88-millimeter guns to hold back the Canadians who were forced to attack along a narrow line. The 340th Bombardment Group (M) dispatched 12 B-25's to drop 30 tons of bombs on a very restricted area. According to the unit historian, "the bombs landed 200 yards away from the Canadians, wiped out all three guns, and the Canadians swept through."11

With the fall of Adriano on 6 August the enemy's scheme for holding a line south of Mt. Etna was untenable and a further withdrawal in the coastal area north of Catania became imperative.
Meanwhile on the American sector the main effort was being applied against Troina. The battle had begun on 1 August, but the advance was delayed by blown bridges, badly damaged roads, and numerous mine fields, in addition to enemy resistance of the most determined and vicious sort. On the afternoon of 4 August the 1st Division launched a full-scale attack which began with a fifty-minute artillery and air preparation. Eight and a half artillery battalions fired on enemy positions, while waves of 35 fighter-bombers dropped 500-pound bombs on the defenders of Troina. Despite the terrific casualties inflicted by this bombardment the enemy continued to put up stubborn resistance, and only slow progress was made against heavy enemy fire and mine fields. The following day the attack was renewed with direct support from the XII Air Support Command, which sent three dive-bomber missions against enemy defense positions in the vicinity of Troina.\(^\text{12}\) In addition to the attacks by the dive-bombers, 12 B-25's of 12th Bombardment Group (11) laid down a good pattern in Troina, while 12 Baltimores of 232 Squadron and 12 Baltimores of 3 SAAT bombed road targets.\(^\text{13}\) On the following day the enemy withdrew from his positions after launching 24 counterattacks in five days. Troina was probably the most bitterly contested battle of the Sicilian campaign so far as the Seventh Army was concerned.

Troina and Adriano were key positions in the center of the Etna line, and in the taking of both places the Tactical Air Force played a direct and important part. Some idea of the devastation wrought against key positions is indicated by a ground force officer who in calling for an attack on enemy-held Randazzo said to 340th Bombardment
Group (K): ". . . trust your group won't smash Randazzo so badly as it
did Adrano. It took our engineer 36 hours to make a single line traffic
passage through the town." The following table of the distribution
of effort to reduce the two towns shows that Troina was selected as a
fighter-bomber target whereas medium and light bombers concentrated on
Adrano.

<table>
<thead>
<tr>
<th>Date</th>
<th>Medium</th>
<th>Light</th>
<th>Fighter-bomber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Troina</td>
<td>10 to 17 July</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>18 to 31 July</td>
<td>12</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>1 to 6 August</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>97</td>
<td>255</td>
</tr>
<tr>
<td>Adrano</td>
<td>10 to 17 July</td>
<td>--</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>18 to 31 July</td>
<td>53</td>
<td>142</td>
</tr>
<tr>
<td></td>
<td>1 to 7 August</td>
<td>122</td>
<td>223</td>
</tr>
<tr>
<td>Total</td>
<td>187</td>
<td>367</td>
<td>140</td>
</tr>
</tbody>
</table>

The battle of Troina having been successfully concluded, the hard-
hitting 1st Division was relieved on 7 August by the 9th Division,
which continued the attack eastward from a point north of Troina while
another unit advanced eastward toward Cesaro. These moves were
supported by A-36's of the 27th Fighter-Bomber Group which flew 3
bombing missions of 72 sorties against targets at Cesaro and Randazzo,
and 1 strafing mission of 12 sorties on roads, while P-40's of the 33d
Fighter Group flew 2 cover missions of 16 sorties over road targets at
Cesaro and Randazzo. Other air activity included 27 missions of 105
sorties by Spitfires of the 31st Fighter Group, of which 19 missions
were cover for troops in forward positions, 7 naval cover for surface
craft at San Stefano, and 1 mission for a scramble.

In the northern coastal area, where the Germans with fresh troops
and the further aid of steep gorges had been able to conduct a slower
withdrawal, two leapfrog landings producing a marked acceleration of
the enemy's withdrawal were carried out. The first of these was
successfully carried out on the night of 7-8 August at a point in the
enemy's rear two miles east of San Agata. The landing force, composed
of the 2d Battalion and two batteries of the 58th Armored Field Artillery,
took the enemy by complete surprise and broke enemy opposition around
San Fratello.18 This action made possible the advance of the main units
which captured San Agata, mopped up pockets of resistance, and gained
contact with the special landing force late in the day. The details
of fighter cover furnished the leapfrog landing are not given in
official sources presently available. According to a journalistic
account, however, General Patton undertook the landing in the enemy's
rear only after he was assured something like one and a half hours of
fighter cover.19 The tactical report for this day merely shows seven
cover missions of 75 sorties in the Cape Orlando area with several
enemy aircraft destroyed.20 As a result of the deterioration of the
situation on the coast, Gesaro, on the inland flank of the northeastern
sector, fell on 8 August also.

As the enemy slowly retreated he conducted a continuous rearguard
action along the entire front using mines, mortar fire, and heavy
artillery concentrations. On the Pandazze road he withdrew east of
the Sineto River, while on the coast he made efforts to reform and reorganize for a defense of the Cape Orlando-Lasso line. All such efforts were frustrated by a strong 3d Division attack on 11 August and a second amphibious assault in the enemy's rear. The 2d Battalion, of the 30th Infantry, reinforced with armored artillery and tanks, landed two miles east of Cape Orlando and captured a position across the highway and railroad. All three branches of the service again combined their striking power to produce successful results in a critical spot. 21 The landing was supported by naval gunfire from Naval Task Force 88, while the XII Air Support Command assisted by attacking troop concentrations and gun positions in the area of the landing and on the roads approaching it. 22 The attack of the 3d Division and the successful envelopment resulted in the evacuation of the Cape Orlando-Lasso area, and by the end of the day the enemy had retreated east of Patti. The hard-hitting ground troops received full support from Tactical Bomber Force, which on 12 August flew 13 missions of 84 B-25's, 36 A-20's, and 24 Baltimores, dropping approximately 126 tons of bombs on troops, ammunition dumps, and guns around Patti, Barcellona, and Novara. 23

Randazzo remained the enemy's last stronghold in the center of the Etna line, and with its fall the Axis forces would be split in two and forced to retire along the coast roads to Messina. The Allied armies now developed a two-pronged assault to reduce this key position: units of the Eighth Army approached from the direction of Bronte, while the American Seventh closed in from Cosenza. Despite resistance of the most
obstinate sort, the enemy was forced to give way to the unremitting pressure of the ground forces and the intensive air attacks. Without reinforcements or air support, the Germans were forced to yield the last road junction connecting Axis positions in the north with those on the east coast on 13 August.

Rendazzo was one of the most heavily bombed targets of the Sicilian campaign. The peak of effort was reached on 7 August when the town and its approaches were plastered by 104 U.S. Mitchells and 142 U.S. Bostons and RAF and SAAF Bostons and Baltimores. This effort was never surpassed on any succeeding day, but the pressure was maintained at a high degree of intensity. The following table shows that up to the end of July Rendazzo was treated mainly as a fighter-bomber target, whereas after 1 August it became primarily a medium and light bomber target.

<table>
<thead>
<tr>
<th></th>
<th>Medium</th>
<th>Light</th>
<th>Fighter-bomber</th>
</tr>
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<tbody>
<tr>
<td>10 to 17 July</td>
<td>46</td>
<td>4</td>
<td>71</td>
</tr>
<tr>
<td>18 to 31 July</td>
<td>90</td>
<td>46</td>
<td>178</td>
</tr>
<tr>
<td>1 to 13 August</td>
<td>428</td>
<td>348</td>
<td>72</td>
</tr>
<tr>
<td>Total</td>
<td>561</td>
<td>298</td>
<td>321</td>
</tr>
</tbody>
</table>

In addition to the attacks on Rendazzo the Tactical Bomber Force had continued to carry out armed reconnaissance by night over the evacuation beaches, while fighter-bombers maintained their daily strafing missions. On 11 August 48 sorties by Bostons and 12 by Baltimores were flown against Pumefreddo, the important junction on the east coast road to Massina.
It is well at this point to comment briefly on the tactics and techniques employed by fighter-bombers and light and medium bombers. It was in the Sicilian campaign that the A-30 came into its own as an all-purpose fighter-bomber. Operating without cover on strafing missions and as close support for ground troops, it could be based well forward and could operate against tactical targets on short notice. Although the A-30 was used for both 90-degree dive bombing and for glide bombing, wherever possible targets were chosen so as to make use of dive bombing because of its greater accuracy. In Sicily, however, the terrain was so broken that glide bombing had to be used because of the difficulty of pulling out of a dive. Where vertical dives were used, pilots of the A-30's usually started their attacks at an altitude of at least 8,000 to 10,000 feet. Targets which could be readily identified had therefore to be chosen, and weather and cloud conditions had to be considered in planning missions.

Only one group of light bombers, the 47th, was employed in the Tactical Bomber Force in the Sicilian campaign. Standard formation used by these A-30's was 12 aircraft in two boxes of six, with the second box usually echeloned to the right and above the lead box. Each box carried a lead bombardier and all planes opened their bomb doors on the box leader. Attacking from 7,000 to 10,000 feet above the target, the maximum allowance for the bomb run was 15 seconds, with the average being 8 to 10 seconds. Break-away was done on a climbing or diving turn. Wing ships spread 60 feet when the bomb doors were open and assumed normal formation after bombing. Evasive actions,
dependent upon the enemy opposition, were employed over enemy territory.\textsuperscript{29} The type of bomb spacing was dependent upon the nature of the target: for area bombing a long pattern was used; for a small target, a concentrated pattern. The Mark IX (fixed) British bomb sight was used.\textsuperscript{30}

Medium bombers, if the 12th Group may be considered typical, used boxes of six as flights in their formation. An 18-plane formation was sometimes used, but it was later found that the 12-plane formation was more maneuverable. Wherever the landing ground was suitable, a formation take-off was used, usually in six-plane formation. Assembly could be accomplished in about six minutes, after which the bombers proceeded to the rendezvous point to pick up the fighter escort and then to the target.

A typical operation of the Tactical Bomber Force would be as follows: the land army, held up by some enemy strong-point, would request a certain number of bombers to attack this target which might be a gun position or a tank concentration. The request would be sent to Tactical Bomber Force, to group intelligence, and on to squadron intelligence officers. It would then be the job of the squadron intelligence officers to brief the crews on the target, including such details as enemy gun and ack-ack positions. The intelligence officers also determined the exact altitude and time of the rendezvous with fighters. Extreme care had to be exercised in the latter particulars because occasionally there were several bomber formation rendezvousing at the same place and it was necessary for the formation to be on time and at the exact altitude to pick up its fighter escort.
using slight evasive action on the approach, the mediums made a sharp diving turn on to the target, picking up from 230 to 240 miles an hour indicated speed, and leveled off for the short bomb approach of approximately 8 to 15 seconds. Often a climbing turn off the target was used, for it was found that in this procedure the enemy ack-ack gunners were unable to plot the course very rapidly and the mediums were able to get away without any trouble. Expecting a dive off the bomb run, the gunners would be apt to shoot ahead and below. The D-8 bombight, suitable for low-level and short approaches, most of which were between 8,000 and 10,000 feet, was used. 

With the deterioration of his position in the center, there was nothing left for the enemy to do but draw in his flanks. On the east coast he abandoned Acireale on 8 August. With stiffened resistance of his rear guards to the north of the town, there was little further change until 13 August when the British took a bound to a line beyond Reposto. Fiumefreddo was abandoned on 13 August, when the enemy was reported to have fallen back to Taormina. Although there were occasional brushes with the enemy rear guard covering the retreat, British troops in the coastal area were concerned mainly with clearing their way through systematic demolitions.

On the north coast likewise the enemy continued his withdrawal. A third amphibious landing had been planned in the vicinity of Falcone. The land forces, however, were moving so rapidly that it was decided to make the landing farther east, on the beaches northwest of Barcellona.
The 157th Infantry of the 45th Division was selected to make the third amphibious assault in the enemy's rear. According to the report of the Seventh Army "the landing was made at D303 of the 15th without incident." Exploiting their success the Seventh Army plunged on to Spadafora, 12 miles west of Messina. On 16 August, the 36th Field Artillery fired the first 100 rounds of 155-millimeter ammunition (HE) from Sicily onto the Italian mainland at enemy batteries in the vicinity of Villa San Giovanni. Replying, the enemy batteries on the mainland attempted to slow the advance of the infantry. During the night the 7th RCT advanced east of Spadafora and pushed its first strong patrols into Messina at 1600 hours. Meanwhile on the British sector the enemy withdrew after a token resistance, and Allied troops entered Taormina, Castiglione, Novara, and Mazzarra on the 16th. Emulating the successful tactics of the Seventh Army, the British made commando landings at Scalea on the nights of 15-16 and 16-17 August and joined the Seventh Army in Messina on the 17th.

**Bombing Against Withdrawal of Enemy Forces**

During the last week of the Sicilian campaign the main weight of the Northwest African Air Forces was directed against the enemy's withdrawal across the Strait of Messina. The retreat had been planned long in advance, however, and was begun before the collapse of German positions in Sicily. Even as early as the last week in July there were signs of a limited evacuation by sea, and 226 U. S. A-36's, Warhawks, and Kittyhawks attacked merchant vessels, barges, freighters, Siebel...
ferries, and other small craft employed by the enemy.\textsuperscript{34} A document captured from the Hermann Goering Division dated 2 August 1943 showed clearly that the Germans were intending to evacuate as much equipment as possible. They began first by withdrawing heavy equipment for which they had little use in fighting in mountainous terrain. Tanks were probably evacuated first, followed by motor transport, and non-combatant troops. There was nothing hurried about the withdrawal, but by 11 August it was in full swing.\textsuperscript{35} A fleet of landing craft, Siebel ferries, barges, "T" lighters, and other craft, protected by a tremendous concentration of flak, was operating day and night across the narrow straits. The Northwest African Air Forces struck at this evacuation fleet while it was at the ports of embarkation, in transit, and off the beaches of Italy.

During the first week in August, in addition to the battle area attacks already discussed, the air forces made large-scale attacks on Messina and on the beaches extending westward to Cape Pelora with the object both of preventing supplies from reaching the troops in Sicily and of causing maximum damage to the enemy's principal evacuation point.\textsuperscript{36} The effort from 1 to 7-8 August, inclusive, consisted of 121 sorties by B-17's, 269 by Wellingtons, and 225 by RAF and U. S. fighter-bombers. Messina itself was the main objective of the heavies, while the Wellingtons attacked first the marshalling yards and then the evacuation beaches between Messina and Cape Pelora. The fighter-bombers were concerned mainly with shipping in the harbor and supplies stored
on the docks. In addition to this effort, some 200 U. S. Warships and Kittyhawks attacked evacuation shipping in the harbor. 37

During the last 10 days of the campaign the attacks against enemy beaches were continued at even greater intensity. From the night of 8-9 August the effort of the night-flying Wellingtons was devoted almost exclusively to attacking evacuation beaches. With the exception of 35 U. S. Mitchell sorties flown on 16 August, all of the 404 sorties flown by medium bombers against Messina during this period were carried out at night by Wellingtons. Some idea of the regularity and intensity of the "night run" to Messina can be gained from the following synopsis: 38

8-9 August Ninety-two Wellingtons attacked beaches between Messina and Cape Pelora, dropping 126 tons of bombs and podmarining the target.

9-10 August Eighty-three Wellingtons attacked the beaches, dropping 137 tons of bombs and scoring hits on barges, railroad tracks, and highways.

10-11 August Eighty-eight Wellingtons attacked the evacuation beaches, causing large fires and explosions.

11-12 August Eighty-nine Wellingtons attacked the beaches, causing fires and explosions, one of which was believed to have been from a merchant vessel.

12-13 August Ninety Wellingtons dropped 2 x 4,000-pound, 1,588 x 40-pound, 396 x 300-pound, and 492 x 250-pound bombs on beaches between Messina and Cape Pelora, starting numerous fires.

In addition to the night effort of the Wellingtons, an intense day offensive was developed by fighter-bombers and medium against the evacuation. From 8 to 17 August a total of 1,170 sorties was flown, the majority of which were against vessels in the Messina Strait, but with an appreciable number carried out against craft along the Italian beaches. The medium also attacked the many landing points on the Italian shores such as Polni, Pizzo, Reggio di Calabria, Scilla, and
Maestro. The night-flying Wellingtons shifted their bombing to the Italian shore on the night of 12-14 July, causing large fires at Felal
and La Mesa where the marshalling yards were completely covered by smoke
and flames. The greatest intensity of effort was developed on 15, 16, and
17 August when day and night attacks by Wellingtons, Mitchells, Beavers,
Baltimores, Takahawks, and Kittyhawks, in spite of a protective gauntlet
of flak, bombed and strafed troop-laden craft at the evacuation beaches,
in transit and in attempts to land on the Italian mainland.39

In spite of all efforts of the Northwest African Air Forces, how-
ever, the Germans continued their withdrawal from Sicily with at least
partial success. It was estimated that they saved the equivalent of at
least one division with equipment which could be placed in the field in
a short time.40 The principal surviving group was the 29th Fighter
Division, and it was thought that other shattered formations might be
incorporated into this division. In any attempt to evaluate the achieve-
ment of the Germans in salvaging one of their divisions, several factors
should be taken into consideration. In the first place the withdrawal
was planned and started well in advance, some of the heavy equipment hav-
ing being removed during the latter part of July. Secondly, the hilly
terrain of Sicily was to the advantage of the defenders and made it pos-
sible for them to impose a maximum of delay upon the Allied invaders by
extensive use of mines and demolitions. Thirdly, a tremendous concentra-
tion of flak was thrown up as protective cover for evacuation shipping on
both sides of the straits. And lastly, the straits themselves are so narrow
that the enemy was able to use extensive night traffic, so that the evacua-
tion operations were more like crossing a broad river than an expanse of sea.41

Despite all these factors, the air forces took a considerable toll.
of enemy shipping. The detailed list of claims was as follows: destroyed: 7 barges, 2 motor vessels, 5 landing craft, 3 Siebel ferries, 3 "T" boats, 1 "F" boat, 2 small boats; direct hits: 15 barges, 9 landing craft, 3 Siebel ferries, 2 "F" boats, 2 "T" boats, 1 motor vessel, 6 miscellaneous craft; near misses: 63 barges, 1 train ferry, 15 motor vessels, 30 Siebel ferries, 85 landing craft, 63 miscellaneous craft, and 2 "F" boats. 42

End of Coastal Air Force, 26 July to 17 August

During the period of the reduction of the island the Coastal Air Force continued its routine but important tasks of coastal defense, convoy protection, air-sea rescue, and anti-submarine activities. During the last week in July convoys passed up and down the North African coastline with almost constant regularity, and patrols were flown without an enemy attack by air or submarine. 43 This lessening of enemy effort along the coast afforded the Coastal Air Force an opportunity to carry out offensive operations over Italian waters. During the week 23 to 29 July Beaufighters scored the following successes: two merchant vessels of 2,500 tons, two merchant vessels of 1,500 tons, and one coaster sunk; one 4,000-ton merchant ship, one tug, three barges, and one destroyer damaged. The week's bag of the enemy air force consisted of eight aircraft destroyed, one probably destroyed, and six damaged. 44 The following week, 29 July to 4 August, the safeguarding of Allied convoys continued uninterrupted. 45 The highlights of the week's activity were provided by the strike aircraft and the air-sea rescue areas. On 30 July two Spitfires, scrambled to intercept enemy aircraft, shot down two Me-109's at a point 30 miles north of Bizerte. 46 On 1 August Spitfires of 24 Fighter Squadron shot down two Do-217's. Strikes against enemy shipping continued: on the 29th Beaufighters obtained two hits on...
a 4,300-ton merchant vessel and set fire to a destroyer and a MTB at a location 20 miles south of Nicosia; eight Beaufighters on the following day sighted the same vessel being towed by a tug, and with two more torpedo hits left it in a sinking condition. On 2 August a destroyer and three MTB's were raked with cannon fire, and hits were observed. 47

During the remainder of the campaign there were fewer convoys to escort and fewer targets for strike aircraft. 48 Air-sea rescue, however, was very active and the last week of the Sicilian campaign particularly was characterized by increased enemy air activity. Torpedo bombers in both small and large numbers attacked Allied shipping, while the bombing of the North African ports was resumed with large-scale attacks on Bizerte on the nights of 17 and 18 August. 49 On the former raid the Beaufighters intercepted and shot down two Ju-88's and one He-111, while on the latter, two He-111's were destroyed and a third damaged. 50

In a cable to General Quesada for Air Vice Marshal Lloyd, General Spaatz paid tribute to the role played by the Coastal Air Force: 51

Too much credit cannot be given to the Coastal Air Force for the part it played in the successful Husky Operation. You have excelled in all of the many fields of your activities. Your Air-Sea Rescue work has been particularly note worthy in view of the fact that its organization was relatively recent and its equipment limited. I wish to commend you and all members of your command on the excellent work you have done.

Bombing of Italian and Ferdinian Targets, 24 July to 17 August 1943

While the Tactical Air Force concentrated on operations which would be of direct assistance to the ground forces in the reduction of the
island, the Strategic Air Force joined with Tactical in the attack on enemy ports and evacuation shipping. In addition the Strategic Air Force continued its bombing of communications targets and airfields in southern and central Italy as part of the plan to force the enemy to abandon his Sicilian positions. The attack on Italian targets, however, was on a somewhat reduced scale after the fall of Palermo, and at no time did the Strategic Air Force reach the high peak attained during the period 10 to 24 July. The main reason for this was combat fatigue. On 30 July General Spaatz wrote General Arnold one of his informative personal letters pointing out that combat fatigue was an especially difficult problem in the Mediterranean theater of operations because weather almost never interrupted flying and between 70 and 80 per cent of the planes were kept in commission. Where weather permitted almost uninterrupted flying, General Spaatz thought a different yardstick of combat fatigue should be employed. He felt that the number of successive combat missions could not be raised much above 50 missions or 250 hours, without a reduction in efficiency. He was in favor of increasing heavy-bomber operations in his theater but did not feel that a greater frequency of operations could be maintained unless he could be assured a higher replacement rate.52

In spite of the fact that it was considered impossible at the time to increase the rate of replacements, the Strategic Air Force continued its offensive against Italian targets to the extent that its resources allowed. On the night of 23-24 July, 66 Wellingtons struck the railroad tracks and marshalling yards at San Giovanni and Salerno. The following
day traffic down the western side of the boot was attacked at Paola by
40 B-26's of 320th Bombardment Group, while railway traffic on the
eastern side was attacked at Marina di Catanzaro by 36 B-25's of 321st
Bombardment Group. Numerous hits were obtained at both places. The
not
B-26's encountered two enemy aircraft but were/attacked while the
B-26's were attacked by 24 He-109's and one He-129. Two of the He-109's
were reported destroyed and two probably destroyed.53 On the same day
51 B-17's of the 97th and 99th Bombardment Groups ranged far into
northern Italy to bomb the railroads and marshalling yards at Bologna.
The main weight of the attack fell across the central part of the mar-
shalling yards where numerous craters blocked traffic, and much rolling
stock was destroyed in addition to considerable damage to workshops,
buildings, and dumps adjoining the yards. Photographs taken two days
later showed the yards still blocked and repair work proceeding slowly.54
This mission was carried out in the heart of Axis Italy's transportation
system without encounters and with no losses.55

During the remainder of July it was chiefly airdromes in Italy which
occupied the Strategic Air Force, the following being attacked:

27 July  - Thirty-five B-25's and 26 B-25's bombed Scalea
airdrome.
        Twenty-one B-17's bombed Capua.

28-29 July  - Twenty-two Wellingtons bombed Monte Corvino.
        Twenty-one Wellingtons bombed Capodichino.

29 July    - Twenty-eight B-17's bombed Viterbo.
        Twenty-eight B-25's bombed Aquino.

30 July    - Forty-five B-17's bombed Crottaglie.
        Seventy-two B-25's bombed Practice di Mare.
The 61 mediums attacking Scalea on 27 July succeeded in completely bracketing the field and destroying an unspecified number of planes on the ground. On the same day two groups of heavies took off to bomb airfields at Peglia, but because of adverse weather they were unable to locate the target. One group consisting of 21 B-17's bombed Cava, a rear base for P-40's, as an alternate target and scored hits on hangars and runways. Eighteen Fortresses of the other group bombed targets of opportunity. On the night of 28-29 July the Wellingtons dispatched to bomb the Monte Corvino airfield near Salerno and the Capodichino airfield near Naples reported a good coverage at both targets. During the following day the heavies struck at the important bomber base at Viterbo, while two groups of mediums attacked the fighter-bomber base at Aquino, which is approximately half way between Rome and Naples. Good coverage with 300-pound bombs was reported at Viterbo; one group of the mediums reported the same at Aquino; but the other group, taking off a few minutes after the first, failed to drop its bombs because the target was "completely obscured by clouds." The B-17's attacking the bomber base of Crottaglie in the heel of Italy on 30 July started several fires which resulted in the gutting of both large hangars. The B-25's attacking Practica di Mare just below Rome reported excellent coverage of the target area and many hits in the dispersed areas, resulting in damage to about 35 aircraft.

Beginning the first of August, the day and night blitz on important Italian communications centers was renewed. Naples was attacked twice by U. S. Fortresses and three times by night-flying Wellingtons during
the first week in August. On 1 August 23 B-17's of the 99th Bomber-
ment Group dropped 69 tons on the docks, while 67 B-17's of the 97th
and 301st Bombardment Groups dropped 112 tons on the docks just
outside Naples. Good coverages were obtained in both places, and pho-
tographs taken on 2 and 3 August revealed three brigade all the airfields.
Directly hit, no less than 35 aircraft destroyed, and at least four
armored on the ground.

The attack on the 4th was carried out by 62
B-17's of 2d and 301st Bombardment Groups, with the submarine base and
docks as the aiming point. Bombs were reported to have fallen in the
target area. A feature of both these raids on Naples was unusually
strong fighter opposition. In the raid of 1 August bombers of the
99th Bombardment Group were engaged by 15 enemy aircraft, while 52
B-39's which were acting as escort to the bombers, encountered 30 to
40 Italian aircraft. Seven enemy planes were reported shot down for
the loss of one Fortress. During the mission of 4 August around 50
enemy aircraft were encountered, of which the Fortresses claimed one
Me-109 destroyed and 11 other aircraft probably destroyed. Two
Fortresses were lost, one to flak and one to enemy aircraft over the
target, while 40 others were damaged by flak. The night raids
against Naples, carried out by the Wellingtons, were aimed at the
marshalling yards. The object of the 170 effective sorties flown
during the first week in August was to interfere with any attempt to
repair widespread damage which had been caused by the July raids.

Other attacks against transportation down the boot were aimed
at NATO di Catenaro on the eastern side of the toe and Rolo and
Battpaglia on the western side. Wellingtons made a total of 147 sorties against all three targets at night, while mediums of 734AF flew over one hundred sorties against Marina di Catanzaro and Paola on 4 August. The aiming point of the Wellingtons was the marshalling yards at these places, while the mediums struck at the railroad bridges.

As a matter of fact the attacks on Catanzaro and Paola mark the beginning of a series of attacks against rail and road bridges.

Prior to the first of August strategic bombing of communications had been directed almost entirely against ports and railroad marshalling yards, but now bridges in southern Italy were added to the list of targets. The first efforts against bridges were not outstandingly successful. On 4 August there were four groups briefed to attack the railroad bridge at Catanzaro and one group to attack Paola. Two of the groups briefed for Catanzaro failed to rendezvous with their fighter escort, while the other two bombed railroad tracks and oil tanks but did not hit the bridge. The group attacking Paola also failed to hit its target.

On 7 August the railroad bridge at Catanzaro was again attacked by 35 B-26s of 17th Bombardment Group. No hits were claimed, but several near misses were observed. On the same day a series of attacks were launched against the highway and railroad bridges over the Angitola, a small river which empties into the Gulf of Nufesia. A force of 71 B-26s of 319th and 320th Bombardment Groups, heavily escorted by B-38s of the 1st Fighter Group, obtained at least one direct hit and many near misses on the highway bridge. On 8 August a force of
approximately equal strength from the same groups repeated the attack and claimed several hits. \(^{69}\) Further attacks were made on the 9th and 11th by 73 B-26's and 45 A-25's, respectively. Photographs taken on the 11th showed the highway bridge breached for about 40 yards at the southwest end and further damage in the center, while the railway bridge itself was damaged by at least three direct hits. \(^{70}\) After a third attack on the Catanaro bridge on 11 August photos showed the bridge hit in two places, but not completely broken. \(^{71}\)

As part of the air force program of paralyzing rail traffic in southern and central Italy, the 8th AAF struck at Rome in a second mass attack on 13 August. A follow-up mission to the heart of the transportation network of Italy had been planned much earlier in the month, but on 2 August 1943 General Eisenhower had received a cable informing him that the Italian government through the Vatican had asked the U. S. government to prescribe the essential conditions for recognizing Rome as an open city. Pending further instructions, General Eisenhower was ordered to refrain from air activities against Rome itself but to continue to attack such airfields in the vicinity as gave evidence of being used by the Axis. \(^{72}\) The following day these instructions were reversed and Eisenhower once more was left free to use his own discretion. \(^{73}\)

This latter intelligence reached the Allied Commander only after a scheduled mission had been canceled and it was too late to return to the original plan. \(^{74}\) Another mission scheduled for 4 August was canceled because of adverse weather. In reporting this cancellation
of planes General Eisenhower pointed out that by this stage the endurance of bombing formations and long distance fighters was being stretched to the utmost and, according to calculations, was just sufficient to complete the Sicilian campaign. Priority in all operations would be given to the land battle and the neutralization of land forces. Any strength over and above that necessary for such operations would of course be used against the most critical points in the enemy's communications. In view of these circumstances he did not see that another attack against the Rome marshalling yards could be made in the immediate future.75

By the 13th, however, the land battle had taken such a favorable turn that it was considered possible to carry out a second large-scale raid. A force of 106 B-17's escorted by 45 P-39's attacked the Lorenzo marshalling yards, while 102 B-26's and 66 B-25's concentrated on the Littorio marshalling yards, dropping a total of approximately 500 tons of bombs.76 Photographs taken after the attack showed a large crater in the center of the Lorenzo marshalling yards and extensive damage to rolling stock. Many repair shops and industrial buildings on the eastern perimeter of these yards were hit, and the sidings were thought to be out of use, at least temporarily. A stick of bombs which had fallen across two buildings of the Officine Fabrizi manufacturing plant caused heavy damage. At the Littorio yards, also, there was severe damage although the northern part of the yards had not been covered. According to the photo interpretation reports, the through
lines were again blocked, and much damage was done to rolling stock in the reception sidings. Several buildings adjacent to the rail yards were destroyed and a car repair shop was hit. Damage to the Littorio airdrome included hits on the airdrome and engine repair shops, five hangars, and the administrative buildings. As in the attack of 19 July there was only negligible damage to non-military targets and it was noticed that more buildings had historic markings on their roofs than before.

The second large-scale attack on Rome was carried out with the loss of only two B-35's. A force of 75 enemy planes intercepted the Allied formations, but a majority of them were probably Italian, as only a few were aggressive in their attacks. They concentrated mainly on the mediums and left the heavies alone. The American B-17's claimed two enemy fighters destroyed and three probably destroyed, while the P-38 escort reported three enemy aircraft destroyed and two probably destroyed.

Although the main weight of attack was now directed against enemy evacuation, air force operations against communications down the Italian coast were continued on 15 August by a medium bomber attack against the marshalling yards and railroad station at Sestri, below Salerno. A force of 49 B-25's of 321st Bombardment Group escorted by 30 P-39's dropped 68.5 tons of 500-pound bombs, while 24 B-26's of 320th Bombardment Group, escorted by 24 P-38's of 1st Fighter Group, dropped 30.5 tons of 500-pound bombs. Strike photographs showed that about 75 per cent of the bombs landed in the target area with many hits on the station, sidings, and repair shops, and among cars in the yard. This mission
was followed up by a night attack of Wellingtons which also bombed railway targets at Cetraro, Scalea, and Paola and made the long trip to Viterbo to attack the marshalling yards and airfield. The following day, 16 August, 24 B-26's of 519th Group escorted by 23 P-38's of 1st Fighter Group, dropped 36 tons of 500-pound bombs on the temporary bridge at Angitola. According to a photographic interpretation report, the north end of the bridge was hit and three possible hits were scored on the bridge.\(^{81}\) The following day, the Angitola temporary bridge was attacked by a force of B-33's, and again hits were claimed.\(^{82}\) The Battipaglia marshalling yards, near Salerno, were attacked also with 53 tons of bombs dropped by 33 B-26's.

During the last 10 days or so of the Sicilian campaign the attack on Italian airfields was on a reduced scale, the main emphasis being on evacuation shipping and communications targets. A few attacks were made, however, against Crotone on 7 August, Grazzanize and Crotone on 12 August, Foggia on 16 August, and Viterbo on the nights of the 15th and 16th. The attacks on the dive-bomber and single-engine fighter base at Crotone were made by 71 B-25's on the 7th and by 45 B-25's on the 13th. In both instances the target was reported to have been well covered.\(^{83}\) Neither of the raids was intercepted by enemy aircraft.

The attack against the twin-engine fighter base at Grazzanize, near Naples, was carried out by 48 B-26's whose pilots reported that the hangar area, dispersal areas, and the whole of the landing grounds were well covered. This attack in the Naples region was intercepted by about 35 enemy aircraft, "several" of which were reported destroyed.\(^{84}\)
Two night raids against the bomber base at Viterbo were carried out by Wellingsons which reported many hits in the target area and fires in the hangars and landing grounds. On the night of 16-17 August several aircraft, unable to locate Viterbo, bombed alternate targets at Grosseto, Tarquinia, and other places "with good results." 86

After their historic low-level attack on the Floesti oil refineries the B-24's of the Ninth Air Force made their first reappearance in the Sicilian campaign with a full-scale attack on Foggia on 16 August. Foggia and Viterbo continued to be the principal bases for German long-range bombers in Italy, and photographs had shown a total of 240 Ju-88's on these landing grounds. The 85 B-24's succeeded in covering with bursts the whole surface of the airfields at San Nicola and in scoring direct hits on the administrative buildings and workshops, while at Tortorella they covered the east side of the airfields with bomb bursts and started two large oil fires. A force of enemyfighters, estimated at from 75 to 100, attacked the Liberators which claimed to have brought down 45 (including 29 Me-109's) destroyed and 7 probably destroyed for the loss of 8 of their own number. 85

**Fighter Sweeps over Sardinia and Southern Italy**

In addition to the medium- and heavy-bomber attacks against targets principally in southern Italy during the period of the reduction of Sicily, fighter sweeps were carried out by P-40's and P-38's of the Northwest African Strategic Air Force over Sardinia and the toe of Italy. Sardinia had been a frequent target for bombers prior to the invasion,
but subsequent to D-day air action against the island was confined almost exclusively to fighter sweeps and raids by fighter-bombers. On some of these raids heavier opposition was encountered than in missions over Sicily and Italy. In several combats our fighters were outstandingly successful. In a fighter sweep carried out 22 July against gun emplacements, railroad stations, other buildings at La Maddalena, and large factories south of 7iliasor some 25 to 30 enemy aircraft were encountered. Seventeen of these were reported destroyed for the loss of two P-40's. On 26 July 48 P-40's of 325th Fighter Group carried out another the bombing and strafing for which they had been briefed but shot down five enemy aircraft in the Cagliari area. Other fighter sweeps were carried out by the 326th Group on 28th and 29th, without results, but on the 30th they had a field day.

Taking off at 0800, the 317th Fighter Squadron flew up the west side of the island. At a point due west of Sassari they were attacked by a force of 25 to 30 Me-109's which was augmented during the course of the ensuing air battle by additional flights of Me-109's and Me-202's, bringing the total number of enemy aircraft engaged to between 40 and 50. Approaching from a northwesterly direction the Jerries attacked the rear of the formation on the same level as the P-40's, whose altitudes were about 9,000 feet. During the first attack four Me-109's were seen to crash almost simultaneously, while in one area alone there were nine fires from burning aircraft. In the course of the 20- to 30-minute running battle there were 21 enemy aircraft destroyed and four probables reported for the loss of one P-40.
The fighter pilots attributed their outstanding success to the perfect cooperation of their units and to the fact that the entire squadron kept together until the very end. The enemy pilots, for their part, exhibited an intrepidity suggesting foolhardiness. From their poorly executed tactics plus their lack of coordination it was inferred that the enemy pilots were green—possibly students from a training unit. Their lack of experience was further demonstrated by their willingness to fight the P-40's at the same altitude and by their failure to adopt the familiar method of attack in which the Me-109 dives and passes, then climbs quickly out of range. The Me-109 pilots, in short, showed little knowledge of the capabilities and limitations of the two types of aircraft.\textsuperscript{91}

On 2 August 48 P-40's of 335th Fighter Group carried out a fighter sweep over southern Sardinia, but there was no contact with enemy aircraft.\textsuperscript{93} Pilots of the same group on 5 August escorted four 3-25's, equipped with 75-millimeter guns, which were to strafe the switching station at Guspini, Sardinia. Three direct hits on the target were obtained while on the return journey pilots of the P-40's attacked and destroyed a German submarine.\textsuperscript{93} A fighter sweep carried out on 7 August netted the 335th Group two Me-109's destroyed and five damaged. Further strafing missions were flown on 9, 11, and 13 August, but on none of these sweeps were there encounters with the enemy. In a fighter-combat sweep against the bivouac area of the Lamserrato air base on 15 August 47 P-40's dropped 262 x 20-pound frags in the target area. Because the target was in an orchard the results of this, the last
mission of the 35th Group in the Sicilian campaign, could not be observed.

The fighter sweeps against targets in the toe of Italy were carried out by P-38's of the 1st, 14th, and 32d Fighter Groups. These missions were a special feature of the evacuation period and were flown daily from 8 through 17 August.55 Trains, motor transport, locomotives, radar stations, and targets of opportunity were bombed and strafed. Since most of the fighter sweeps over the toe followed about the same pattern, the following extracts from the report of operations of 10 August may be considered typical:56

49 P-38's of 32d Fighter Group made sweep of the San Basilio-Paludi-Locri area (on west side of toe) between 1105 and 1120 hours; 19 dropped 4,750 tons of 500 pound bombs, one bomb hung; 44 aircraft returned early, one landed in Sicily. Near misses on railroad bridge at Angitola; on buildings in Porto S. Venere; railroad cars, stations and radar station on Cusa Vaticano were strafed with good results; one locomotive strafed and exploded near Rosarno; town of Porto S. Venere bombed; hit on railroad bridge north of Locri. No encounters, no losses.

48 P-38's of 1st Fighter Group made sweeps of Cape Spartivento-Marina di Catanzaro area (on east side of toe) between 1300 and 1400 hours; 20 dropped 10 tons of 1000 pound bombs from 1000/2500 feet; 4 bombs hung; 3 aircraft returned early; one landed in Sicily; 3 lost to intense accurate ground fire from C. Spartivento and Bevano. Near misses on road and railroad bridge north of Locri; hits in marshalling yards at Nova and Bevano; hit near south end of railroad tunnel near Bianca; another on tracks at Marina di Catanaro at north end of railroad bridge; railroad station, cars, a locomotive, and radar station at Cape Spartivento successfully strafed. No encounters.

On the same day that the above sweeps were carried out General Eisenhower sent a message commenting on the work of the P-38's as follows: "Strategic Air Force is concentrating on communications . . . The P-38 (Lightnings) have done very good in the toe cutting communications and
destroyed jammed up transport and railway equipment . . . ."

During the last week of the Sicilian campaign the Axis air force furnished scant support to hard pressed ground forces. Only on rare occasions were enemy fighters seen over Sicily, and the fighter sweeps over southern Italy encountered only weak interference. The enemy made occasional small fighter sweeps over the Strait of Messina by day, but the real protection for the evacuation was afforded by an extremely strong concentration of antiaircraft fire. Allied bombers also reported occasional night fighters over the Messina Strait but there is no record of actual combat. On the other hand, Allied heavy-bomber raids against Casarano in the Taranto area on 12 August and on Foggia on 16 August met with considerable fighter opposition, about 70 enemy fighters being reported at each place. In the second raid on Rome, carried out 13 August, 75 fighters, most of which were probably Italian, were reported.

At the same time GAF bomber activity was on an increased scale. Fighter-bombers attacked Allied shipping on the north and east coasts of Sicily as well as ground troops which made the leapfrog landings between Palermo and Messina, while bombers concentrated on Allied landing grounds in Sicily and shipping in North African ports. On the night of 11-12 August some 45 enemy aircraft attacked Allied airdromes at Lentini and Agrigento, causing considerable damage to grounded aircraft, while some 35 to 30 enemy bombers attacked the port of Augusta. On the night of 13-14 August a westbound convoy off Oran was attacked by an estimated force of 40 to 50 enemy bombers and torpedo-bombers. The
German long-range bombers continued to be based at the Foggia and Viterbo airfields, but reconnaissance revealed an increase in bomber aircraft based in southern France, where during the last week of the campaign there were reported to be 140 He-111's, Do-217's, and Ju-88's.

On 17 August the Strategic Air Force carried out its first foray in this new and fertile hunting ground. A force of 180 B-17's from the 2d, 97th, 99th, and 391st Bombardment Groups dropped 25,619 x 20-pound fragmentation bombs on the Istres le Tube and Salon airfields, which are about 23 miles northwest of Marseille. Information obtained from strike photos revealed a total of 94 aircraft destroyed on the ground and about 28 others damaged. Reconnaissance photographs taken after the attack showed further extensive damage to the hangars and workshops at the Istres landing ground and several hits on the administrative buildings at Salon.

With General Patton's tanks rumbling through the rubble of Cassino, with U. S. artillery mounted in Sicily firing salvoes onto the Italian mainland, and with General Spaatz's strategic air forces taking the air battle to Rome, above Rome, and into southern France, the air phase of the Sicilian campaign could be considered finished.
Chapter VII
CONCLUSION

The invasion and reduction of the island of Sicily in 38 days was
in many respects a model campaign—a text-book case for students of
military history. In an operation which consisted of a large-scale
amphibious operation followed by a vigorously contested mountain
campaign, air, land, and sea power were combined to produce decisive
results. In men, ships, and aircraft the Allied forces had superiority,
but in the last two their predominance was overwhelming. The Italian
navy made no attempt to take offensive action against the invasion
fleet, its only concern being to find a safe hiding place in troublous
times. Air superiority, however, had to be fought for and maintained
by an unrelenting offensive in enemy territory.

The main characteristics of the air phase of the campaign were as
follows: (1) reduction of enemy resistance by a preinvasion offensive
against his airfields and communications centers, (2) the transporta-
tion of airborne assault troops, (3) protection of the invasion fleet
before, during, and after the assault, (4) concentrated effort against
vital centers of communication to isolate battle areas, (5) direct
support of the land battle by tactical bombing and strafing before the
advance of ground forces, (6) a concentrated effort against the enemy's
evacuation movements, and (7) the ultimate freeing of the strategic
air forces to begin again the cycle of long-range attacks against the
next series of air bases and communication centers in preparation for
the coming invasion of Italy.

The Air Plan was criticized on the ground that it was unrelated
to the U. S. Army and Navy plans and gave the commanders no concrete
information as to what support might be expected. It was true that
the air planning team was late in getting to work. This was due to
the fact that, in contrast to ground and naval forces, after the con-
clusion of the Tunisian campaign the air forces never ceased large-
scale operations against the enemy. The reduction of Pantelleria, for
example, required a much larger expenditure of air strength than was
demanded of either military or naval forces. Officers with the neces-
sary experience in planning were therefore engaged upon current opera-
tions and were too busy to participate fully with Army and Navy repre-
tsatives in detailed and consecutive planning. They were at the same
time reluctant to assign to other services representatives authorized
to make firm commitments for the air forces.

In his critique of the operation General Eisenhower pointed out
that "It was agreed among the planners of all services that the primary
role of our forces in all phases of the attack was to neutralize the
enemy air force and to provide maximum security for the shipping and
assault beaches against the enemy air attack, and that until that
mission had been definitely accomplished, the scale of air effort
available for the direct support of naval and military operations was
certain to be strictly limited." ¹ The basic difficulty during the
planning phase seems to have been that in HUSKY the U. S. commanders
were experiencing for the first time the system of operating air forces in combined operations in which the air commander is responsible for giving air cover in all sectors and regulating the air effort in relation to the enemy air effort. Misunderstanding arose because the American military and naval commanders were unfamiliar with this system and wished to have personal control over the air units operating in local support of their forces. In spite of all criticism of air force planning, it was generally admitted that once the invasion was underway casualties from enemy action were comparatively light and large numbers of ships were able to transport troops and supplies with little serious molestation.

One of the main reasons for the small losses of the Allied invasion force was the high degree of air superiority which had been gained largely through the systematic bombing of enemy airfields. The enemy air forces were gradually squeezed out of Sicily by the accuracy and weight of the day bombing and by the continuous attacks of the night bombers. 3 During the preinvasion blitz approximately one-half of the German and Italian air forces was driven out of Sicily and forced to shift to other bases. 4 During the week following the invasion a further rapid decline took place with the result that about the only type of enemy aircraft remaining in Sicily was single-engine fighters, and even these declined from 240 to 125. Bombing of airfields was so heavy and so persistent that the enemy was eventually forced to withdraw his force to bases from which he was unable seriously to threaten the battle area.
The tangible results achieved by these concentrated attacks are demonstrated by the fact that up to 13 August Allied personnel had examined approximately 1,100 abandoned enemy aircraft in various degrees of unserviceability. A majority of this number—approximately 57 per cent—were German types. Aside from the actual destruction of aircraft on the ground, another important result was that the enemy was forced to engage in air combat. During the period of intensive operations over 740 enemy aircraft were destroyed in combat, while the Northwest African Air Forces in spite of a far greater effort suffered losses which were only about 50 per cent of the enemy total. 5

From the experience in the Sicilian operation it would probably be a mistake, however, to assume that similar results could be achieved in any theater of operations. The special conditions operating to make the attacks on airfields especially effective in this campaign were: (1) enemy air units of real fighting value were limited; (2) geographical conditions were such that systematic denial of airfields by bombing was effective; and (3) until the later stages the enemy showed little initiative in constructing alternative airfields. 6 In spite of these special circumstances it seems safe to conclude that well-directed air attacks against enemy airfields is an important phase both before and during a major invasion and can be relied upon to reduce to an important degree, but not to eliminate, shipping losses as a result of enemy air attack.

The troop carrier operations which spearheaded the assault were perhaps the least satisfactorily executed phase of the air participation...
in HUSKY. The salient shortcoming here was in night navigation. Although a satisfactory standard had been achieved in practices and rehearsals, navigational errors were made on the night preceding D-day which resulted in the dropping of paratroops in the wrong place and in a number of gliders falling into the sea. The dropping of a parachute brigade within Allied lines on the second night of operations purely as a reinforcement was unsound in principle. In this instance a failure to arrange a safe corridor for passage resulted in high casualties inflicted by friendly troops and ships. Airborne troops should be employed only on missions which cannot be accomplished more expeditiously or more economically by some other means, and their use as reinforcements should be confined to serious emergencies. Dummy paratroops were used in HUSKY with success, and this form of diversion was recommended for future operations. The experience in Sicily seems to point clearly to the conclusion that the Air Commander in Chief should have the major share of the control of airborne operations, and that his word should be final as to whether or not airborne operations are to be undertaken. To his report on the Sicilian campaign General Eisenhower appended the following note:

The outstanding tactical lesson of the campaign was, for me, at least, the potentialities of airborne operations.

As outlined in this report our technique was not good. Crews of planes were inadequately trained; in our inexperience we did not allow time for planning and training, particularly in coordination; our losses were inexcusably high with blame about equally distributed among the several services, and with a large measure falling upon me because of my failure to make better provision against misunderstandings, particularly in the "follow-up" operations. The only excuse was an intense desire to push ahead—to reinforce quickly—in hope that the whole defense might collapse.
in a few days. But in spite of all this the Airborne troops contributed markedly to success in both sectors. We must exploit our position of superiority in air power, superiority in air transport, and availability of trained airborne troops to combine these assets with superiority in other fields, notably command of the sea and in armored forces. By so doing we can apply crushing, sudden devastating blows that will hasten the final downfall of Nazidom.

The differences of opinion as to the adequacy of the air cover provided for the assault forces have been discussed in connection with the landings and need not be revived here. One of the most useful innovations employed in HUSAY were the GCI's mounted on LST's and located off the assault beaches. These forward control stations enabled night fighters to operate at a high degree of efficiency and reduced losses from enemy night attacks. The seaborne GCI's were in operation on the first two nights following the landing but were taken ashore at the earliest opportunity, the first being in operation on the afternoon of D-day. 9

The mission of a tactical air force in coordination with the movements of the ground troops involves three phases of operations: the neutralization of the enemy air force; the bombing of objectives ahead of ground troops to neutralize enemy activity that can hinder ground operations—commonly called the "isolation of the battlefield"; and the destruction of selected objectives in the battle area in furtherance of the combined air-ground effort. 10 In HUSAY there can be little doubt that the first phase was successfully carried out through the bombardment of airfields and air combat, for at no time was the enemy air force able to interfere effectively with the movements of the naval or ground forces. The second phase of tactical operations, carried out
chiefly by fighter-bombers, took the form of attacks against rail and road movements. During the initial stages good targets were found, and formations of 13 aircraft were used. Then the number of targets became smaller and more scattered, the size of formations was reduced to eight and four in order to maintain a constant effort against road movements. Attacks against railroads were considered successful in hindering enemy transportation, but owing to the inherent limitations of the Sicilian system the targets were limited, and in the later stages attacks were discontinued altogether to avoid further damage to means of transportation which the Allied armies wished to use themselves. During the early stages of the invasion, particularly during the moon period, the effect of the fighter-bombers was supplemented by light bombers which concentrated principally on road movements.

In its critique of the Sicilian campaign the report of the Seventh Army maintained that aerial attacks against roads and railroads were not capable of destroying these arteries of communications, that the chances of getting a direct hit against a vulnerable place were small, and more important, that "a demolition to be effective must be defended or else it will be readily removed." Without questioning any of these generalizations, it would seem safe to conclude that the constant attacks against road movements caused the enemy considerable hindrance, as is shown by the fact that during the later stages of the battle there were very few targets and his motor transport were forced to seek cover in olive groves and other such protection as the terrain afforded.
The attacks against Caltanissetta, Enna, and other vital bases during the assault period aided in making the landings stick, while the concentrated attacks against the series of road junctions around Mt. Etna undoubtedly had an effect on breaking the center which led to the disintegration of the whole position.

The third phase of the combined air-ground effort is the most difficult of execution and requires the highest level of coordination, training, and timing on the part of both arms. In Sicily the results achieved varied in proportion to the attainment of these elements.

There were a few instances when the bomb line was undershot and friendly troops were bombed or strafed by the Allied air forces. There were, however, on the other hand, several occasions on which the degree of coordination was outstanding and the ground troops were very materially aided with close support. There is perhaps no better example then the reduction of Troina, concerning which the Commanding General, 1st Infantry Division wrote:

During the initial stages of this campaign it was not uncommon to have our own air corps bomb or strafe our own troops, and in some cases behind the Division command post. Missions called for close-in bombing of the enemy often brought bombs on our own troops. An attempt was made to rectify this by sending a Division officer to the airport with a radio and having the air corps reciprocate by sending pilots to the Division command post with communications direct to the planes.

The air corps was most willing to cooperate, and in the attack on Troina a closely coordinated air, artillery and infantry attack went off with clock-like precision. The effect of this close coordination on the enemy was temporary complete demoralization. The following day the Germans commenced their withdrawal from Troina. . . .
This same commander pointed out that combined training would serve to acquaint both arms with the problems the other faced and thus would prevent either from expecting too much of the other. In his view ground troops had a tendency to expect more prompt assistance than was always possible, and they should be taught that it requires some time to mount an attack with appropriate bombs and escort.

The bombing or strafing of friendly troops by their own aircraft was the result of several causes, the basic one being improper identification. The II Corps reported that it used both yellow smoke and panels out that pilots had difficulty in observing them, especially in hilly and wooded areas. Red or orange smoke was considered far more satisfactory than black, which was useless in the battle areas, or yellow smoke, which was too easily confused with grass and brush fires. Toward the end of the campaign the II Corps experimented with mobile fighter control parties which consisted of an officer who operated well forward in his own jeep containing a VHF radio set. This method of controlling fighter-bombers was thought to be worthy of further trial.

In 1944 the air forces experienced considerable difficulty in obtaining an accurate picture of land operations and of the intentions of Army commanders. The Air Commander pointed out that if the enemy were not to be allowed a safety zone in which they escape attack, it was essential that the air forces be furnished accurate and up-to-date information on the location of friendly troops. The bomb line, which was defined as the predicted line of forward troops for the next two hours, should be clearly capable of accurate identification by the
pilots and should be forwarded at least twice a day.\textsuperscript{14}

It is obvious that at the time of the Sicilian campaign much remained to be done in the improvement of coordination and techniques of air operations in close support of ground forces. It is equally certain, however, that the results of missions flown were in most cases gratifying and that air support had greatly improved over the Tunisian campaign.

In conclusion some of the broader strategic objectives achieved by the conquest of Sicily might be pointed out. In January 1943 the Combined Chiefs of Staff had described the objectives of the campaign as follows: (1) to make more secure the Allied line of communications in the Mediterranean, (2) to divert as much strength as possible from the Russian front during the critical summer period, and (3) to intensify pressure on Italy. The move into Sicily accomplished all these objectives and more. As a result of the unprecedented fury and violence of the Allied advance across the Mediterranean and in response to the devastating aerial attacks against the heart of Axis communications in Rome, the Italian people took the first step in ridding themselves of their German masters by announcing on 26 July the resignation of Mussolini. Two weeks after the Allied armies marched into Messina—3 September 1943—an armistice was signed and Italy was out of the war.

It is impossible to say to what extent the Sicilian operation assisted the Russians during the summer of 1943, but certain it is that German military commitments had to be extended into southern France and the Balkans while Sardinia and Corsica were made untenable. It may be
presumed furthermore that Dr. Goebbels spoke some measure of truth when he laid the blame for Germany's military defeats in Russia on her "treacherous" Italian ally. Certainly we can accept General Eisenhower's statement that "the loss of an ally, however feebly, was a blow to German prestige which could hardly be disguised from the German people to whom the bonds of the Rome-Berlin Axis had been trumpeted as forged of steel."
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFABI</td>
<td>AG/AS, Intelligence</td>
</tr>
<tr>
<td>AFAFP</td>
<td>AG/AS, Plans</td>
</tr>
<tr>
<td>AOC</td>
<td>Air Officer Commanding</td>
</tr>
<tr>
<td>CCA</td>
<td>Combat Command A (of armored division)</td>
</tr>
<tr>
<td>CCS</td>
<td>Combined Chiefs of Staff</td>
</tr>
<tr>
<td>INTEFS</td>
<td>Intelligence Operations Summary</td>
</tr>
<tr>
<td>JICA</td>
<td>Joint Intelligence Collection Agency</td>
</tr>
<tr>
<td>MAC</td>
<td>Mediterranean Air Command</td>
</tr>
<tr>
<td>MACAF</td>
<td>Mediterranean Allied Coastal Air Force</td>
</tr>
<tr>
<td>NAAF</td>
<td>Northwest African Air Forces</td>
</tr>
<tr>
<td>NAAFTCC</td>
<td>Northwest African Air Forces Troop Carrier Command</td>
</tr>
<tr>
<td>NAASC</td>
<td>Northwest African Air Service Command</td>
</tr>
<tr>
<td>NACAF</td>
<td>Northwest African Coastal Air Force</td>
</tr>
<tr>
<td>NASKAF</td>
<td>Northwest African Strategic Air Force</td>
</tr>
<tr>
<td>NATAF</td>
<td>Northwest African Tactical Air Force</td>
</tr>
<tr>
<td>NATAUSA</td>
<td>North African Theater of Operations, U.S. Army</td>
</tr>
<tr>
<td>CGSR</td>
<td>Office of AG/AS for Operations, Commitments, and Requirements</td>
</tr>
<tr>
<td>RCT</td>
<td>Regimental Combat Team</td>
</tr>
<tr>
<td>TEF</td>
<td>twin-engine fighter</td>
</tr>
<tr>
<td>WNTF</td>
<td>Western Naval Task Force</td>
</tr>
</tbody>
</table>
1. This account of the Casablanca Conference is based upon General Dwight D. Eisenhower's Report on the Sicilian Operations, in Combat Analysis files, AGO.

2. Ibid.

3. Strategic Engineering Study No. 31, Strategic Studies Unit Intelligence Branch, Office of the Chief of Engineers, Dec. 1942; Interservice Strategic Study of Sicily, Office of the Chief of Naval Operations, Division of Naval Intelligence, 20 Jan. 1943.


5. Ibid.

6. Ibid.

7. Outline Air Plan issued by Force 141, 15 March 1943.


9. Cable message, Algiers to War for CCS, #7892, NAF 183, 20 March 43.

10. Ibid.

11. CM-IN-8518 (11 April 43), Algiers to War for CCS from Eisenhower, NAF 207, 11 April 43.


13. Ibid.

14. Ibid.

15. Ibid.

16. Ibid.

17. Assigned were 1st Division (minus one RCT), 45th Division, two Ranger battalions, 91st Reconnaissance Squadron, paratroops (52d Airborne Division), and supporting troops. Hq. Force 543, Outline Plan, 13 May 1943.

18. See map following page 12.
19. An organization chart showing the units under MAC is given in Appendix V.

20. GO No. 1, 16 Feb. 1943, Air Eq., MAC.


26. The document itself contains only the date "May." On the cover of one copy in AFIH files there is penciled the date "15 May." Amendment list no. 1 to the above plan is dated 25 May 1943.


28. AFIH files.


30. Ibid.

31. Ibid.

32. Hensenhower Report.
Chapter II

1. RAF Middle East Review No. 3 (April–June 1943), 37–38.


5. Ibid.

6. Ibid.

7. Ibid.

8. Ibid.


11. IAAF Weekly Intelligence Summary No. 31, 12-18 June. According to "An Appreciation of the Effect of Allied Air Force Attacks on Axis Airfields in Tunisia, Sicily, and Italy," issued by the BJSF, there were "some 10 or more" aircraft damaged. In A-2 Library, Italy (Possessions) Sicily, 9/30-9/60.

12. IAAF Weekly Intelligence Summary No. 31, 12-18 June.

13. Ibid.; C.I-IN-8338 (14 June 43), AIIMS 6433, 14 June 43.


16. CI-L-17506 (23 June 43), AIIMS 6634, 23 June 43.

17. Brereton, Employment of Heavy Bombardment Against Enemy Airbases.
19. Ibid.
20. Report, JASAF's Participation in the Sicilian Campaign; C.-II-12801 (21 June 43), Algiers to War, p.2644, 19 June 43.
22. Ibid., No. 32, 19-25 June 1943.
23. RAF Middle East Review No. 3 (April-June 1943), 48-49.
26. IAAF Operation and Intelligence Summary No. 124, 24 June 1943.
27. Twelfth Air Force in the Sicilian Campaign, in IJH11 files.
28. RAF Middle East Review No. 3, 53-54.
29. Tactical Appreciation, in AFSI files, A-3 RUS/H, 9th AF.
30. JASAF's Participation in the Sicilian Campaign.
31. RAF Middle East Weekly Intelligence Summary No. 157, 15-22 June 1943.
32. IAAF Operation and Intelligence Summary No. 125, 25 June 1943; JASAF's Participation in the Sicilian Campaign.
33. Twelfth Air Force Weekly Intelligence Summary No. 34, 3-9 July.
34. C.-II-12518 (20 June 43), KMS 6530, 20 June 43; RAF Middle East Weekly Intelligence Summary No. 157, 15-22 June 1943.
35. IAAF Operation and Intelligence Summary No. 118, 18 June 1943.
36. Ibid., No. 121, 21 June 1943.
37. RAF Middle East Review No. 3, 53-54.
38. IAAF Operation and Intelligence Summary No. 123, 23 June 1943.
39. JASAF's Participation in the Sicilian Campaign.
40. IAAF Operation and Intelligence Summary No. 184, 24 June 1943.
41. Ibid., No. 133, 30 June 1943; RAF Middle East Review No. 3, 53-54.

42. IAAF Operation and Intelligence Summary No. 118, 18 June 1943.

43. IAAF Weekly Intelligence Summary No. 52, 19-25 June 1943.

44. IAAF Operation and Intelligence Summary No. 133, 26 June 1943 and No. 135, 25 June 1943.

45. Ibid., No. 124, 24 June 1943.

46. IAAF Weekly Intelligence Summary No. 52, 19-25 June.

47. IAAF Operation and Intelligence Summary No. 132, 2 July 1943.

48. Based on data in IAAF Weekly Intelligence Summaries Nos. 31-33 for the period 12 June-2 July 1943.

49. RAF Middle East Review No. 3, 54.

50. Ibid.


52. Ibid.

53. Ibid.

54. Ibid.


57. Interview of Colonel Elliott; CO, Photo Reconnaissance Wing, North African Air Forces, in the Bureau of Aeronautics, 30 July 1943.

58. Ibid.

59. Ibid.

60. Ibid.

61. Ibid.

63. MACAF Operations, 1.
64. Unit history of the 414th Fighter Squadron, in AFI files.
65. Their Victory, 7-8.
66. MACAF Operation and Intelligence Summary No. 140, 10 July 1943.
67. Ibid.
68. Their Victory, 12-13.
69. Ibid.
70. MACAF Weekly Intelligence and Operational Statistical Record No. 9, 1-7 July 1943.
71. Ibid.
72. Their Victory, 22-23.
73. Ibid.
76. Eisenhower Report.
77. MACAF's Participation in the Sicilian Campaign.
80. RAF Middle East Weekly Intelligence Summary No. 159, 29 June-6 July 1943.
81. Ibid.
82. RAF Mediterranean Review No. 4, 8.
83. MACAF Weekly Intelligence Summary No. 34, 3-9 July 1943.
84. Ibid.; NAAP's Participation in the Sicilian Campaign.

85. NAAP Weekly Intelligence Summary No. 34; Ninth Air Force Periodic Report No. 39. The Ninth Air Force usually reported its bomb load in terms of pounds. It is assumed here that the NAAP was reporting in terms of American tons; consequently the total number of rounds of bombs dropped by the IX Bomber Command was divided by 2,000 to obtain the above figure.

86. NAAP Weekly Intelligence Summary No. 34, 3-9 July 1943.

87. NAAP's Participation in the Sicilian Campaign from 15 June through 24 July.

88. NAAP Weekly Intelligence Summary No. 34, 3-9 July 1943.

89. Ibid.

90. Ibid.

91. Daily Operational Summaries, 3-9 July 1943.

92. NAAP Weekly Intelligence Summary No. 34, 3-9 July.


94. Ibid.

95. Ibid.

96. Air Attacks of Airfields; Brecon, Employment of Heavy Bombardment Against Enemy Airports.

97. See pages 44-45.

98. Air Attacks of Airfields.

99. Ibid.

100. Ibid.

101. G-113-8733 (13 July 43), Personal for Arnold from Stentz, OS 144, 11 July 43.

102. Air Attacks of Airfields.
103. IAAF Operational and Intelligence Summary Nos. 131-141, 1-11 July 1943.

104. Ibid.

105. Ibid.


107. Ninety-eight bombers took off; according to the operations cables 88 reached the target. CI-17-3923 (6 July 43), Cairo to AFRIC, VIAFRIC 6731, 6 July 43; CI-17-4048 (7 July 43), Cairo to AFRIC, VIAFRIC 6732, 7 July 43.

108. 9th AF A-2 Periodic Report No. 39, 3-9 July 1943.

109. Ibid.

110. RAF Middle East Weekly Intelligence Summary No. 160, 6-13 July 1943.

111. Ibid.

112. RAF Weekly Intelligence Summary No. 34, 3-9 July 1943.

113. Ibid.


115. IAAF Weekly Intelligence Summary No. 34, 3-9 July 1943. Enemy air strength as of 9 July is given in the Report of the Northwest African Air Forces on Dusty, p. 36, as follows:

<table>
<thead>
<tr>
<th></th>
<th>German</th>
<th>Italian</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>SICILY</td>
<td>SS fighters 260</td>
<td>200</td>
<td>460</td>
</tr>
<tr>
<td></td>
<td>SE fighters 40</td>
<td>-</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Bomber recce 5</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Tactical recce 10</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>LVR bombers 50</td>
<td>-</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Torpedo-bombers -</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>600</td>
</tr>
<tr>
<td>SARDEGNA</td>
<td>SS fighters 130</td>
<td>100</td>
<td>230</td>
</tr>
<tr>
<td></td>
<td>Bomber recce 5</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Tactical recce 10</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Torpedo-bombers -</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>265</td>
</tr>
<tr>
<td>LIVY</td>
<td>SS fighters -</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>SE fighters 35</td>
<td>-</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Night fighters 20</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Bomber recce 30</td>
<td>90</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>LVR bombers 110</td>
<td>-</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>Torpedo-bombers -</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>255</td>
</tr>
</tbody>
</table>
German  Italian  Totals

S- F/LK.31  Bomber raids  20  -  20
  L/R bombers  65  -  65
  Torpedo-bombers  35  -  35  120

GRAND TOTALS  825  745  1,570  1,570

The Report of the Northwest African Air Force on Operation Husky, p. 23, lists the following squadrons as available:

<table>
<thead>
<tr>
<th>British</th>
<th>American</th>
<th>Total A/C</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE fighter (offensive)</td>
<td>23 1/2</td>
<td>18</td>
</tr>
<tr>
<td>SE fighters (defensive)</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td>SE day (offensive)</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>SE day (defensive)</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>SE night (offensive)</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>SE night (defensive)</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Bombers - light</td>
<td>-</td>
<td>23</td>
</tr>
<tr>
<td>Bombers - medium day</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Bombers - medium night</td>
<td>-</td>
<td>35</td>
</tr>
<tr>
<td>Bombers - heavy day</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Bombers - heavy night</td>
<td>20 1/2</td>
<td>-</td>
</tr>
<tr>
<td>Coastal</td>
<td>4 1/2</td>
<td>2</td>
</tr>
<tr>
<td>Army C-op.</td>
<td>5 1/2</td>
<td>30</td>
</tr>
<tr>
<td>Transport a/c</td>
<td>3 1/2</td>
<td>2</td>
</tr>
<tr>
<td>Gliders (ECU)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Totals</td>
<td>113 1/2</td>
<td>146</td>
</tr>
</tbody>
</table>

In this table the term "defensive" is applied to those squadrons whose primary function was shipping protection and defense of vulnerable areas. The report does not indicate what percentage of the above list of aircraft was operational. The Historian of the Twelfth Air Force, however, in his report The Twelfth Air Force in the Sicilian Campaign says: "The Husky Order of Battle listed as operational 661 Strategic aircraft, 579 Tactical, 218 Coastal, 469 Troop Carrier, and 373 Gliders; the total of combat aircraft was 1,659, and the grand total was 3,493." For the Allied Order of Battle, see Appendix I.


117. AAF Weekly Intelligence Summary No. 34, 3-9 July 1943.

118. Ibid.
119. RAF Mediterranean Review No. 3, 8.

120. Ibid.

121. Tactical Appreciation, in AFHEI files.


123. NAFF Weekly Intelligence Summary No. 41, 21-27 Aug. 1943.

124. According to the RAF Mediterranean Review No. 4, p. 8, there were 60,000; the RAF Middle East Weekly Intelligence Summary No. 166 gives the figure 90,000.
Chapter III


2. Eisenhower Report.


4. The 38 Wing RAF was to serve as reinforcements for 51st TG Wing for ANZAY and was to return to the United Kingdom upon completion of operations.


7. Ibid.

8. Ibid.

9. There were 144 transport aircraft and 144 gliders originally briefed to carry out the LADROKE mission, seven of which failed to take off because of various mechanical failures. Of the 137 taking off, four returned with their loads. The gliders carried over 1,600 men, and equipment including: 26 bicycles, 101 hand carts, 6 six-pounder guns, 32 wireless sets, 1 150 combination, 6 tenniers, 1 trailer, 17 trolleys, 10 three-inch mortars, 4 tripods, 1 compressor, TCC Report, 71-77.


11. HAAFTCO Report, 75.


15. Ibid.

16. HAAFTCO Report, 73.


19. Ibid.

20. NAFTOC Report, 77.

21. Ibid.

22. Ibid., 79.

23. Ibid., 82-83.

24. Briefly, the assigned missions were as follows: (a) the 505th RG, with the 3d Battalion of the 504th attached, was directed to support the landing of 1st Division near Gela; (b) the 2d Battalion, 504th was to drop three miles south of Niscemi at 2320 on D minus 1; (c) the 2d Battalion, 505th Parachute Regiment at 2400 hours was to drop on the main drop zone (approximately two and one-half miles southeast of Gela; (d) CT Headquarters was to follow 3d Battalion, drop at 0012 hours on D-day, and the 1st Battalion was to follow Headquarters; (e) the 3d Battalion, 505th Parachute Regiment was to drop just south of the road junction 500 yards south of main drop zone; (f) a demolition section was to drop west of the 3d Battalion; (g) field artillery; 75-millimeter Howitzer units were to drop with Battalion CT's. Report on Airborne Operations in Nuxy, 16 Aug. 1943, based upon Lt. Col. C. Billingeale's observations as executive of the Fifth Army Airborne Training Center during the training period of the 52d Division and the 52d Troop Carrier Wing as an attached member of the 505th Parachute Infantry Combat Team for the drop on D minus 1 and the six days following [cited as Billingeale Report], in A-3 Library, Sicily 9930-9960.


26. NAFTOC Report, 75-76, 81.

27. Eisenhower Report; Military Reports of the United Nations No. 11.


29. NAFTOC Report, 65.

30. Unit history 5th Troop Carrier Squadron, in AFIM files.
31. Unit history 53d Troop Carrier Squadron, in AFHIS files.
32. Unit history 316th Troop Carrier Group, in AFHIS files.
33. Ibid.
34. Billingslea Report.
43. Eisenhower Report.
44. Ibid.
45. IAAFTCO Report, 83-89.
46. Ibid.
47. Ibid, 104.
49. Ibid.; memo for General Arnold by Maj. Gen. Clayton Bissell, AOG/AS, Intel., Report of Allied Force Airborne Board, 5 Nov. 1943. It will be noted that the figures given here are at slight variance with those given in the table on page 94. Since the figures given in the Allied Force Board report were compiled later than the personnel and aircraft mission report, it is presumed that they represent a more considered view. Exact agreement among sources of statistical data is very difficult to obtain.
51. IAMTOJ Report, 106.

52. Ibid.

53. Ibid.

54. Ibid., 106.


57. Ibid.

58. Ibid.


4. Ibid.

5. Ibid.


7. Op-Id-8236 (13 July 43), Speaz to Arnold, 43-144, 11 July 43.


9. Eisenhower Report. The same phrase is used in the report of WNF.


12. Report of WNF.


14. Report of WNF.


16. Ibid.


18. Report of WNF.

19. Ibid.

20. Ibid.

22. Ibid.
23. Ibid.
24. Report of RAF.
25. Report of RAF.
26. Report of RAF.
28. Report of RAF.
30. Ibid.
31. Report of RAF.
32. See map following p. 12.
33. RAF Middle East Weekly Intelligence Summary No. 160, 6-13 July 1943.
34. Report of the 7th Army.
36. Ibid.
38. Ibid.
41. Ibid., 8-9. The results achieved by the night fighters during the week of the invasion are as follows:

   10-11 July  2 Ju-88  
              1 Cant. 1-1097  ) destroyed 2 Ju-88 probable

   11-12 July  2 Ju-88  
              1 He-111  ) destroyed 
              1 E/A 

(cocont)
(cont'd)

12-13 July  5 Ju-88  
3 He-111  
2 Cant. Z-1007  
1 Do. 217  ) destroyed  1 Ju-88 probable

13-14 July  2 Ju-88  
2 He-111  
1 P-103  
1 unidentified

14-15 July  9 Ju-88  
2 He-111  
1 Cant. Z-1007

15-16 July  6 Cant. Z-1007  
5 Ju-88  
2 He-111  ) destroyed

43. Ibid.

45. Twelfth Air Force Weekly Intelligence Summary No. 35, 10-16 July 1943; USAAF's Participation in the Sicilian Campaign from 15 June through 31 July.

44. USAAF Operation and Intelligence Summary No. 140, 10 July 1943.

46. USAAF's Participation in the Sicilian Campaign.

47. Ibid.

49. RAF Middle East Weekly Intelligence Summary No. 160, 6-13 July 1943.

50. Ibid.

51. USAAF Operation and Intelligence Summary No. 143, 12 July 1943.

52. Twelfth Air Force Weekly Intelligence Summary No. 35, 10-16 July 1943.

54. Report of USAAF.


56. Report of USAAF.
57. IAAF Operation and Intelligence Summary No. 144, 14 July 1943.
58. IAAF Weekly Intelligence Summary No. 10, 8-14 July 1943.
59. IAAF Operation and Intelligence Summary No. 144, 14 July 1943.
60. RAF Mediterranean Review No. 4 (July-Sep. 1943), 21.
63. RAF Mediterranean Review No. 4 (July-Sep. 1943), 18-19.
64. IAAF Operation and Intelligence Summary No. 146, 16 July 1943.
65. Ibid., No. 147, 17 July 1943.
67. Ibid.
68. Twelfth Air Force Weekly Intelligence Summary No. 35, 10-16 July.
70. Ibid.; IAAF Operation and Intelligence Summary No. 146, 16 July 1943.
71. RAF Mediterranean Review No. 4 (July-Sep. 1943), 21.
72. This review is from the Report of IAAF, 8-9.
73. Ibid.
Chapter V

2. NAFL Operation and Intelligence Summary No. 146, 16 July 1943.
3. Ibid., No. 149, 19 July 1943.
4. NAFL A-3 Section Monthly Operations Bulletin No. 9, Dec. 1943.
5. NAFL Weekly Summary No. 36 (17-23 July 1943); Operation and Intelligence Summary No. 147, 17 July 1943.
6. RAF Mediterranean Review No. 4 (July-Sep. 1943), 21.
7. RAF Weekly Intelligence Summary No. 36, 17-23 July 1943.
9. Ibid.
10. NAFL Operation and Intelligence Summary No. 150, 20 July 1943.
11. Ibid.
14. NAFL Operation and Intelligence Summary No. 151, 21 July 1943.
15. Ibid.
17. RAF Middle East Weekly Intelligence Summary No. 162, 20-27 July 1943.
18. Allied Force Hq., G-2 Weekly Intelligence Summary No. 48, for week ending 24 July 1943.
19. RAF Mediterranean Review No. 4 (July-Sep. 1943), 27.
20. Ibid.
21. NAFL Weekly Intelligence Summary No. 11, 15-22 July 1943.
22. Ibid.
23. NAFL Weekly Intelligence Summary No. 36, 17-23 July 1943.


27. RAF Mediterranean Review No. 4 (July-Sep. 1943), 24; RAF Middle East Weekly Intelligence Summary No. 161, 13-30 July 1943.

28. NASAF's Participation in the Sicilian Campaign.


30. Extracts from a diary kept by Oberfeldwebel Hesslinger Dec. 1942 to 8 Sep. 1943, in A-2 Library, Italy 9930.

31. Air Ministry Weekly Intelligence Summary No. 204, 31 July 1943.

32. CI-OUT-8228 (19 June 43), COS to GO, Freedom Algiers #683.

33. CI-OUT-19614 (25 June 43), COS to Eisenhower, Falmouth.

34. CI-HR-12777 (18 July 43), Eisenhower to WAR, NASAF 293, 18 July 43.

35. The communiqué which was to be issued was as follows: "Military objectives in Rome and its vicinity have been bombed today by heavy bombers and medium bombers of the Mediterranean Air Command. The Marshalling Yard was the principal target. It is of greatest importance to the Axis war effort and in particular for the movement of German troops. Leaflets were also dropped over city during the raid. Pilots and bombardiers employed on this mission were particularly instructed to avoid damaging religious and cultural monuments."


37. JICA AFRQ Detailed Interpretation Report No. D-73, 7 Sep. 43, in A-2 Library, Italy 9930.

38. Ibid.

39. Ibid.

40. NASAF's Participation in the Sicilian Campaign.

42. USAAF Participation in the Sicilian Campaign.
43. Ibid.
44. USAAF Operation and Intelligence Summary No. 152, 22 July 1943.
45. USAAF Weekly Intelligence Summary No. 37, 24-30 July 1943.
46. RAF Middle East Weekly Intelligence Summary No. 161, 13-20 July 1943.
47. USAAF Operation and Intelligence Summaries Nos. 148-153, 18-23 July 1943.
49. Ibid.
Chapter VI


2. Ibid., b-14.


8. Allied Force Hq. 6-2 Weekly Intelligence Summary No. 50, for week ending 7 Aug. 1943.


10. RAF Mediterranean Review No. 4, 34.

11. Unit history, "Significant Activities of 345th Bomb Group (N), 1 April to 1 October 1943," in AFTHI files.


13. NAAFI Operation and Intelligence Summary No. 167, 6 Aug. 1943.


15. NAAFI Report, 15.


17. NAAFI Operation and Intelligence Summary No. 169, 8 Aug. 1943.


20. NAAFI Operation and Intelligence Summary No. 170, 9 Aug. 1943.


22. NAAFI Operation and Intelligence Summary No. 172, 11 Aug. 1943.


27. **Ibid.**, 12.


29. Remarks and Recommendations from AAF Form 34, 12th AF Evaluations, in A-2 library.

30. **Ibid.**

31. Interview with Captain E. M. Lower, 17 Sep. 1943.


33. *EAF Middle East Weekly Intelligence Summary* No. 165, 10-17 Aug. 1943.


35. *EAF Middle East Weekly Intelligence Summary* No. 165, 10-17 Aug. 1943.

36. *EAF Mediterranean Review* No. 4 (July-Sep. 1943), 34.

37. **Ibid.**

38. EAAF Operation and Intelligence Summaries Nos. 171-175, 10-15 Aug. 1943.


40. EAAF Weekly Intelligence Summary No. 40, 14-20 Aug. 1943.

41. EAAF Report.

42. **Ibid.**

43. EAAF Weekly Intelligence Summary No. 13, 22-28 July 1943.

44. **Ibid.**

45. EAAF Weekly Intelligence Summary No. 13, 22 July-4 Aug. 1943.

46. **Ibid.**
47. Ibid.


49. Ibid.


51. NAAAF Weekly Intelligence Summary No. 16, 11-16 Aug. 1943.


53. NAAF Operation and Intelligence Summary No. 164, 24 July 1943.

54. RAF Middle East Weekly Intelligence Summary No. 162, 20-27 July 1943.

55. NAAF's Participation in the Sicilian Campaign.

56. NAAF Operation and Intelligence Summary No. 157, 27 July 1943.

57. NAAF Weekly Intelligence Summary No. 37, 24-30 July 1943.

58. NAAF Operation and Intelligence Summary No. 159, 29 July 1943.

59. Ibid., No. 160, 30 July 1943; RAF Middle East Weekly Intelligence Summary No. 164, 3-10 Aug. 1943.

60. See note 59 above.

61. RAF Middle East Weekly Intelligence Summary No. 163, 27 July-3 Aug. 1943.

62. NAAF Operation and Intelligence Summary No. 165, 4 Aug. 1943.

63. NAAF Weekly Intelligence Summary No. 38, 31 July-5 Aug. 1943.

64. RAF Mediterranean Review No. 4 (July-Sep. 1943), 35.

65. Ibid.

66. Ibid.

67. NAAF Operation and Intelligence Summary No. 165, 4 Aug. 1943.

68. Ibid.

69. Ibid., No. 166, 3 Aug. 1943.
70. NAAFI Weekly Intelligence Summary No. 39, 7-13 Aug. 1943.

71. Ibid.

72. CI-OUT-464 (3 Aug. 43), 0CS to Eisenhower.

73. CI-OUT-675 (5 Aug. 43), 2 Aug. 43. The cable from General Marshall states that the British Chiefs had reversed themselves, that as a matter of fact the Prime Minister thought it might be a good thing to go ahead with the bombing of Rome. The President was out of Washington at the time, but until his views could be ascertained General Marshall was willing to accept responsibility for U. S. approval in case General Eisenhower wished to go ahead.

74. CI-IN-1657 (5 Aug. 43), Eisenhower to Marshall, 3 Aug. 43. Under existing circumstances General Eisenhower thought it might be best to refrain from air activities against Rome until a decision had been reached making it an open city. He did not feel, however, that it should take long for the Badoglio government to act on Allied conditions, which would certainly be simple and which should require the complete demilitarization of Rome and cessation of all movements of troops and military supplies through the city, the closing of all factories engaged in the manufacture of munitions and military supplies and of all airfields in the close vicinity. General Eisenhower was inclined to doubt that the Italians were acting in good faith. If they were, they would accept Allied terms promptly; if not, they would follow a temporizing policy which should be answered by further attacks against Rome whenever planes could be spared from more important military objectives. In any case General Eisenhower did not intend to overdo operations against Rome for he fully realized all the implications and repercussions which were bound to result. Nevertheless, he felt that planes over the city dropping leaflets and bombs undoubtedly had a marked effect on Italian morale.

75. CI-IN-2593 (4 Aug. 43), Eisenhower to Marshall, 3-6509, 4 Aug. 43.

76. NAAFI Weekly Intelligence Summary No. 39, 7-13 Aug. 1943.

77. Ibid.

78. Ibid.

79. EAT Mediterranean Review No. 4 (July-Sep. 1943), 37.

80. NAAFI Operation and Intelligence Summary No. 176, 15 Aug. 1943.

81. Ibid., No. 177, 16 Aug. 1943.

82. Ibid., No. 178, 17 Aug. 1943.
83. Ibid., No. 173, 12 Aug. 1943 and No. 178, 17 Aug. 1943.
84. Ibid., No. 173, 12 Aug. 1943.
85. RAF Middle East Weekly Intelligence Summary No. 165, 10-17 Aug. 1943.
86. NAAF Operation and Intelligence Summary No. 173, 12 Aug. 1943.
88. NAAF Operation and Intelligence Summary No. 152, 22 July 1943.
89. Ibid., No. 156, 26 July 1943.
90. Outline History of 317th Fighter Squadron, in AFIH4 files.
91. Ibid.
92. NAAF Operation and Intelligence Summary No. 165, 2 Aug. 1943.
93. Ibid., No. 166, 5 Aug. 1943.
94. Ibid., No. 168, 7 Aug. 1943.
95. An exception is 16 August, for which day there are no fighter sweeps recorded. See INTOR3 Los. 18-27, 8-27 Aug. 1943, in AFIH4 files.
96. INTOR3 No. 20, 10 Aug. 1943.
97. RAF Middle East Weekly Intelligence Summary No. 165, 10-17 Aug. 1943; NAAF Weekly Intelligence Summary No. 40, 14-20 Aug. 1943.
98. Ibid.
99. Ibid.
100. NAAF Weekly Intelligence Summary No. 40, 14-20 Aug. 1943.
101. RAF Mediterranean Review No. 4 (July-Sept. 1943), 41.
102. Ibid.

2. "Comments on the Execution of the First Phase of the Sicilian Combined Operations," in Col. Parton's file. Date and author not given, but on the basis of internal evidence it would appear that the author of the document is a high-ranking RAF officer.


4. Ibid.

5. Comments on the Sicilian Operation.


7. Comments on the Sicilian Operation; Allied Force Hq. Training Memo No. 43, 2 Aug. 1943.

8. Comments on the Sicilian Campaign; Report of WAAC.


12. Quoted in Allied Force Hq. Training Memo No. 50, "Lessons from the Sicilian Campaign."

Bibliographical Note

There is a plethora of material of uneven quality relating both to the planning and execution of the invasion of Sicily. This study would have been greatly improved by comprehensive and well-integrated narratives of the naval and ground phases of the campaign, but such sources are lacking so far. The reports of the Western Naval Task Force and the U.S. Seventh Army, however, present excellent raw materials which have been relied upon heavily in an attempt to relate the air story to the ground and naval stories. The best sources on the planning phase are the Report by General Eisenhower, the Operations Record Book of Air Plans, Mediterranean Air Command with its numerous appendices, the "Plan for the Employment of the Northwest African Air Forces and Attached Air Forces in Operation 'Husky'" in the files of the AAF Historical Office and the cable messages filed in the AAF Message Center. There are some gaps in the records currently available for the story of the air operations themselves, but the daily and weekly Intelligence Summaries, the unit histories, cable messages, Form 54's, and other primary materials have been examined to obtain as reliable an account as possible.

The following list, though not comprehensive, represents some of the more significant items used in this study. Unless otherwise noted, these items can be found in AFIN files.
General Accounts

"Air-Ground Cooperation in the Sicilian Campaign," Informational Intelligence Summary No. 44-4.


Lessons of the Sicilian Campaign, Training Memorandum No. 50, Allied Force Headquarters, AFO 5LE. Sicily 9930, A-2 Library.

"Operations of Fighter Planes in the Sicilian Campaign," Informational Intelligence Summary Nos. 43-46.

"Preludes to the Invasion of Sicily," EAT Middle East Review No. 3 (April-June 1943), 40-68.


Reports of Participating Units

"Action Report of Western Naval Task Force in the Sicilian Campaign."
Sicily 7510, A-2 Library.

History of the Original XII Air Service Command From Activation to 1 January 1944.


"Operations of II Corps in Sicily, 10 July-17 August 1943." Combat Analysis Section, Operations Division, War Department General Staff.


"Report on Operations by the Northwest African Tactical Air Force in the Capture of Sicily."

"Sicilian Campaign Operational and Intelligence Summary, 1 July to 17 August 1943." Hq. XII Air Service Command, 12 AF Evaluations, A-2 Library.


Observers' Reports and Interviews


Interview with Colonel Elliott Roosevelt, 30 July 1943. Bureau of Aeronautics.

Report on Sicilian Campaign, by Maj. Gen. J. P. Lukas. (General Lukas was the personal representative and special observer for General Eisenhower.)

Periodical Intelligence Reports


Northwest African Air Force Operational and Intelligence Summary Nos. 78-178.

Northwest African Air Forces Weekly Intelligence Summary Nos. 28-41.

RAF Middle East Weekly Intelligence Summary Nos. 153-166.
## Appendix I

**ORDER OF BATTLE, CONSTITUENT AFRICAN AIR FORCES, FOR OPERATION RYTHE**

(including incoming and attached combat units and giving the composition of the Air Task Force)

### 1. CONSTITUENT AFRICAN STRATEGIC AIR FORCE

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### NOTES:
1. Due to arrive from U.S.
3. Two RAF Wing and 4 Wellington Squadrons and 1 Halifox Squadron (463 Sqm) to come from M.E.
Adviser: XII ASC will be located in the headquarters ship, until established ashore. It will form the link between HQ Desert Air Force and HQ Eastern Tank Force.

Note: 1. A.O.C. MALTA will control units shown in the chain of command only when those units are in MALTA.
2. 1/2 600 Sq under control of A.O.C. MALTA.
3. New units will operate from KTMN and will move to SICILY as an A.O.C. (Note 2 above).
### 3. NORTHWEST AFRICAN COASTAL AIR FORCE

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### Notes:

1. 144 Sq. on attachment from U.K.
2. 468 Sqn may be fully ASV for HURRICANE. The rest 221 Sq. will return to Malta on D plus 5 or D plus 7. The Ministry have been asked to furnish two additional Wellington Sqs.
3. 614 and 13 Sqs may remain with Beauforts after 47 and 39 Sqs have re-armed.
4. 213 and 279 Sqs (or other selected Hurricane Sqs) attached from N.E.
Appendix II

PLAN FOR THE FORMATION AND DEPLOYMENT OF THE
AIR TASK FORCE FOR OPERATION HUCKY

Composition of the Air Task Force.

1. The Air Task Force will consist of combat units provisionally detailed in Annexure B to the N.A.A.F. Operational Air Plan, and ancillary units detailed in Appendix 1 to the N.A.A.F. Air Administrative Plan.

Formation of the Air Task Force.

2. Squadrons intended to form part of the Air Task Force will be refitted and reorganised as necessary prior to the operation. Squadrons which are administered by R.A.F. MIDDLE EAST, will be refitted under arrangements made by H.Q., R.A.F. MIDDLE EAST, in collaboration with Northwest African Air Forces. Squadrons of the N.A.A. Forces will be refitted and reorganized under arrangements made by the A.O.C., Tactical Air Force.

3. Aircraft and equipment will be checked, replaced where necessary.
6. Ancillary units of the Air Task Force must also be equipped and trained for their task. This will be undertaken as follows:

   a. Units provided by R.A.F. MIDDLE EAST . . . under arrangements made by R.A.F. MIDDLE EAST.

   b. Units provided by H.A.A. Forces . . . under arrangements made by the A.O.C., Tactical Air Force and the C.G., Air Service Command as applicable. R.A.F. units not already forming part of N.A.T.A.F. will be assigned to that Force. Units and Sections which are to go in with the assault forces must receive training in amphibious operations, and if possible should take part in the exercises arranged for the Army assault forces which they will accompany.

   c. Units provided by the United Kingdom will be trained in the United Kingdom. These units must be fully briefed on the voyage from U.K. The briefs must be prepared as soon as possible by Headquarters, N.A.T.A.F. for despatch to U.K.

The list of R.A.F. ancillary units to be included in the Air Task Force, and the Air Service Command units and sections which are to proceed with the Air Task Force, are contained in Appendix I to the N.A.A.F. HUSKY Air Administrative Plan, which also states the Command of origin.

Deployment of Combat Units.

7. After refitting and training, squadrons will move to their HUSKY Stations in MALTA or TUNISIA. This will be done as follows:


      (1) There are ten R.A.F. SEF (Spitfire) squadrons (two Wings), administered by N.A.A.F. which are initially included in the Air Task Force. The two Wing Headquarters and the ten squadrons will move to their HUSKY Stations in MALTA prior to D - 21. All the ground personnel and equipment of the ten squadrons will also move into MALTA.

      (2) There are five R.A.F. SEF (Spitfire) squadrons, one SEF (Spitfire) Polish Flight, (organized in one Wing), and one S.E. (Spitfire) Tac/R Squadron, administered by N.C., R.A.F. MIDDLE EAST, which are initially included in the Air Task Force. Those squadrons and the Wing N.C. will move to their HUSKY Stations in MALTA prior to D - 21, together with their ground personnel and equipment.

      (3) There are two Beaufighter Night Fighter squadrons (both administered by N.A.A.F.), which will take part in Operations from SICILY. All the ground personnel and half the combat echelon of one squadron will move to MALTA by D - 21 approx., the balance of the combat echelon moving to MALTA approx. D - 5. The second Squadron will remain in TUNISIA until
elements are called forward to SICILY.

(4) There is one wing of five Kittyhawk Fighter-Bomber Squadrons, administered by H.Q., R.A.F., MIDDLE EAST, initially included in the Air Task Force. The wing Headquarters and the ground personnel and equipment will move to MALTA prior to D Day. The combat echelons will await call forward to MALTA from D plus 3 onwards.

b. U.S.A.A.F. Groups and Squadrons.

(1) There is one SEF Group (Spitfires), and one SEF Group (P-40s) which are administered by N.A.A.F., and initially included in the Air Task Force. The Spitfire Group will be located at its HUSKY Station in TUNISIA until it moves into SICILY. The P-40 Group will move to a HUSKY Station which will be selected later.

(2) There are two P-40 Fighter-Bomber Groups of the Ninth U.S. Air Force which are initially included in the Air Task Force. The Group Headquarters, together with the ground and air echelons and a Service Group will move to MALTA prior to D Day. The combat echelons will await call forward to MALTA from D plus 3 onwards.

(3) There is one P-51 Observation Squadron of N.A.A. Forces which is initially included in the Air Task Force. It will remain at its HUSKY Station in TUNISIA, or other selected location, until called forward to SICILY.

(4) There are two A-36 Dive Bomber Groups of N.A.A. Forces initially included in the Air Task Force. They will remain at their HUSKY Stations in TUNISIA until called forward to SICILY.

The complete Order of Battle of the Air Task Force is given in Annexure B to the N.A.A.F. Operational Air Plan. The schedule of movements of combat echelons to MALTA is given in Annexure F to the Operational Air Plan. The schedule of movements of the ground personnel of the N.A.A.F. squadrons (R.A.F.), which move to MALTA is given in Appendix 6 to the N.A.A.F. Air Administrative Plan.

Movement of Combat Units to SICILY.

8. Combat Units of the Air Task Force will move to SICILY as follows:

a. First Move - MALTA to PACHINO - D plus 2 approx. or when airfield is available.

   Fighter Wing H.Q., R.A.F., and two Spitfire Squadrons (R.A.F.), followed by two further Spitfire squadrons when called forward.
b. Second Move - MALTA to PACHINO - D plus 2 approx., or when airfield is available.
   Half Tac/R Spitfire Squadron, R.A.F.

c. Third Move - TUNISIA to LICATA and PONTE OLIVO - D plus 2 approx., or when airfields are available.
   Fighter Group H.Q., U.S.A.A.F., and three Spitfire squadrons.

d. Fourth Move - TUNISIA to PONTE OLIVO - D plus 2 approx., or when airfield is available.
   P-51 Observation Squadron, U.S.A.A.F., to be called forward as soon as circumstances allow.

e. Fifth Move - MALTA to COMISO and BISCARI - D plus 3 approx., or when airfields are available.
   Fighter Wing H.Q., R.A.F., with five Spitfire squadrons and three additional Spitfire squadrons and a Polish Flight attached from other wings.

f. Sixth Move - MALTA to CATANIA - D plus 7 approx., or when airfield is available.
   Fighter Wing H.Q., R.A.F., and two Spitfire squadrons. A third Spitfire squadron will be called forward from MALTA when aircrews space is available. Balance of 40 Tac/R Squadron, R.A.F., called forward from MALTA to CATANIA or GERBINI when required. Ground personnel will be flown or ferried across.

g. Seventh Move - BISCARI or COMISO to GERBINI - D plus 8 approx., when airfields are available.
   Two Spitfire squadrons, to rejoin their wing (which has moved to CATANIA (vide f. above).
   Two Spitfire squadrons, which remain detached from the wing which is in PACHINO (vide e. above).
   Fighter Wing Headquarters with five Spitfire squadrons.

h. Eighth Move - TUNISIA or alternative location to BISCARI - D plus 8 approx., when called forward.
   Fighter Group Headquarters, U.S.A.A.F., and three Fighter-Bomber squadrons (P-40s).

i. Ninth Move - TUNISIA to COMISO - D plus 8 approx., when called forward.
   Two Dive-Bomber Group Headquarters, U.S.A.A.F., and eight A-36 squadrons.
9. Fighter-Bomber squadrons and groups will be called forward from MALTA as airfield accommodation becomes available, or if the tactical situation allows SEF squadrons to be withdrawn and replaced by Fighter Bombers.

10. Bomber squadrons and groups of the Tactical Air Force will be moved into SICILY as additional airfields are captured or constructed.

**Arrangements for Servicing Combat Units in SICILY**

11. The manner in which squadrons and groups are to be serviced and maintained on arrival in SICILY is detailed in the N.A.A.F. Air Administrative Plan. The general policy is as follows:

   a. **R.A.A.F. Units.**

      Initial requirements will be met by Servicing Commandos moved to SICILY by convoy as shown in Appendix I to the N.A.A.F. Air Administrative Plan. Squadrons "A" and "B" parties to be ferried from MALTA, (by air transport if available, otherwise by sea). Equipment to follow by sea.

   b. **U.S.A.A.F. Units.**

      (1) **Arrangements for complete groups which move from TUNISIA to SICILY.** The complete Air and Ground Echelons of one squadron will move to SICILY in the appropriate assault or follow-up convoy, to arrive before the Group is due to fly in. Service Group Detachments will also move in at this time. When the squadrons fly in, the three remaining Air Echelons will also be flown in. The remaining Ground Echelons and equipment will move by later convoy.

      (2) **Arrangements for the single Observation squadron which moves from TUNISIA to SICILY.** Half the Ground Echelon will move in by convoy to arrive prior to date on which the Combat Echelon is due to fly in. The Air Echelon will be flown in with the Combat Echelon.

      (3) **Arrangements for groups which move from MALTA to SICILY.** The Air Echelons will be flown in with the Combat Echelons. The Ground Echelons and the unit equipment will be ferried across by sea.

**Movement of Ancillary Units to SICILY.**

12. R.A.A.F. ancillary units and U.S. Service Command units and sections of N.A.A.F. proceeding from N.A. AFRICA in U.S. convoys will, after training, be moved to assembly areas for embarkation in the appropriate convoys, under arrangements made by H.Q., N.A.T.A.A.F., and H.Q. Air Service Command and in conformity with the instructions issued.
by SOS NACTONSA. The schedule of convoys is contained in Appendix 6 to the N.A.A.F. Administrative Plan, and the provisional allocation of ancillary units to convoys is contained in Appendix 1 to the N.A.A.F. Air Administrative Plan. The assembly and embarkation of units mounted in MIDDLE EAST will be undertaken by R.A.F. MIDDLE EAST on instructions issued by Force 545, or G.H.Q. MIDDLE EAST Forces. The assembly and embarkation of units sailing in British convoys from N.A. AFRICA is being undertaken by R.A.F. MIDDLE EAST on instructions issued by Force 545 or A.F.H.Q. Assistance by N.A.A.F. may be requested.

**Channels of Operational Control in SICILY.**

13. Units of the Air Task Force operating from MALTA in the early stages will be operationally controlled by the A.O.C., MALTA, and under the direction of the A.O.C., N.A.T.A.F. At a later stage, when the Air Task Force H.Q. is established in SICILY, the missions for fighter bombers and bombers operating from MALTA will probably be allocated by the A.O.C., Air Task Force.

14. During the initial phase in SICILY, the Air Forces in Sicily will be controlled by the Air Task Force H.Q. (Desert Air Force H.Q.), under the direction of the A.O.C., N.A.T.A.F. Fighter control will be exercised in the early stage through H.Q., 211 Group, R.A.F. As soon as a second Fighter Control is practicable, the Advanced H.Q., XII Air Support Command, will take over the control of XII A.S.C. units, under the A.O.C., Air Task Force. Advanced H.Q., XII A.S.C. will also act as the link between the A.O.C., Air Task Force and the Commander of the western Task Force.

15. The rear elements of the Tactical Air Force will be operationally controlled as follows, under the direction of the A.O.C., N.A.T.A.F.


b. Rear units of the XII Air Support Command . . . by Rear H.Q., XII Air Support Command.

g. Units of the Tactical Bomber Force . . . by H.Q., Tactical Bomber Force. Certain reserve units of the Air Task Force will also be placed under the control of the Tactical Bomber Force.

16. If the land operations in SICILY diverge into two operational Sectors, the Rear H.Q., XII Air Support Command will move forward to join the Advanced H.Q., and the XII A.S.C. and the Desert Air Force will operate separately, under the control of the A.O.C., N.A.T.A.F.

Headquarters,
Northwest African
Air Forces

May, 1943.

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Appendix III

SCHEDULE OF MOVEMENTS OF COMBAT UNITS OF THE AIR TASK FORCE TO HUSKY STATIONS AND TO SICILY.

(Novements of other units are included for information)

1. D - 40 to D - 34
   a. Units leaving MALTA
      1 T.B. Sqn. (Albac) FAA
         i.e. 821 Sqn.
      MALTA to N.A.
   b. Units moving to MALTA
      5 S.E.F. Sqns. (Spit) R.A.F.
         i.e. 323 Wing.
         ( 81 Sqn
         (154 Sqn
         (232 Sqn
         (242 Sqn
         ( 43 Sqn
         N.A. to MALTA

2. D - 33 to D - 27
   a. Units leaving MALTA
      (N/A)
   b. Units moving to MALTA
      5 S.E.F. Sqns (Spit) R.A.F.
         i.e. 324 Wing
         ( 72 Sqn
         ( 93 Sqn
         (111 Sqn
         (152 Sqn
         (243 Sqn
         N.A. to MALTA

3. D - 26 to D - 22
   a. Units leaving MALTA
      (N/A)
   b. Units moving to MALTA
      5½ S.E.F. Sqns (Spit) R.A.F.
         i.e. 214 Wing
         ( 1 Sqn (S.A.F.)
         ( 92 Sqn
         (145 Sqn
         (601 Sqn
         (417 Sqn
         (Polish Flight
         TRIPOLI to MALTA
         CONFIDENTIAL
1 Tac. R. Sqn (Spit) R.A.F.
i.e. 40 Sqn

TRIPOLI to MALTA

4. Before D - 21 (movements must be co-ordinated with
   the movement of units listed above)

a. Units leaving MALTA.
   ½ 0.E. Sqn (Belf) R.A.F.
   i.e. 29 Sqn

   1 T.E. Sq (Beaufort) R.A.F.
   i.e. 29 Sqn

   1/2 TD/ASV (Wellington) R.A.F.
   i.e. 458 Sqn and ½ 231 Sqn

MALTA to N.A.

b. Units moving to MALTA

   ½ T.E.F. (H) Sqn (Beau.) R.A.F.
   i.e. ½ 600 Sqn

MALTA to N.A.

5. D - 5 to D - 1

a. Units leaving MALTA
   1 T.E.F. (D) Sqn (Beau.) R.A.F.
   i.e. 272 Sqn

MALTA to M.E.

b. Units moving to MALTA

   ½ T.E.F. (H) Sqn (Beau.) R.A.F.
   i.e. Second half 600 Sqn

MALTA to N.A.

6. D - 2

a. Units leaving MALTA

   4 S.D.F. Sqs (Spit) R.A.F.
   i.e. 244 Wing
   H.Q. and
   (145 Sqn
   92 Sqn
   (601 Sqn
   (1 Sqn (S.A.A.F.)

Note: Wing H.Q. and first two Sqs move in on
D - 2, followed as soon as possible by other
two Sqs, probably between D - 2 and D - 4.

477 Sqn and POLISH Flight, belonging to
this Wing remain in MALTA until called forward

b. Units moving to MALTA

   ½ Tac/R. Sqn (Spit) R.A.F.
   i.e. 40 Sqn (when called forward)

MALTA to PACINO

b. Units moving to MALTA
2. Units moving direct from NORTH AFRICA to SICILY
   3 S.E.F. Sqns (Spit) U.S.A.A.F.  
     i.e. 31st Group  
     307 Sqn  
     308 Sqn  
     309 Sqn  
     N.A. to LICATA and PONTE OLIVO

   NOTE: One Sqn to LICATA and two to PONTE OLIVO, or if space permits two Sos to LICATA.

   1 Obs. Sqn (P-51) U.S.A.A.F.  
     i.e. 111 Sqn.  
     N.A. to PONTE OLIVO

   NOTE: This Squadron to await call forward to PONTE OLIVO as soon as circumstances permit.

7. D/3

a. Units leaving MALTA

5 S.E.F. Sqns (Spit.) R.A.F.  
   i.e. 324 Wing  
   (72 Sqn  
   HQ and  
   (93 Sqn  
   (111 Sqn  
   (152 Sqn  
   (213 Sqn  
   MALTA to COMISO

   NOTE: These Squadrons may move from D/3 onwards

2
d S.E.F. Sqns (Spit.) R.A.F.  
   i.e. From 323 Wing  
   (61 Sqn  
   (154 Sqn  
   From 244 Wing  
   (417 Sqn  
   (POLISH Flight  
   MALTA to BISCARI

   NOTE: 417 Squadron and POLISH Flight move between D/3 and D/7

   Squadrons shown under para. 7 (a) will be under control of 324 Wing HQ at this stage.
   324 Wing HQ and Squadrons for BISCARI will probably go in first.

b. Units moving to MALTA.

5 S.E.F. Sqns (Kitty) R.A.F.  
   i.e. 239 Wing  
   (3 Sqn  
   (113 Sqn  
   (450 Sqn  
   (260 Sqn  
   (260 Sqn  
   N.A. to MALTA

6 S.E.F. Sqns (P-40) U.S.A.A.F.  
   i.e. 7th Group  
   (64 Sqn  
   (65 Sqn  
   TRIPOLI to MALTA
79th Group
(85 Sqn
(86 Sqn
(87 Sqn

NOTE: 1 T.E.F. (N) Sqn (Beau.) RAF i.e. 108
Sqn to be brought from Delta to TRIPOLI to be
on call to move to MALTA from D+3 onwards.

e. Units moving from NORTH AFRICA direct to SICILY.

Nil.

8. D+7

a. Units leaving MALTA

2 S.O.P. Sqn: (Spit.) R.A.F
i.e. 532 Wing
(232 Sqn
EC, and
(242 Sqn

NOTE: <3 Sqn (in MALTA at this stage) to remain
there until called forward to SICILY.

1/2 T.E.F. (N) Sqn (Beau.) R.A.F.
i.e., 600 Sqn

1/2 Sac/R Sqn (Spit.) R.A.F.
i.e., 40 Sqn

NOTE: This 1/2 Sqn will await call to move to
CATANIA or CERBINI from D+7 onwards.

b. Units moving to MALTA

Nil.

c. Units moving from NORTH AFRICA direct to
SICILY

Nil.

NOTE: (1) Refuelling and re-arming facilities for
69 G.R. Sqn (Beau) R.A.F. to be available at this
time at CATANIA. Any personnel required for A.L.G.
servicing to be provided from Squadron and flown
or ferried across.

(2) 153 Sqn (TBF/FF) (Beau) R.A.F. will operate
from NORTHWEST AFRICA until it moves into SICILY, up
to which time it will use a base in SICILY as an
A.L.G.

a. Units leaving MALTA
   
   NIL

b. Units moving to MALTA
   
   NIL

c. Units moving from NORTH AFRICA direct to SICILY
   
   8 D.E. Sqs (A-36) U.S.A.A.F.  
   i.e. 27th Group  
   (15 Sq
   (16 Sq
   (17 Sq
   (21 Sq
   85th Group  
   (305 Sq
   (310 Sq
   (311 Sq
   (313 Sq

   NOTE: Movement of above 8 Sqs on D + 3 or when called forward.

   3 S.E.F. Sqs (P-40) U.S.A.A.F.  
   i.e. 33rd Group  
   (53 Sq
   (59 Sq
   (60 Sq

   NOTE: Movement of above 3 Sqs on D + 3 or when called forward. Their initial HUSKY St- tion may be changed.

d. Movement of Units within SICILY
   
   5 S.E.F. Sqs (Spit.) R.A.F.  
   i.e. 324 Wing  
   (72 Sq
   (93 Sq
   (111 S-n
   (152 Sq
   (245 S-n

   3 S.E.F. Sqs (Spit.) R.A.T.  
   i.e.  
   (81 Sq
   (154 S-n

   NOTE: To rejoin 322 Wing with H.Q. at CATANIA

   (417 Sq

   (POLISH Flight

   NOTE: 244 Wing Units.
GENERAL NOTES

(1) Headquarters, Air Task Force (E. Desert Air Force) will move from TRIPOLI to VILNA approximately June 15 (D-25), together with Headquarters 211 Group to await move to SICILY.

(ii) Headquarters Air Task Force, moves to vicinity of PACHINO about D + 3.

(iii) 211 Group Headquarters moves from PACHINO to CIZA, probably before Headquarters Air Task Force.

(iv) Advanced Hq, XII Air Support Command will be located in the Headquarters ship, Western Task Force, until it can be established ashore.
### Appendix IV

**BUILD-UP OF SQUADRONS WITHIN SICILY BETWEEN THE ASSAULT AND 10 SEPTEMBER, 1943.**

<table>
<thead>
<tr>
<th>UNIT</th>
<th>DATE</th>
<th>AIRFIELD LOCATION</th>
<th>TOTAL OF SQUADRONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>224 Wing</td>
<td>16 July</td>
<td>CASSINO</td>
<td>3</td>
</tr>
<tr>
<td>(114, 145, 52 Squadrons)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>224 Wing</td>
<td>16 July</td>
<td>CASSINO</td>
<td>3</td>
</tr>
<tr>
<td>(112, 23 Squadrons)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211 (63) Group (U.S.)</td>
<td>16 July</td>
<td>PORTO CILICO</td>
<td>11</td>
</tr>
<tr>
<td>(297, 303, 309 Squadrons)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>111 (Home) U.S.</td>
<td>16 July</td>
<td>LIGURIA</td>
<td>12</td>
</tr>
<tr>
<td>224 Wing</td>
<td>16 July</td>
<td>PACHINO</td>
<td>15</td>
</tr>
<tr>
<td>(651 Sqdn.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33 Group</td>
<td>16 July</td>
<td>LIGURIA</td>
<td>16</td>
</tr>
<tr>
<td>(59, 59, 50 Squadrons)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244 Wing</td>
<td>16 July</td>
<td>PACHINO</td>
<td>17</td>
</tr>
<tr>
<td>(417 Sqdn.)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(40 Sqdn. 1439 Flight)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244 Wing (2nd Sqdn.)</td>
<td>17 July</td>
<td>CASSIBILE</td>
<td>-</td>
</tr>
<tr>
<td>40 Sqdn. 1440 Flight</td>
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</tr>
<tr>
<td>Flat Group (3rd Sqdn.)</td>
<td>18 July</td>
<td>ARRIGGIO</td>
<td>-</td>
</tr>
<tr>
<td>27th (F) Group</td>
<td>18 July</td>
<td>LIGURIA</td>
<td>21</td>
</tr>
<tr>
<td>(16, 17, 31 Squadrons)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28 Squadron</td>
<td>18 July</td>
<td>LIGURIA</td>
<td>22</td>
</tr>
<tr>
<td>UNIT</td>
<td>DATE</td>
<td>AIRDRESS LOCATION</td>
<td>PROGRESSIVE TOTAL OF SQUADRONS</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>-------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>323 Wing</td>
<td>19 July</td>
<td>PACHINO</td>
<td>27</td>
</tr>
<tr>
<td>(3, 112, 259, 230, &quot;50 Squad.)</td>
<td></td>
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</tr>
<tr>
<td>67 (F) Group (U.S.)</td>
<td>19 July</td>
<td>PACHINO S.</td>
<td>30</td>
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<tr>
<td>(64, 65, 66 Squad.)</td>
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<td></td>
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</tr>
<tr>
<td>27th Group</td>
<td>21 July</td>
<td>GELA E.</td>
<td>-</td>
</tr>
<tr>
<td>(16, 17, 91 Squad.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200 Wing (and Squad.)</td>
<td>21 July</td>
<td>ARTICIA.</td>
<td>-</td>
</tr>
<tr>
<td>86 Group (and Squad.)</td>
<td>20 July</td>
<td>GELA W.</td>
<td>32</td>
</tr>
<tr>
<td>(209, 310, 218 Squad.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202 Wing</td>
<td>24 July</td>
<td>LENTINI E.</td>
<td>38</td>
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<tr>
<td>(232, 182, 242, 61, 114 Squad.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244 Wing (and Squad.)</td>
<td>25 July</td>
<td>LENTINI W.</td>
<td>-</td>
</tr>
<tr>
<td>600 H/F Squad.</td>
<td>25 July</td>
<td>CASSIDIL.</td>
<td>39</td>
</tr>
<tr>
<td>31st Group</td>
<td>26 July</td>
<td>TRENTO W.</td>
<td>-</td>
</tr>
<tr>
<td>40 Squad.</td>
<td>31 July</td>
<td>S. FRANCESCO</td>
<td>-</td>
</tr>
<tr>
<td>78 Group</td>
<td>31 July</td>
<td>TALAGONIA</td>
<td>42</td>
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<tr>
<td>(65, 66, 97 Squad.)</td>
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<td>224 Wing (and Squad.)</td>
<td>31 July</td>
<td>PACHINO S.</td>
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<td>12 (F) Group</td>
<td>4 Aug.</td>
<td>TOLETO CLIVY</td>
<td>46</td>
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<td>(61, 92, 85, 474 Squad.)</td>
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<td>340 (F) Group</td>
<td>4 Aug.</td>
<td>CCISO</td>
<td>50</td>
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<td>(458, 497, 498, 499 Squad.)</td>
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<tr>
<td>226 Wing</td>
<td>6 Aug.</td>
<td>GELA</td>
<td>52</td>
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<td>(11, 114 Squad.)</td>
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<td>24 (F) Group</td>
<td>6 Aug.</td>
<td>MALAVITRANO</td>
<td>56</td>
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<td>(24, 21, 86, 87 Squad.)</td>
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<tr>
<td>572 Wing</td>
<td>6 Aug.</td>
<td>SICILIA</td>
<td>56</td>
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<tr>
<td>(65, 223 Squad.)</td>
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