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The AAF in Northwest Africa

AN ACCOUNT OF THE TWELFTH AIR FORCE IN THE NORTHWEST
AFRICAN LANDINGS AND THE BATTLE FOR TUNISIA

An Interim Report



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Foreword

The AAF in Northwest Africa focuses on the Allied assault on Northwest Africa and the battle for Tunisia—the critical second front that secured the Mediterranean and increased the enemy's vulnerability to a massive invasion from Britain. From this experience of the Twelfth Air Force and its British counterparts in 1942-43 evolved a spirit of Anglo-American cooperation and important aspects of air doctrine still relevant to today's Air Force.

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An Account of the Twelfth Air Force in the
Northwest African Landings and the
Battle for Tunisia

PART I

The Twelfth Air Force in the Landing
Operations

IMPATIENCE had reached its peak. The Soviet Union was loudly demanding that the Western Allies open a second front. British and American military leaders were harriedly explaining that they wanted to be sure of sufficient strength before committing forces to such a task. Small but vociferous groups on both sides of the Atlantic were clamoring for aid to the hard-pressed Soviet forces. Everywhere the question was being asked, "When?"

It was thus all the more electrifying when, on 8 November 1942, the word was flashed that Allied forces had landed in Northwest Africa. The war was being brought, if not immediately to Fortress Europe, then to its most vulnerable approaches.

Of great importance and effectiveness was the part in that invasion and in the later battle for Tunisia of the United States Twelfth Army Air Force. This booklet relates the role of that organization from the time the initial assault was made on the Axis buffer territory of Africa to the time when the *Herrenvolk*, beaten and disillusioned, were compelled to withdraw to Europe itself, there to find little comfort in the certainty that the forces they had set in motion could not be halted.

NOTE.—The grades of officers mentioned in this booklet are those which they held at the time of the events described herein.

There were four chief purposes in undertaking the invasion:

1. To open the Mediterranean to Allied shipping. This would shorten the haul from the North Atlantic to India and, by making unnecessary the longer route around the Cape of Good Hope, vitally increase the number of round trips which Allied shipping could make to the Orient.
2. The opening of the Mediterranean would be an effective counter to the Axis *Drang nach Osten*, which was in danger of reaching out to meet the Japanese push toward India, and the success of which would have split the United Nations into two segments.
3. Allied control of the Mediterranean would make it possible to invade Europe through Italy, the "soft underbelly" of the Axis. Italy would thus afford a springboard for further invasions, would draw part of the German strength from the Russian front, and would give strategic bombers a base within effective distance of hitherto inaccessible Axis installations.
4. Last, and not by any means least, the movement would deal a serious blow to the morale of Germany and her satellites, would raise Allied morale, and would encourage those elements in the Axis-occupied countries which were working as best they could toward the defeat of the Axis.

It was planned to strike simultaneously at Casablanca, Oran, and Algiers. It was also planned that at about the same time the British Eighth Army would break Rommel's El Alamein line and advance into Tripolitania to meet the spearhead of invasion which would sweep eastward from Algiers.

Attitude of the French Toward the Allies

Certainly, it was believed, Germany would occupy Vichy France immediately upon receiving the news of the invasion, in order to forestall an Allied breaching of the southern coast of France, to establish submarine and air bases, and to control the French fleet then based at Toulon. Intelligence determined that Frenchmen in Northwest Africa probably would be neutral and that the natives would be apathetic. Civil servants, interested in their salaries and pensions, would be content to jog along under the Viche régime.

The Navy, with a long and proud tradition and composed largely of Bretons, was violently anti-British. This attitude had been strengthened by British attacks on French naval units at Oran and Dakar in 1940, and by suspicions of British designs on Bizerte. It was anticipated that the fact that the United States had now joined the British would make little difference; indeed, the French Navy considered that Anglo-Saxon sea power was a threat to the continued existence of the French colonial empire. The loyalty of the French Navy, it was evident, was not so much to Vichy as to the Service, and this loyalty among enlisted personnel was heightened by their interest in ratings and pensions, to obtain which absolute conformity to the naval hierarchy was necessary.

The French Army, on the other hand, better reflected the attitude of most metropolitan Frenchmen. Marshal Pétain was personally popular, and his dealings with Germany were condoned as unavoidable. The officer corps was, to say the least, anti-foreign, but junior officers and the rank and file were inclined to favor the United States. For this reason it was decided to emphasize the American character of the invasion. The difference between the Navy and the Army was demonstrated by the resistance which each was to offer.

There were additional factors which might urge the French to cooperate. The American continuance of relations with Vichy had convinced many Frenchmen of our good will, and the United States had not been involved in British actions against French colonies. The Axis had not occupied French Africa, but its armistice commissions had stripped the country of food and had reduced the population to a hand-to-mouth existence. The French Army was being slowly deprived of its weapons and the Navy was short of fuel. These experiences were gradually convincing the French that they could not do business with Hitler and were arousing them from their apathy. There was a chance that an Allied invasion, if predominantly American, might meet with some degree of welcome.

Danger from Spain

It was realized that Spanish sympathies were pro-Axis and that the Spanish fascist government hoped to fish in troubled water and catch the control of all or part of French Morocco. This might not be pos-

sible without German collaboration, but the whispered suggestion of a projected Allied seizure of Dakar brought forth rumors that in such event Spain might move into French Morocco. Though the Allied ambassadors had assured Franco himself of our determination to respect Spanish neutrality, and though Franco was thought for economic reasons to favor continued neutrality, there was the possibility that German pressure might cause him to throw in his lot openly with the Axis. Already Spain was selling vital supplies to Germany, and German agents were allowed to operate freely on both sides of the Straits of Gibraltar. For these reasons it was felt by the Allied command that the seizure of Casablanca was a necessary part of the movement into Northwest Africa. Moreover, it would be essential to maintain on the border of Spanish Morocco a force sufficient to meet any invasion which Franco or the Axis might launch.

Planning for the Northwest African invasion began on 18 July 1942, when American and British officers met at a conference at Norfolk House, London, under direction of Lt. Gen. Dwight D. Eisenhower. From the first, every effort was made to promote real unity of command, for anything falling short of this jeopardized the chances of success in the proposed invasion. To meet this necessity, staff officers were chosen from both nations with regard to their fitness. In some sections national differences in procedure made it necessary to appoint opposite numbers of both nationalities. General Eisenhower was the supreme commander and Adm. Sir Andrew Browne Cunningham was naval commander in chief. The American Twelfth Air Force was under command of Brig. Gen. James H. Doolittle, and the RAF under Air Marshal Sir William Welsh.

The principal snag in planning was struck when it came to deciding upon the focal areas of attack. The invasion would strain Allied resources, which were woefully weak in landing craft, freighters, troopships, and available combat units. The Americans maintained that the Spanish menace dictated landings at Casablanca, to which they were willing to add Oran, but the British favored Oran, Algiers, and if possible Philippeville and Bone; the reasoning was based on the cogent assumption that if Tunisia were to be seized promptly it was necessary to land as close to it as feasible. In the end it was decided to include Casablanca, Oran, and Algiers, but the discussions delayed the movement for about three weeks. It was

also decided to modify the American character of the invasion by adding more British combat units in the Algiers area.

The period of a new moon being most favorable for landings, the date of the invasion was set at 7 October. This was later changed to 4 November, and again to 8 November. Casablanca was assigned to the Americans under Maj. Gen. George S. Patton, and the planning for this phase was accomplished chiefly in Washington. The Oran force, also American, was under Maj. Gen. Lloyd R. Fredendall. In order to give an American color to the Algiers force, which was combined British and American, Maj. Gen. Charles W. Ryder was made commander; upon the fall of Algiers the command was to pass to British Lt. Gen. K. A. N. Anderson.

The Oran and Algiers invasions were to occur simultaneously. It was hoped that the Casablanca landing could be made at the same time, but this was rendered problematical by the notorious fact that in the late autumn only one out of five days would be suitable for amphibious operations. The American Navy was to cover the Casablanca effort, while the British Navy was to operate in the Mediterranean. In addition, the British provided a strong naval force to watch over the Italian and Vichy French navies, and another to patrol between the Azores and Gibraltar.

American troops at Casablanca and Oran were to unite to guard the border of Spanish Morocco, while General Anderson's British First Army would push on to Tunisia. The Twelfth Air Force was to remain in the west, Casablanca and Oran, while the RAF would cover the British advance.

American diplomats in French North Africa reporting that certain army and air force elements would welcome the coming of Allied forces, a deputation of American officers headed by Maj. Gen. Mark W. Clark landed near Algiers on the night of 22-23 October for a series of conferences. Meanwhile the Americans were negotiating with Gen. Henri Giraud and planned to bring him to Africa in a submarine.

Air Planning of the Invasion

Gen. H. H. Arnold and Maj. Gen. Carl Spaatz agreed that air bombardment from the United Kingdom and air activities based on the Middle East were essential concomitants to any movement into North-

west Africa, and that nothing should be allowed to interfere with either. Moreover, the Northwest African venture must be exploited by a build-up of strategic bombers.

Plans had already been made for the activation of the Twelfth Air Force, but it did not appear officially until 20 August 1942, when it was activated at Bolling Field. On 5 September the Headquarters and Headquarters Squadron left New York, landing in Scotland on the 11th. General Doolittle assumed command on 23 September 1942. Prior to that time, personnel were a part of the Eighth Air Force and were known either as Eighth Air Force Junior or simply as Junior. General Doolittle arrived in the United Kingdom on 6 August 1942.

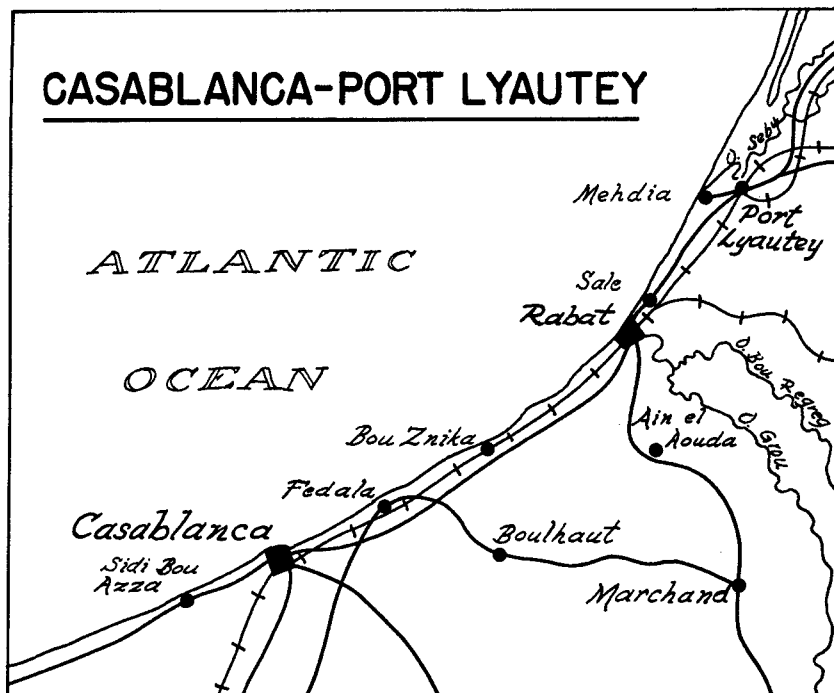
On 31 August General Spaatz forwarded to the Commanding General of the European Theater the following points dealing with the timing of the planned operation:

1. A minimum of three weeks' notice was required to make motor changes, tune planes, pack, crate, and mark equipment, and otherwise to prepare air units for movement from their stations.
2. It would be impossible to carry out any tactical operations during this period.
3. Additional time might be needed to replace shortages of equipment. This condition of shortages would probably prevail in the new theater, due to ship sinkings and the fact that supply depots were not yet functioning on a completely effective basis.
4. Additional time would also be needed for movements to the ports and for loadings.

It was proposed that the Casablanca end of the invasion should receive air cooperation from the XII Air Support Command, then being activated and organized in the United States. It would in effect be a miniature air force, with bomber and fighter wings.

The RAF was to accompany the Algiers landing. The main body of the Twelfth Air Force was to proceed from the United Kingdom to Oran, this body to consist of XII Fighter Command and XII Bomber Command, with the addition of the 51st Troop Carrier Wing.

As political and meteorological considerations urged the invasion at the earliest possible date, it was necessary to assign units already trained; to accomplish this, the Eighth Air Force was temporarily



all but stripped of units. Staff officers and organizations set apart to reinforce the Ninth Air Force in Egypt were switched to the United Kingdom. In all, the Twelfth Air Force was planned to comprise about 1,500 aircraft and 75,000 men.

Plans called for sending the 33d Fighter Group of P-40's into Casablanca as soon as possible after D-day, and to send the 31st Group of Spitfires to Oran. During the next month other units were to follow as rapidly as preparations could be made to receive them; inevitably there were changes made after D-day in the groups originally scheduled to go.

The air program of the Northwest African invasion consisted of three parts:

1. XII Air Support Command under Brig. Gen. John K. Cannon accompanied the Western Task Force at Casablanca.
2. The remainder of the Twelfth Air Force under General Doolittle operated with the Central Task Force at Oran.
3. The RAF Eastern Air Command under Air Marshal Welsh operated with the Eastern Task Force at Algiers.

In addition, U. S. carrier-based naval aircraft were to cover the initial operations at Casablanca and the British Fleet Air Arm was to cover the other two.

The mission of the air forces was threefold:

1. To provide air defense and air cooperation with the initial assault forces, and to protect bases and communications as established.
2. To protect post-D-day convoys, the lifeline of the invasion.
3. To build up an offensive air striking force for strategic bombing of Axis bases and communications, particularly on the continent of Europe.

The Moroccan Landings

The Atlantic coast of Morocco is rocky, with outcroppings extending into the water. Although a few long, shelving beaches are suitable for landing, it is necessary for vessels to lie far out at sea. Harbors are usually formed by breakwaters, and the few natural harbors at the mouths of small rivers are shallow. On the beaches the ground swells are heavy and waves often break at a height of 30 feet. Low pressure over the North Atlantic results in rough water off the Moroccan coast, and as winter approaches these disturbances increase. Since, as has been said, the late autumn affords one feasible landing day in five, it is not surprising that the landings were followed the next day by prohibitively rough seas.

The coast was relatively well fortified with coastal defense batteries, field artillery, anti-aircraft batteries, and machine-gun pillboxes. All likely landing areas were protected. Particularly strong was Fedala, about 12 miles northeast of Casablanca, while the immediate vicinity of Casablanca bristled with big guns. The battleship *Jean Bart*, though unable to move, lay at a jetty and added her guns to the defense. Fedala and Casablanca constituted the focal point of the central attack; Mehdiya, 80 miles northeast of Casablanca, was the second; and Safi, 130 miles southwest of Casablanca, was the third.

The Amphibious Force, under command of Rear Adm. Henry K. Hewitt, consisted of a strong contingent of battleships, cruisers, aircraft carriers, destroyers, and fleet train vessels, together with an adequate number of troop and cargo ships, with the cruiser *Augusta* as flagship.

It was planned to have a strong covering group shell Casablanca if resistance occurred at that point, with the Northern Attack Group covering the landing at Mehdia, near Port Lyautey, the Center Group covering that at Fedala, and the Southern Attack Group covering Safi.

The Army contingent, under General Patton, consisted of approximately 2,000 officers and 35,000 men. There were about 250 tanks in one armored combat command and an armored combat team, the Third and Ninth Infantry Divisions, and a Ranger detachment. Before the landings were made the following orders were published to all ranks:

1. Leading waves will reach beaches 2½ hours before sunrise.
2. Direct attack will be avoided. The enemy will be pinned by frontal fire and attacked from rear.
3. Attack both day and night will be prosecuted to the limit of human endurance and then continue the attack. Rapid, violent, and continual attack will win.
4. Military or civilian units or individuals offering resistance will be destroyed.
5. Military or civilian authorities or military units displaying conciliatory attitude will be accorded friendly and courteous treatment.
6. Local civilian authorities in captured localities will be urged to continue their administrative and judicial functions.
7. Sultan's palace, houses of worship, mosques, cemeteries, and private homes will not be disturbed or entered unless they are used as defensive works.
8. Women, both European and native, will be treated with the utmost respect. Soldiers guilty of looting or assault on women will be shot.
9. The following will not be damaged beyond temporary interruption to prevent use by enemy:
 - a. Power plants and utilities.
 - b. Ports and port facilities.
 - c. Radio stations at Rabat and Casablanca.
 - d. Telegraph and telephone lines between Rabat-Meknes and Rabat-Casablanca.

Off Casablanca was the largest American naval force, with Rear Adm. Robert C. Giffin in command of the covering group, subject

to the control of Admiral Hewitt, commander of the Western Naval Task Force. Maj. Gen. J. W. Anderson was in command of ground forces, and General Patton, commanding all ground movements, was present in the area.

Early in the morning of the 8th, French planes attacked the fleet and soon afterward shore batteries, aided by the *Jean Bart*, opened fire. The American vessels returned the fire. The *Massachusetts* paid particular attention to the *Jean Bart*, and succeeded not only in silencing her guns for the day but also in damaging her so seriously that her stern settled on the bottom. The French fleet stationed at Casablanca included one light cruiser, three flotilla leaders, seven destroyers, 11 submarines, and additional small craft. The *Jean Bart* and three submarines had now been sunk, and three other ships either had been put out of action or were undergoing repairs. Three of the remaining submarines managed to escape. Next, the cruisers, destroyers, and flotilla leaders attempted two sorties, but were driven back with a loss of six vessels. The others retreated to Casablanca.

The Mehdia Landings

The Northern Attack Group was under the command of Adm. Monroe Kelly and the landing troops under Brig. Gen. Lucian K. Truscott, Jr. Soon after midnight on the morning of 8 November the landing craft opposite Mehdia were loaded with troops. The assault was organized in waves, the first one to go in behind three escort vessels, those following to depart at 10-minute intervals. Because of considerable confusion in the darkness the first wave did not reach shore until 0515, one and one-half hours late. Landings were made at five points above and below the mouth of the Sebou River. The central wave, at the mouth of the river, was the only one which met opposition. Batteries which opened fire on the assault were answered by naval fire. At daylight six planes were launched by the fleet for spotting and naval patrol. Soon afterward, two French Dewoitines attacked the ships without result, and 10 others went up to strafe the landing parties.

Broadcasts to the French authorities and to the people of Northwest Africa failed to lessen the resistance, so the landing parties pressed the attack and established themselves well inland. Early the next morning the French started a counterattack. There were exchanges between

the shore batteries and the ships, and the fire of the latter broke up a French tank attack. About 1430 General Cannon arrived in a naval plane and went into conference with Admiral Kelly.

On the 10th the *Dallas* ran up the Sebou River and landed Rangers at the airdrome, which was soon in use by naval planes. Meanwhile, instructed by spotting planes, the naval vessels shelled the French columns and sent out planes to strafe and bomb. American troops stormed the fort on the south bank of the river, supported by dive bombers. Reconnaissance showed that there were no more forces to continue the resistance, and at 0400 on 11 November the order was issued to cease firing.

Landings at Fedala

Beginning at 0525 on the morning of the 8th, four assault waves were landed on the beaches between Fedala and the Neffikh River. French searchlights which spotted the landing boats were fired upon by the American fire support vessels, and the shore batteries at Chergui and Fedala then opened up. The slight French opposition to the landings consisted of occasional shelling of the beaches. The French Army confined itself to delaying actions. At 1430 Fedala surrendered. Unloading proceeded during the ensuing night, though the loss of landing craft, due principally to waves and tides, reached the appalling total of 64 percent. The armistice at 0400 and the surrender of Casablanca at 2200 hours on 11 November did not hinder French torpedo action, for on the 11th and 12th four of our ships were hit and sunk. These actions had been aided by searchlights at Casablanca, but this aid ceased with the occupation of the city.

The Safi landings were under command of Rear Adm. Lyal A. Davidson and Maj. Gen. Ernest H. Harmon. The principal objective of the move was to land tanks at Safi to keep the garrison of Marrakech from reinforcing Casablanca. From Safi the tanks were to move north to aid in the attack on Casablanca.

The *Bernadou* and the *Cole* were sent ahead into the harbor to seize the installations needed to unload tanks; despite the fire of shore batteries their mission was successful. Ten assault waves were landed on four beaches beginning at 0505 on 8 November, while shore batteries were silenced by fire support ships. Another battery south of

Safi was captured at 1130, and the *Lakehurst* moved into the harbor and began landing tanks at 1500.

French planes strafed the assault waves, but otherwise no army opposition was offered. Air cover was provided by the *Santee* and the *Philadelphia*. On the 9th an air attack on the Marrakech air-drome destroyed or damaged 20 planes and wrecked a hangar. Meanwhile French relief columns coming from the east were attacked by American aircraft and disrupted. On the 10th and 11th American Army tank units bypassed Mazagan and appeared before Casablanca. Strongpoints in the Mazagan region surrendered by midnight, and information was received that hostilities in French Morocco had ceased.

Ground elements of the XII Air Support Command landed on D-day in order to take over captured airfields at the earliest possible moment, and speedily prepare them for our use. The first Command planes to land were 72 aircraft from the carrier *Chenango*, which were flown to Craw Field, Port Lyautey. The field was soft and pitted with bomb craters. Those planes whose undercarriages had not been ruined in landing were later moved to Casablanca. Meanwhile, 35 aircraft were landed from the carrier *Archer*, and B-26's began to arrive from the United Kingdom via Gibraltar. Good airdromes were found at Sale, Rabat, and Casablanca, though the last named had spots which would not bear B-17's. The main effort of the XII Air Support Command was devoted to patrols and to air cooperation with General Patton's troops; it engaged in no air combat. Within a month the Command began a movement eastward which was to result in its entry into the Tunisian fray about the middle of January 1943.

The Oran Landings

The coast in the vicinity of Oran is precipitous except in the west, in the area of Les Andalouses, 12 miles from Oran and 30 miles east of Arzew. The port of Oran lies in a semicircular bay, its artificial harbor bounded on three sides by cliffs. Three miles away, on the western side of the Bay of Oran, is the supplementary harbor of Mers-el-Kebir, also artificial and also at the foot of a cliff. Oran was well defended by coastal batteries, particularly on the high ground



Official Photo USAAF

BATTERED SOUSSE. Bombers of Northwest African Strategic Air Force left this major Axis Tunisian base in rubble before Germans and Italians retreated. Note tank obstructions in shattered street.

between the ports of Oran and Mers-el-Kebir, though few of the guns were long-range. The coastal batteries were manned by naval personnel. There were also some mobile artillery and an infantry division, while Sidi-Bel-Abbes, 35 miles to the south, was the headquarters of the Foreign Legion. The two local military airdromes were at Le Senia, a few miles south of the city, and Tafaraoui, about 15 miles farther south. The French air defenses consisted of a few old anti-aircraft and machine guns and a few outmoded fighter and bomber planes.

The Central Naval Task Force was entirely British, though some of the troop transports were American. There were 46 naval vessels, of which three were carriers, and 44 troopships and freighters. The Center Task Force, under General Fredendall, was composed of the First Infantry Division, Combat Command B of the First Armored Division, one battalion of the 503d Parachute Regiment, and the First Ranger Battalion. The missions of this task force were four:

1. To occupy the ports and airfields in the Oran area.
2. To extend westward to meet the Casablanca expeditionary forces.
3. To build up land and air striking forces in case the Axis erupted from Spanish Morocco.
4. To extend eastward to Orléansville to meet the forces coming from Algiers.

The plan of attack envisaged simultaneous landings at Les Andalouses and Arzew, while two British cutters filled with U. S. combat troops would enter the harbor of Oran and seize the shipping and port installations to preserve them from sabotage. The parachute battalion was to be brought from England on the morning of D-day by the 60th Troop Carrier Group and dropped or landed at La Senia or Tafaraoui, depending upon whether the French proved hostile or peaceful. Air cooperation was to be furnished during the early hours by the British Fleet Air Arm, but the 31st Fighter Group was to fly in from Gibraltar during the day.

Two landings were made about 0200 at Arzew, one to seize the harbor and the other the fort. Both objectives were accomplished, but with dawn, scattered guns about the harbor increased their fire until they were captured by Army detachments. Armored Combat

Command B was landed promptly and began a rapid advance upon the airfields of Tafaraoui and La Senia. Two regimental combat teams also began moving toward St. Cloud and Oran. Combat Command B seized Tafaraoui at noon, then moved north toward La Senia. That airdrome, however, held out most of the next day. It was bombed by the Fleet Air Arm and strafed by Spitfires. Upon its capture the batteries above Mers-el-Kebir swung on the field, but were put out of action by Spitfires of the 31st Fighter Group.

Meanwhile the landings at Les Andalouses had been successful, though there was considerable confusion in the darkness. A searchlight illuminating the beaches was extinguished by naval fire. Three French destroyers and an escort vessel sallied from Oran; all were hit and two were sunk. During the morning coastal batteries opened upon the landing beaches and were shelled by the guns of HMS *Rodney*. One combat team advanced toward Oran to seize the heights west of the city, while another column moved on Lourmel airfield.

During 9 November the build-up of forces continued, while forward elements engaged in bitter fighting. By the morning of the 10th the ground forces had pressed their way to the outskirts of Oran, and at 0737 they delivered a coordinated attack. At 1230 the city formally surrendered.

Take-off of Paratroop Operations

One phase of the plan for the capture of Oran included the dropping of paratroops from 39 C-47's of the 60th Troop Carrier Group. Col. William C. Bentley, Jr., was mission commander and Lt. Col. Thomas J. Schofield was group commander. The 39 planes assigned to the mission were divided into four flights. The first two flights, consisting of 19 aircraft, took off from St. Eval, and the other two, made up of 20 planes, took off from Predanneck.

The 556 paratroops engaged in the mission were the 2d Battalion of the 503d Parachute Infantry, commanded by Lt. Col. Edson D. Raff. Two plans were formulated: by the "war" plan most of the paratroops were to jump near Tafaraoui and capture that airdrome; by the "peace" plan the planes were to land at La Senia, where the paratroops were to walk in and receive the plaudits of the multitude.

While the men were standing by their planes on five-minute alert,

the order was received to substitute the "peace" plan for the "war" plan, which had originally been thought more probable. Personnel were informed of the change and warned to take off in time to assemble over Portreath in Cornwall at 2200. However, during the night the "war" plan was reinstated, unknown to the mission, a circumstance leading to utter confusion the next day. To add to the general turmoil, the radio boat in the Mediterranean was sending signals on 460 kc instead of 440 kc, as indicated in the Signal Annex and the inadequately informed briefing personnel briefed the crews for Gibraltar. Much time was lost, and when the instructions were given for the actual mission they were very inadequate.

Flights A and B took off at 2120 on 7 November, with C and D taking off at 2105. Rendezvous was made over Portreath at 1,000 feet, and the course was taken from there. The planes had difficulty in getting into formation in the darkness, in some cases collisions being narrowly averted. Ground fog and occasional rains were encountered and these, added to poor radio communication and the failure of some lights to function, made it difficult for the aircraft to keep formation. The dispersal became practically complete when the planes climbed to 10,000 feet for the flight over the mountains of northern Spain. Radio and navigator failure made reassembly impossible, and the C-47's arrived at widely dispersed points over the north African coast. Over the coast of Spain several aircraft were fired upon. Notwithstanding the liberal use of caffeine pills, most of the crews had to fight to stay awake. Of three which lost their way, one put in at Gibraltar and two reached Casablanca.

With the dawn arrival in Algeria most of the planes were almost out of fuel and the crews all but exhausted. The crews and parachutists of three planes landing in Spanish Morocco were interned, and the paratroops of a fourth plane were dropped there and also taken into custody.

Near Lourmel a column of tanks was seen and 12 planes jumped their paratroops, but the tanks proved to be American. The airborne troops marched to Tafaraoui, arriving the next day. The change from the "peace" to the "war" plan first became known to the mission when a C-47 encountered flak over Tafaraoui. This plane hastily warned all those it could reach by radio, and an emergency landing field was sought at the west end of the Sebkra d'Oran, a salt lake south of Oran.

During the morning the majority of the aircraft, 28 in number, landed there. The first of this contingent to land, about 0830, was fired upon by two Arab horsemen, and a bullet exploded a parachutist's hand grenade, seriously wounding an officer. The paratroops were organized, the planes dispersed, and the defensive outposts established. A platoon of light tanks reinforced the defense.

Colonel Bentley's plane was among those which reached the Sebkra, but after talking with those on the ground he jumped his paratroops and turned north to reconnoiter over Tafaraoui and La Senia. It must be remembered that to the best of his knowledge the mission was operating on the "peace" plan. There were evidences of a ground battle occurring at Tafaraoui, and at La Senia he was met by antiaircraft fire. With his fuel low and one engine spitting and missing, he sat down on a dry sebkra and managed to establish radio contact with the ground commander, reporting the situation of the aircraft and paratroops at the west end of the Sebkra d'Oran. Here he was joined by another C-47.

Presently, with the arrival of French civilian police, Colonel Bentley and the crews of the two planes were taken prisoner. On the way to Oran they were joined by the crew and parachutists of the third C-47 which had landed in the vicinity early in the morning, apparently the first to land in Algeria. Incarcerated in the prison camp of St. Philippe, Colonel Bentley was courteously treated, and remained there until the 11th, when American armored forces captured the camp.

Transports Move to Tafaraoui

Meanwhile, Colonel Schofield had established a command post on the second floor of the airdrome headquarters building and made liaison with the armored division. This was the unit which had helped to take Tafaraoui and which engaged the enemy in the hills in an attempt to clean up the artillery which had been sporadically dropping shells on the airdrome all afternoon.

Not all the aircraft which took off from the west end of the Sebkra d'Oran reached Tafaraoui. One was forced down at the east end by French fighters, and in the process most of the crew were wounded (one dying the next day); three paratroopers were killed and 10 wounded. Near the same place another plane was washed out in

landing to escape enemy action, and a third one, also forced down, had its co-pilot killed. The parachutists went on to join in the attack on Tafaraoui.

Earlier in the morning a C-47 was forced down in the same region by a French fighter, and the crew and parachutists barely had time to spring to the ground before the Frenchman riddled the plane, wounding one man. Later, other C-47's landed near-by and took off the crew, the parachutists, and the salvage. Another troop carrier aircraft, coming down near Arzew, did not join the group for some days.

Of the 39 planes belonging to the 60th Troop Carrier Group which left England, one was at Gibraltar, two at Casablanca, three in Spanish Morocco, and the others near Oran; of these, at least three had been damaged beyond repair. Only 14 of the aircraft at Tafaraoui were at the moment flyable.

Twenty-six Spitfires of the 31st Fighter Group, flying via Gibraltar, arrived at Tafaraoui during the afternoon of D-day. It had been arranged that four Hurricanes from a carrier would cover the landing, and four French Dewoitines above the field were mistaken for the Hurricanes. The attacking Dewoitines brought down one Spitfire just off the end of the airdrome while in the traffic pattern, but other Spits shot down all four Frenchmen. In the dogfight it was very difficult to distinguish the planes of one nationality from those of another. One French pilot bailed out when his plane burst into flames, and another fighter which broke away crashed about 10 miles from Tafaraoui. This action occurred about 1600. At 1845 four Spitfires strafed La Senia airfield in cooperation with the armored force then attacking.

On Monday, 9 November, the Americans at Tafaraoui were awakened by shell explosions and anti-aircraft fire, which continued at intervals during the day. One C-47, its radio operator wounded, was put out of commission. While no C-47's took off during the day, the Spitfires were busy. Armored units devoted their attention to the gun positions on the surrounding hills, and by midafternoon the conflict had waned; thereafter sniping was the only hostile action. During the afternoon General Doolittle arrived in a B-17 escorted by 12 fighters.

The morning's principal air action was the breaking up of a column of the Foreign Legion en route from Sidi-Bel-Abbes. Three forma-

tions of four Spitfires each took off periodically during the morning to strafe this 10-mile column. The French had very little AAA and the Spits were able to strafe almost at will. A few of the large French guns arrived within range of the airdrome, but their fire was inaccurate and the Spitfires destroyed their emplacements. During these actions the Spitfires had to use captured French ammunition because their own supplies had not arrived.

By noon of 10 November the French Air Force had been destroyed or captured. The U. S. loss was six Spitfires and three C-47's.

Period After the Fall of Oran

Air movements began even before the fall of Oran, when on the 10th two C-47's were dispatched to Blida and Maison Blanche to ferry military personnel, returning the same day. The next day 13 planes carried 134 paratroops to Maison Blanche. During the succeeding days and weeks Spitfires flew reconnaissance patrols while the air forces were built up.

No time was lost in organizing the Twelfth Air Force for the expected encounter with the Luftwaffe, for the struggle in Tunisia was entering a hazardous stage and air reinforcements were badly needed. Incoming ground echelons and new units were sent east as soon as practicable. French airdromes were repaired and new ones hastily laid out in wheat fields and sheep pastures. Supplies at first were a problem, but air service, quartermaster, and ordnance organizations moved in rapidly, and within a week the supply situation was well in hand, though eventually the numbers of incoming troops were so great that thousands of them had to live in pup tents in the rain and mud.

The Algiers Landings

The Eastern Naval Task Force consisted of 48 naval vessels, including two aircraft carriers and 34 transports and cargo ships. Nearly all the fleet, except five American cargo ships and transports, was British. The Eastern Task Force to be landed at Algiers was also mainly British, although the small proportion of American troops, two regimental combat teams, and the U. S. commander, General Ryder, were sup-

posed to give it an American complexion, thus making it less repugnant to the French. The missions of the Eastern Task Force were:

1. To seize the ports and airfields of the Algiers area in order to provide a base for the invasion of Tunisia.
2. To extend eastward by capturing ports and airfields which would be useful in the push on Tunisia.
3. To extend westward to meet the forces approaching from Oran.

Though the city of Algiers was well protected by coastal batteries, it was planned to gain control by making landings about 25 miles on each side. The broad, open Bay of Algiers faces the north. On each side are wide, rugged capes, Point Pescade on the west and Cape Matifou on the east. A landing at Sidi Ferruch could skirt the hill country below Point Pescade and take Algiers in the rear; similarly, landings east of Cape Matifou could open a passage to the Bay of Algiers and approach the city on the southeast.

The Algiers landings were less seriously opposed than those in Morocco and Oran. The batteries of Fort d'Estrées and Cape Matifou offered the greatest resistance and had to be bombarded by naval vessels and aircraft. One U. S. troopship was torpedoed at sea but not sunk on the morning of the 7th, and though 800 of her combat troops put off to cover the 160 miles to Algiers, all of the landing craft had to be abandoned and the soldiers crammed into a British destroyer. On 9 November they landed at Algiers.

The ships assigned to Cape Matifou area began unloading at midnight 7-8 November and continued the process all day. At 1730 a group of Heinkel bombers and Ju-88 torpedo planes attacked. The USS *Leedstown* was torpedoed. Next afternoon another flight of German planes finished the *Leedstown*.

Although operations were hampered by rough weather and a majority of the landing craft were lost, landings were made in both projected areas. Sidi Ferruch airfield was occupied by American troops at 0300 and the Maison Blanche field fell at 0830 after an engagement with French light tanks. Blida airfield was occupied about noon. Meanwhile the troops had closed in on Algiers, but negotiations with Admiral Darlan, which had begun a few hours after the landings, re-

sulted in the surrender of the city at 1900. All of eastern Algeria was included in the surrender.

Shortly after the fall of Maison Blanche airfield, 19 Hurricanes and 35 Spitfires arrived from Gibraltar as advanced units of RAF Eastern Command. Operations were conducted on the 8th and 9th from a British carrier, though on the first day there was very little air activity because of the shortage of fuel. However, Servicing Commandos and RAF Regiment personnel began work at once on both the airdromes. On the 9th German bombers attacking Algiers were met by RAF fighters and at least 12 were shot down.

So ended the preliminary stages of the battle for Northwest Africa, a conflict that put an end to the fluctuating tides of victory and finished by flinging the enemy back across Mare Nostrum after the first serious setback at the hands of the Western Allies.

PART II

The Twelfth Air Force in the Tunisian Campaign

BEFORE the Northwest African invasion was fully decided upon, powerful arguments had been advanced for the inclusion of Tunisia in the initial landings. The planners, however, had had to consider four factors:

1. The small number of Allied troops available, which would be spread even thinner if Tunisia were included.
2. The necessity of maintaining a large holding force in Morocco lest the Axis strike through Spanish Morocco.
3. The possible hostility of the French military and naval establishments in Morocco.
4. The overwhelming air superiority of the Axis over the straits between the Tunisian coast and Sardinia and Sicily, which might make disastrous any Allied landing attempt.

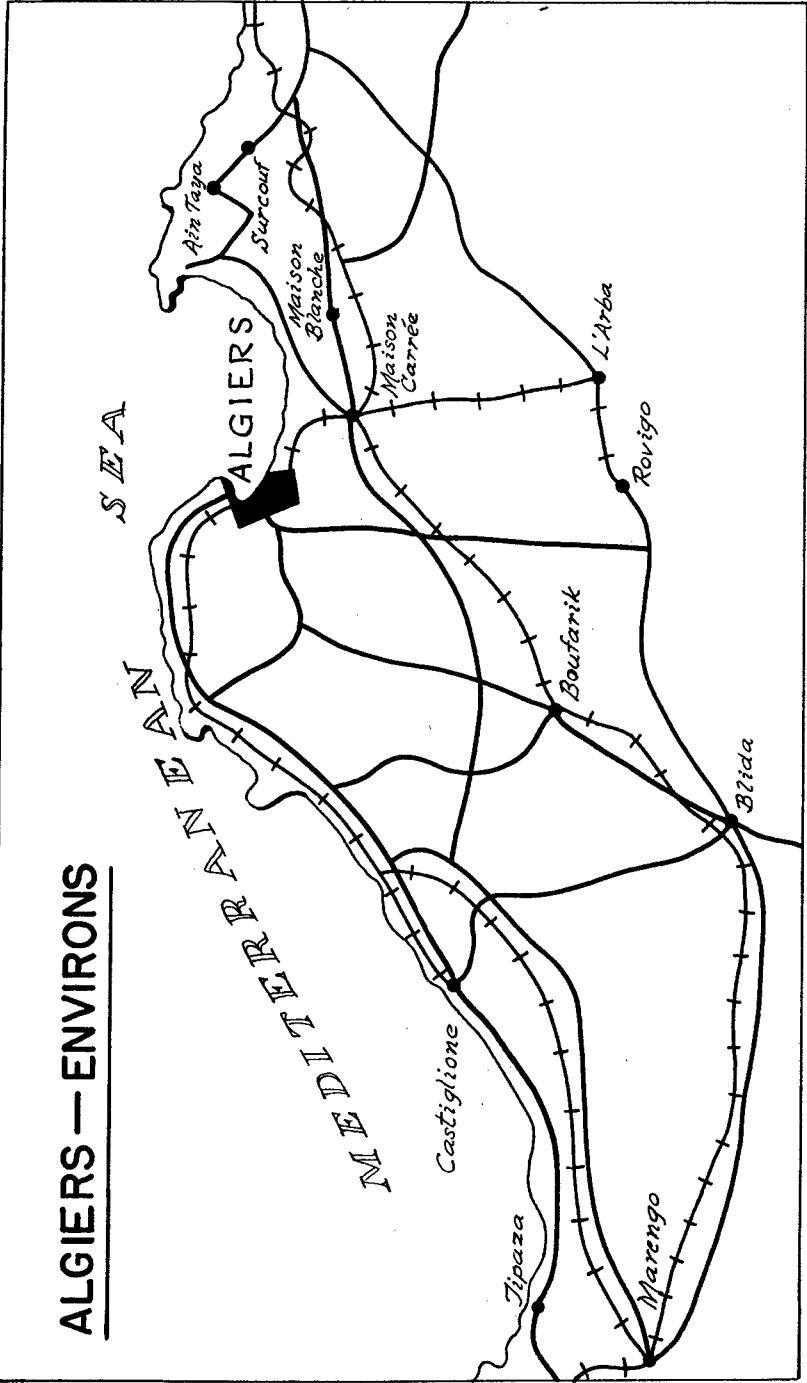
In the end it had been decided that it would be wiser to insure the firm control of Morocco and Algiers, a decision in which the enemy threat to Morocco had been the deciding factor. But it was planned that as soon as control of Algiers was gained light mobile elements would be pushed toward Tunis and Bizerte as rapidly as possible.

For a long time it will be debated whether the more audacious course would have been the wiser. Admiral Cunningham spoke for himself and an appreciable number of others when he said, "It is a matter of lasting regret to me that the bolder conception for initial assault in that area (Tunisia) was not implemented. Had we been prepared to throw even a small force into the eastward parts, the Axis would have been forestalled in their first token occupation and success would have been complete. They were surprised and off their balance. We failed to give the final push which tipped the scales."

The task of getting control of Tunisia was complicated by many difficulties:

1. *Terrain.*—The country between Algiers and Tunis was extremely rugged, with high mountains and narrow valleys which were prohibitive to armored action.
2. *Transportation.*—The roads were few, and few of these were hard-surfaced. Three railroads led from Constantine into Tunisia, but one of these was broken by a 20-mile gap through mountainous terrain which had to be negotiated by motor vehicles. Moreover, all the railways were in disrepair and rolling stock was scarce and unreliable. The Allies did not possess, nor could they obtain at once, the motor transport necessary to rush even the few available combat units and their necessary supplies to the region of prospective action near Tunis and Bizerte.
3. *Air cooperation.*—There were no hard-surfaced airfields in the intermediate area; moreover, most of the available fighters were short-range and quite unable to cover effectively the advance spearheads as they approached Tunis and Bizerte.
4. *Weather.*—Northern Tunisia is a region of heavy winter rains, which usually begin in late November and continue through February. If the advance failed to seize Tunis and Bizerte before the rains began, it was inevitable that roads and air-

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fields would be reduced to quagmires, and transportation and air cover would be greatly hampered if not actually interdicted.

Nevertheless an all-out effort was made to improve such opportunities as existed and to reach the objective before the rains began. The plan adopted was threefold:

1. Naval units and landing forces were to be sent eastward to capture the ports and airfields in the vicinities of Bougie, Djidjelli, Philippeville, Bone, and La Calle.
2. Paratroops were to drop on the airfields at Bone, Souk-el-Arba, and Youks-les-Bains.
3. Infantry and armored units were to be rushed by road and rail to points as far within Tunisia as possible. For this effort there were initially available the equivalent of one infantry division and one tank regiment, both under strength.

Because the French in Tunis did not oppose the enemy landings, which began the day after the Allied invasions, by 18 November 1942 the Germans were moving out of Tunis to establish a front against the advancing British. Every passing day saw new Axis aviation units established on the airdromes and new ground forces landing from ships, transport aircraft, and gliders, and spreading across the western hills. In November alone it was said that more than 1,200 Ju-52 landings were made at Bizerte. By the end of November, the moment of crisis, Axis troops of all categories numbered about 20,000 well-equipped men. Not only did the enemy have the advantage of being within 100 miles of his Sicilian bases, across a strip of water which he rigidly controlled, but the airdromes in eastern Tunisia were suitable for all-weather use, an incalculable advantage during the ensuing rainy season.

Operating from Algiers, the British seized control of all the ports and airfields along the coast as far as La Calle, landing troops from the sea under cover of naval guns and the Fleet Air Arm, and bringing in fighter squadrons at the earliest possible moment. These movements were accomplished under difficulties, as Axis planes, probably based on Sardinia, attacked at all times of the day and night. One of the first assaults was upon Bougie, where three U. S. combat loaders were sunk; a British carrier was slightly damaged, but its aircraft brought down 11 enemy planes for the loss of three.

Paratroop Activities

Paratroop drops played an important role in the eastward advance. The U. S. 64th Troop Carrier Group, which had flown from the United Kingdom via Gibraltar with British paratroops, landed 34 planes at Maison Blanche on 11 November 1942. Immediately upon landing, the aircraft were refueled and the troops reorganized, in view of plans for early action. At 0600 on 12 November, 26 C-47's took off loaded with paratroops for the invasion of Bone. The operation was completely successful, and all planes returned at 1030. The escort of 12 British fighters brought down one Ju-88.

However, Axis bombardment of Bone was so heavy that it became necessary to abandon the place or dispatch anti-aircraft guns. At 1200 on the 13th five C-47's, escorted by P-38's, were sent with guns and ammunition to tide the garrison over until more could arrive by water. At 1500 five more C-47's departed for Bone, loaded with gasoline for fighting planes and escorted by five P-38's. The arrival was after dark; the transports landed and turned their lights on the runway to enable the Lightnings to land. It is believed that these two flights were a decisive factor in holding the port. A flight of three C-47's took additional gasoline the next day.

On 15 November a mission left to drop a parachute invasion of Souk-el-Arba, but weather forced the mission to return. The next day 32 C-47's, escorted by 12 P-38's, successfully completed the mission without loss.

Youks-les-Bains was taken on 15 November 1942. On this mission 20 aircraft of the 60th Troop Carrier Group departed from Maison Blanche at 0730 and dropped 350 paratroops of the 2d Battalion, 503d Parachute Infantry, at Youks at 0945 from an altitude of 400 feet or less in record time. The flight went by way of Djidjelli, being escorted to that point by six fighters and from there to Youks and back to Maison Blanche by 12 fighters. The drop was made without either air or ground opposition. A medium force of German infantry was reported within 20 miles of Youks. The mission of the parachutists was to deny to the Germans the use of the zone over which they were dropped. Despite the unfavorable route weather, which caused the flight as well as the escort to resort to instrument flying, the formation

reached the drop zone successfully. Two enemy planes were sighted over the drop zone but they failed to attack. "The Youks jump," said Colonel Raff, "was the most successful jump I've ever made. The landing pattern over the target was perfect and well timed."

On 29 November 1942 a large-scale attack was made on three vital airdromes at Depienne, Pont-du-Fahs, and Oudena, all lying in a triangle about 15 miles southwest of Tunis. Of the 45 transports used, 26 were furnished by the 62d Troop Carrier Group and 18 by the 64th. The planes carried about 530 British paratroops. The last transport took off at 1230, followed by four Hurricanes and eight P-38's; at Le Kef 14 Spitfires joined the defense. The transports moved at about 130 m. p. h. and in spite of a rather stiff wind and a ragged formation they arrived at each scheduled point at the exact time planned. Upon arrival at the target the planes dumped their loads. All parachutists bailed out except two, who failed because of static cable trouble, but both soldiers asked the pilot to fly over the drop zone again so they could jump. All ships returned safely. Although they had penetrated into very hot enemy territory, they had met no opposition.

Allied Air Activity, November and December

All airdromes along the Tunisian border were quickly taken over and strengthened to provide bases for air cover over the advancing First Army. By this time the autumn rains had set in, and airfields were so muddy that aircraft, particularly bombers, were often immobilized. Mats and tracks were laid as rapidly as they could be procured, but transportation, both rail and motor, was so strained in carrying necessary supplies, ordnance, and personnel that the process was very slow. In this emergency troop carriers were used to haul freight and personnel, with or without escort, almost to the front lines, and they continued flying under conditions that ordinarily would have been considered prohibitive. Communications facilities were also very inadequate during those early days.

November and December were feverish months for the U. S. and British air forces. Patrols were flown over Allied-controlled Mediterranean ports, and there were frequent clashes with the enemy. At least 32 Axis raiders were shot down by night fighters alone. Tactical

reconnaissance, fighter sweeps, and air cooperation with ground troops were daily tasks when weather permitted. Furnishing escort for C-47's carrying precious supplies was a constant problem. During the period, 170 enemy aircraft were reported brought down by RAF day and night fighters, with 41 probably destroyed. The USAAF as a whole, fighters and bombers, accounted for 109 enemy aircraft destroyed and 26 probables, at a cost of 70.

Bombers of all classes lost no opportunity to harass the enemy. The only RAF bombers to arrive before the end of December were four squadrons of Bisleys, and from 14 November they made regular attacks on the airdromes and docks of Tunis and Bizerte; operations were at first from Blida and then from Canrobert and Souk-el-Arba. Bisleys flew a total of 442 sorties during November and December and dropped almost 157 British tons of bombs. Fourteen Bisleys were missing from operational and 13 from other causes. During the same time Malta-based aircraft dropped 644 British tons of bombs on Tunisian targets. Even by the end of December the Twelfth Air Force had only two groups of Flying Fortresses, three medium bomber groups, and a few A-20's in the forward area. However, from the middle of November they were busily bombing Tunisian objectives whenever weather allowed; 78 missions were flown by Twelfth Air Force bombers and 1,300 long tons of bombs were dropped.

On the night of 20 November about 30 Axis planes, presumably from Sardinia, came in shortly after dark and bombed the airfield at Maison Blanche for two hours. One B-17, two P-38's, six Beaufighters, and four photo reconnaissance Spitfires were reported destroyed and other planes were damaged. The enemy dropped demolition bombs, delayed-action bombs, booby traps in the form of common objects such as purses and fountain pens, and caltrop-like objects intended to puncture tires. Defense from the field was almost nil, but two enemy planes were reported shot down at sea by naval craft. On the night of the 21st a similar attack on the same objective was stated to have damaged 16 aircraft.

Our heavy loss was attributed to the lack of radio control and to the fact that night fighters had no A. I. equipment. By 25 November these lacks had been remedied, with the result that during the next few days more than one-third of the enemy aircraft entering the Algiers area were destroyed. Originally, Axis bombers made straight high-

level approaches in small formations at five-minute intervals. This plan proving vulnerable, simple evasion tactics were employed, and attacks were made at irregular intervals, at lower altitudes, and from unexpected directions. These also proved easy to counteract, and presumably the drop in enemy pilot morale forced the Germans to adopt more complicated tactics.

The Allied ground movement eastward was undertaken by understrength armor and infantry with even less adequate motor transportation. Nevertheless, by the 15th Tabarka had been occupied and by the 18th the British paratroops who had been dropped in Souk-el-Arba had come into contact with the Germans. About the same time, U. S. paratroops dropped at Youks-les-Bains, occupied Gafsa airfield, and came up against Italian patrols. By this time the Tunisian French forces under General Barré had come over to the United Nations' cause, and they aided in forming a screen between the Germans and the gathering British and American troops.

During the last days of the month a gallant Allied advance was made on Mateur, Tebourba, and Medjez-el-Bab. On the 28th Djedeida was reached, only 12 miles from Tunis, but there the surge was stopped. The rains had set in and mud had bogged down armor and supply trains, but of equal importance was the fact that the ground forces had emerged beyond effective range of their fighter cover. The forward fields were too exposed to enemy action to be occupied as bases. Six Spitfires which attempted to land at Medjez-el-Bab were attacked by enemy planes; two Spitfires were shot down and the rest flew back to Souk-el-Arba. Even the rear airfields were often unserviceable from the heavy rains, and German bombings aggravated the supply problem. From these rear area fields Spitfires could fly over the lines only five or ten minutes, and the few P-38's at hand were insufficient to furnish continuous patrols. The result was that German aircraft simply fled when Allied fighters appeared, then returned in half an hour to complete their work. So close were the Ju-87's to the front, and so efficient was German air-ground liaison, that air cooperation was furnished within five or ten minutes of receipt of the request.

Tunis and Bizerte were still in Axis hands and were to remain there until the next May. The effort had not, however, been entirely fruitless. Allied forces were established in the line of mountains facing

the northern Tunisian plain, and could issue forth in the spring to finish their task. The French had come over to the Allied side and, though under-armed and under-supplied, were grimly holding a segment of the line. Also, we held a line of advanced airfields, which, though often useless because of mud, would afford good bases with the cessation of the rains and with the acquisition of long-range fighters. Meanwhile the Allies devoted themselves diligently to the task of overcoming transportation difficulties and building up troops and supplies for the coming conflict.

The Tunisian Winter Campaign

From the time of the tragic and expensive withdrawal from Djedeida, "General Mud" continued to operate against us, while the Axis went on building up strength. While the Luftwaffe in Tunisia was probably no stronger than our own forces, its bombers could operate from the comparative safety of Sardinia and Sicily and its fighters were favored with all-weather fields and a short supply line.

The First Army's race to Tunis had been lost in large part because of the unseasonable rains which turned the fields into morasses, and because there were not enough long-range fighters to cover the advance when flying from Allied fields on the Algerian-Tunisian border. The winter that followed was one of the worst on record; it was said, quite understandably, that this was the first major military campaign undertaken there at this time of year since the Punic Wars. The season had gone well into March before any extensive general ground movement could be undertaken in the north, though the Eighth Army, advancing over the sands of Tripolitania, was able to drive Rommel before it and across the Tunisian border. During this time the supply and airfield situation remained discouraging in Tunisia, although there were many improvements on the fields in Algeria and Morocco.

On 11 December 1942 the area eastward from the Algerian-Tunisian border was assigned to the advanced echelon of the XII Fighter Command with headquarters at Tebessa. From Bougie to the border of Tunisia was the territory of XII Bomber Command. West of it to Cape Tenes was the Central Algerian Composite Wing, which never really operated; from Cape Tenes to Oujda and the border of Spanish Morocco was the Western Algerian Composite Wing under the rear

echelon of XII Fighter Command; the Moroccan Composite Wing operated in Morocco. All wings were activated 26 January 1943.

XII Fighter Command's advanced echelon moved back to La Senia 12 January 1943, and presently took over control of the 1st, 2d, and 3d Air Defense Wings. The 2d covered Morocco; the 1st covered the Oran sector, extending from the border of Spanish Morocco to Cape Tenes; and the 3d covered the Algiers region, extending from Cape Tenes to Bougie. XII Bomber Command retained the territory from Bougie eastward.

In order to facilitate XII Fighter Command's work, certain signal air warning battalions and fighter control squadrons were assigned to it. The mission of XII Fighter Command was to provide:

1. Area air raid warning.
2. Fighter escort for seaborne and airborne craft.
3. Patrols and sweeps.
4. Harbor protection.
5. Homing of lost planes.
6. Air-sea rescue.

On 15 February 1943 the Fighter Command and the defense wings were taken into the Coastal Air Force. In August the 1st, 2d, and 3d Air Defense Wings became respectively the 62d, 63d, and 64th Fighter Wings, and the last-named was transferred to XII Air Support Command.

The RAF General Reconnaissance Wing, organized chiefly to protect shipping, began operations from Tafaraoui on 11 November and later moved to Blida. During November and December 572 sorties were flown, of which 280 were sea sweeps and 261 convoy escorts. Twenty-seven submarines were attacked. The work of this coastal command, though often unspectacular and even dreary, was of primary importance in bringing convoys safely into port and enabling supply organizations to rush essential materials to the front. In February the assignment was taken over by the newly organized Coastal Air Force.

The Allied Air Force was activated 5 January 1943 and included all USAAF, FAF, and RAF units in Northwest Africa. General Spaatz was designated commander. The Allied Air Support Command was established under the AAF on 22 January, composed of XII Air

Support Command, RAF 242 Group, Photo Reconnaissance, and other units as assigned. Six weeks after its formation the Allied Air Force, as a result of the Casablanca Conference, was inactivated and replaced by the Northwest African Air Forces.

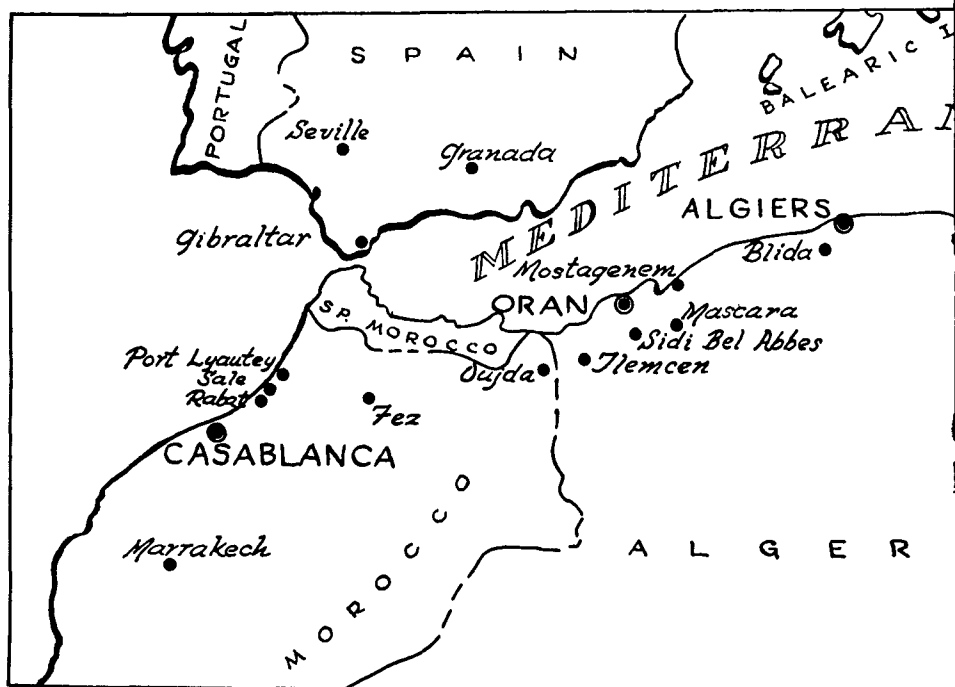
New combat units, both RAF and USAAF, continued to arrive and were fanned out as close to the front as was operationally possible. The day fighter elements of Eastern Air Command were organized in 242 Group, and this was brought up to Souk-el-Arba, as air cooperation with the First Army in northern Tunisia. As the danger from Spain decreased and the Tunisian emergency became more apparent, U. S. II Corps in southern Tunisia received additional air cooperation. XII Fighter Command and some of its elements were withdrawn for coastal work farther east, and XII Air Support Command was brought up and based mainly at Youks-les-Bains and Thelepte airfields. Meanwhile the B-17's were grouped near Biskra and the medium bombers near Constantine.

Twelfth Air Force Status Report as of 2 January 1943 placed the figures for that organization at 755 aircraft assigned and 520 operational. On the 5th, the *RAF Middle East Review* gave 251 as the number of aircraft of the RAF in this theater. One must also take into account, in estimating Allied air strength, the squadrons in Malta and the Western Desert and Ninth Air Forces.

Allied ground forces consisted of the British First Army north of Pont du Fahs, and of four French divisions and the U. S. II Corps south of that point.

Notwithstanding Allied bombing efforts, which got well under way in December, von Arnim, the German commander in Tunisia, succeeded in amassing respectable forces and supplies. On 1 January it was estimated that he commanded 30,000 Germans and about 15,000 Italians, together with 140 serviceable German tanks and 60 Italian. His bomber strength was based mostly in Sardinia, Sicily, and southern Italy, and his fighters principally in Tunisia. It was estimated that there were about 610 aircraft, 225 of them Ju-88 bombers, and 150 Me-109 and FW-190 fighters; 55 to 60 percent were supposed serviceable. There were approximately 560 Italian aircraft, 50 percent of them fighters, of which half were thought serviceable.

Von Arnim's Germans were chiefly in the north opposite the First

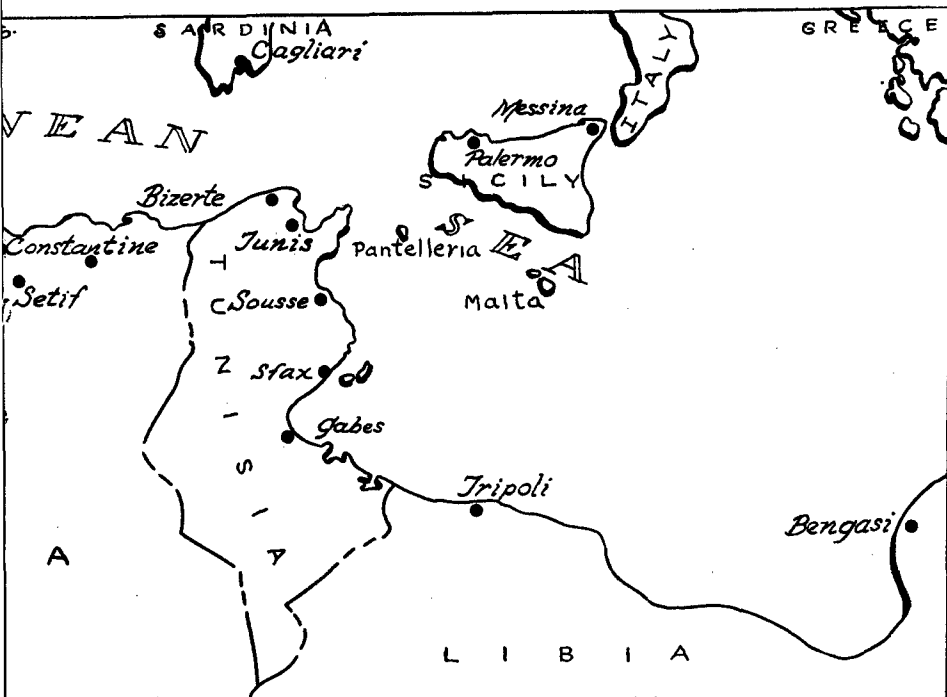


Army, while Italians held the center and south. A little later, however, Rommel reinforced the south with his 21st Armored Division plus Italian infantry.

The Strategic Situation

The Axis held the Tunisian coastal plain, while the Allies occupied the fringe of mountains to the west. To secure his position von Arnim needed:

1. To entrench himself against British pressure in the rough country around Mateur.
2. To take Medjez-el-Bab, the key to the great valley which led to Tunis.
3. To capture the range between Pont-du-Fahs and Pichon, then held by the French, which threatened the plain at its narrowest point opposite Enfidaville and Sousse.
4. To drive the Americans from Sbeitla and Gafsa, where we stood poised for a drive on the Gabs-Sfax-Sousse road so vital



to the communications of Rommel, who was retreating northwestward from Tripolitania.

The last two weeks of 1942 saw a lull in ground activity while both sides strove to build up the level of their supplies. Flying weather was bad and airfields were bogged down by rains, yet our bombers sought to hamper enemy communications by strikes on ports and depots.

From 1 December repeated bombing attacks had been made on El Aouina airdrome by B-17's, A-20's, and Bisleys. On the 1st, six A-20's and 13 B-17's were followed at dawn by six Bisleys and nine more A-20's. The hangars were damaged and about 30 out of 60 parked aircraft were destroyed. Later that day 15 more parked aircraft were destroyed by 12 B-26's. December also saw attacks on Sidi Ahmed airdrome at Bizerte by B-17's, Bisleys, and P-38's. In addition, there were attacks on Mateur, and on Sidi Tabet, west of El Aouina.

Fifteen Fortresses began the day attacks on the port of Tunis on 6 December. Other raids occurred on the 13th, 14th, and 15th, respectively, by 17 B-17's, 15 B-17's, and 17 B-24's from the Ninth Air

Force. On the night of 15 December, 27 Malta-based Wellingtons set at least 20 fires which were burning briskly the next day when more bombers came over. Tunis remained a favorite target throughout December, by day and night.

The port of Bizerte also received attention. Fortresses and Marauders of the Twelfth and Liberators of the Ninth took turns by day, and toward the end of December the new Wellingtons of the Eastern Air Command flew over at night in their maiden operation. There were many hits on docks, warehouses, and ships, and many fires were started.

Northwest African aircraft cooperated with Western Desert, Ninth, and Malta-based in bombing Sousse and Sfax, Rommel's supply warehouses. On the 19th, 11 U. S. mediums bombed the Sousse marshalling yards and hit the station and a freight train. The same evening light bombers struck the Sfax marshalling yard. On the 27th Sousse was attacked in turn by aircraft from Algeria, Egypt, Malta, and Egypt again. Fighter-bombers and bombers struck heavily at enemy transport at Massicault, and on the roads around Tunis and Kairouan, and destroyed upwards of 100 vehicles.

Tactical Air Attacks in Early January 1943

It was apparent that von Arnim had scheduled one or more moves for the near future, and Allied fighters and light and medium bombers ranged the length of the front, searching for targets whenever weather permitted. Enemy convoys in the north were small or well concealed; hence not much damage was done to these, though keeping a sharp lookout resulted in some bombing and strafing. Efforts in the south were better rewarded. Tank parks and camps were attacked near Gabes, where the enemy was building up his forces.

The Twelfth Air Force mediums and heavies attacked the marshalling yard at Kairouan with some success on 4 and 6 January. Two railway bridges were destroyed near Graiba, the marshalling yard at Gafsa was attacked, and other bridges were bombed north of Gabes and at La Hencha. While annoying, such operations probably did not seriously hamper enemy preparations.

Von Arnim's January push in central Tunisia, treated in greater

detail later, necessitated an intensification of bomber effort against his ports of entry at Tunis and Bizerte. The new Wellingtons of Eastern Air Command made this possible. Their principal target was Bizerte, which they bombed on 16 nights in about 150 sorties; weather allowing, they doubtless would have attacked oftener. They dropped bombs ranging in size from 250- to 4,000-pounders in addition to liberal unloadings of incendiaries. On several nights the fires they set were visible for 40 miles. B-17's also flew 100 effective sorties over Bizerte and Ferryville and pounded the ships in the harbors. These missions were notable for the numbers of enemy fighters brought down by the B-17's and their escorting P-38's. At times as many as 50 fighters rose to oppose the January assaults and, though they lost heavily, they took a toll in bombers which we could ill afford.

The Fortresses made three more attacks on Tunis and the B-26's made one. Several attempted raids on this port were abortive because of weather. Attention was also given to the industrial section of Tunis and to the marshalling yards, power plant, and near-by camps. On 2 January the B-17's and escort claimed 17 enemy fighters destroyed, with 10 probables.

Sousse and Sfax each sustained three attacks. The latter was visited by a total of 64 B-17's, 18 B-25's, and 15 B-26's, all escorted. The heaviest concentration was on the 28th, when six enemy fighters were shot down for a loss of one B-26 and one P-38.

The favors extended by the Ninth and Western Desert Air Forces were returned when Northwest African heavies and mediums bombed Castel Benito airfield, south of Tripoli, on 9, 12, and 18 January. Twenty-five escorted B-17's and five B-26's took part in these missions, in which numerous fires were set among buildings and at least 20 parked aircraft were destroyed. Twenty enemy fighters were claimed shot down; one Fortress and one Lightning were lost.

Even before the fall of Tripoli on 23 January, Liberators of the Ninth Air Force supported by RAF elements began to soften up Tunisia both in preparation for invasion and to harass German supply lines to Tripoli which now ran through Tunisian ports. Tunis, Bizerte, Sousse, Sfax, and Gabes all suffered heavily during January. To the efforts of the Ninth were added those of the Twelfth, and the British Navy and RAF united in attacking ships at sea. It was calculated that because of Northwest African and Middle East bombings the month

of January saw a great reduction in enemy supplies landed; *RAF Middle East Review* (No. 2, p. 13) estimates deliveries as follows:

<i>Port</i>	<i>Normal daily discharge (Tons)</i>	<i>January average daily discharge (Tons)</i>
Tunis.....	2,400	700
Bizerte.....	1,800	1,000
Sousse.....	1,500	300
Sfax.....	1,500	200
Gables.....	300	-

In addition to these activities, Ninth Air Force heavy bombers struck at Naples and Palermo.

NAAF Bombing of Tunisia in February and March 1943

On 3 February 15 B-26's with P-38 escort attacked the main airfield at Gabes, but dust prevented observation of results. Enemy fighters offered stiff resistance, but lost at least three and probably more aircraft in a 40-minute fight. On the 4th, 18 B-17's escorted by P-38's again attacked and set half a dozen fires; at least nine Axis fighters were downed. The same day, 24 B-17's bombed another Gabes airfield, and 16 enemy fighters were claimed destroyed by bombers and escort. One Fortress and four P-38's failed to return. Other attacks followed on the 8th by 33 mediums which hit the target area heavily.

Highly effective missions against El Aouina were flown by *Marauders* on 13 and 14 February. Hits were scored among the buildings and parked aircraft, and bombers and escort shot down at least nine Me-109's and probably four more. Other attacks were made on 3 and 10 March by B-17's and similar successes were registered; transport Ju-52's at La Marsa were also bombed on the 10th. At least six Axis fighters were destroyed in these engagements. Strikes were also delivered against Sfax-el-Maouh on 2 February and by Fortresses and mediums against Kairouan airfield on the 9th, 15th, and 24th. A B-25 was lost against a bag of seven enemy fighters.

The bombing of Gabes and northern Tunisian airfields continued in March, but priority was now given to ports. The *Wellingtons* devoted themselves primarily to Bizerte, and on the 25th 32 B-17's

dropped their load there, hitting the docks and scoring near misses on the ships in the harbor. A B-17 attack on the Tunis docks on the 1st scored many hits, and the bombers and their escort shot down nine fighters while losing one B-17. The next day the attack was repeated with more hits by 36 B-17's on both Tunis and La Goulette. Wellingtons added their bombs on the night of 12-13 March and started many fires on the docks, marshalling yards, and the city buildings of Tunis.

Sousse was visited by 42 B-17's on 8 February and suffered considerable damage to buildings, jetties, and ships. On 12 March 38 B-17's set fires in the dock area and scored hits on the marshalling yards and near the powerhouse and loading piers.

During December 1942, attacks on Naples by Ninth Air Force and RAF B-24's had been frequent. January saw but one such mission because of adverse weather. On the 11th Naples was bombed by eight USAAF B-24's which dropped 40 1,000-pound bombs; clouds obscured the results, but one fire was seen to break out in the town. Two B-24's were lost. Palermo and Messina each suffered 22 effective sorties during January, though these were usually alternative targets to Naples.

In the face of much bad February weather, all possible blows were delivered on Palermo and Messina, the former attacked by RAF night bombers and the latter by USAAF B-24's. During February, the Ninth Air Force renewed its attacks on Naples and in one raid sank two ships. Forty-eight sorties were flown over Naples and 116 tons of bombs were dropped. In March the RAF joined the B-24's in pummeling Naples, and together they caused considerable damage to port installations and shipping. Meanwhile Malta- and Northwest Africa-based bombers were strewing havoc among supply ships out of Naples. The enemy then took to sending ships out of Palermo and other Sicilian ports to make the run to Tunis and Bizerte under cover of night. Malta-based aircraft seriously took up the work of destroying Sicilian communications, particularly those at Messina, and were soon joined by the bombers based in the Middle East.

Meanwhile the Northwest African Air Forces was sending its bombers against Sardinian and Sicilian targets. Wellington opened the attack on Elmas airdrome on the night of 1 February, causing fires and explosions. On the 7th, 32 B-17's and 19 B-26's bombed Elmas and the Cagliari seaplane base. High explosive and fragmentation

bombs were dropped, fires started, and parked aircraft destroyed. That night 16 Wellingtons briefed for Villacidro bombed that target, Decimomannu, and Elmas; clouds forced their scattering. Nine days of bad weather intervened, but on the 18th heavies and mediums again bombed the same three points. Bad visibility prevented accurate observation of results. Cagliari docks and railways were bombed by 19 B-17's on 26 February, and again on the 28th by 46 B-17's. Docks and anchored ships suffered extensively. Trapani was visited by Wellingtons repeatedly. Palermo also received several bombings, one on 15 February by 19 B-17's and the worst on 1 March by 38 B-17's. Docks, drydocks, and shipbuilding yards were hit by 2,000-pounders, and five vessels were set on fire.

NAAF Shipping Strikes, January-March 1943

During the January-March period numerous shipping strikes were made by NAAF heavies and mediums. On 20 January six B-25's escorted by P-38's struck a tanker between Sicily and Tunisia and saw it explode and settle in the water. On the 22d, six B-26's left a freighter listing; the next day B-26's made an attack on a convoy and saw one ship explode and another capsize, and left one listing. On the 29th direct hits were scored by B-25's on a freighter and another was set on fire.

There were few sightings during the first three weeks of February because of adverse weather conditions, but on the 10th near Cape Bon B-25's sank two Siebel ferries. From 21 February to 19 March successes were frequent. Twenty vessels were sunk, 15 severely damaged, and 11 damaged.

The central sector along the mountain ridge between Pont-du-Fahs and Faïd was held by three divisions of French troops, who were poorly armed for fighting even in that mountainous region where tanks could not maneuver. Moreover, there was some disaffection and desertions were frequent. General Giraud was not disposed to leave much to the discretion of Generals Barré and Juin, who commanded in the field. General Eisenhower proposed to give to General Anderson the responsibility of meeting the anticipated Axis thrust, but the French refused to serve under his command. General Eisenhower was therefore forced to assume command, with headquarters



Official Photo USAAF

FORMER SEAPLANE BASE. The seaplane base at La Goulette harbor, Tunisia, while enemy-held, was made unserviceable by accurate Allied aerial bombings.

at Constantine. Meanwhile an organization was set up to supervise rearming of the French, evidently a task requiring many months, and a USAAF fighter squadron's P-40's were given to a group of selected French pilots known as the Lafayette Escadrille.

The first preliminary German move was made on 2 January, when the French were pushed out of Fondouk, west of Kairouan. Air operations in the mountainous terrain were difficult, and smoke signals served only to disclose our ground positions to the enemy.

On 18 January the expected Axis attack began when armor-supported columns moved out of Pont-du-Fahs to seize the coastal range to the south. The French were thrown back along the Oued-el-Kebir, and the attackers streamed through the gap and turned southward into the Ousseltia Valley toward Pichon. British and American units were rushed in from north and south and the drive was stopped within a week by strong counterattacks, but the enemy retained most of the area he had captured. Allied air cooperation had come largely from the RAF airfields around Souk-el-Arba; it had played an important part in blocking the drive.

The Germans were now in control of the northern half of the Ousseltia Valley. Since it was evident that the French did not possess the equipment to withstand a determined Axis push, certain French units were withdrawn to be re-equipped and British and American substitutes were rushed in as rapidly as transportation difficulties could be mastered. Mobile British units were stationed in the south, and none too soon, for on the 30th a German thrust at the weak southern flank of the French captured Faïd, and its progress was stopped only by American counterblows and by diversionary attacks out of Gafsa toward Maknassy. These diversions only partly accomplished their mission, and the participating troops were forced to withdraw to Gafsa. In the short space of two weeks the Germans had seriously weakened the Allied center and had insulated their communications between Sousse and Tunis from ground attacks. Moreover, Rommel was now crossing the border from Tripolitania, and a captured dispatch disclosed his intention of striking toward Gafsa and Thelepte. One gain was that in the midst of the crisis the French had at last agreed to serve under General Anderson.

It was during the Ousseltia drive that American fighters began to put ground-to-air communication into use. Faulty equipment and

inexperience hampered its practical working, but its development in subsequent months made it in Italy the most important factor in the speed and accuracy with which our fighters and fighter-bombers responded to calls for cooperation.

After the fall of Tripoli Rommel retreated hastily to Tunisia and toward the Mareth Line, meanwhile striving to retard his pursuers by bombing their ports of entry, by fighting rear-guard actions, and by mining roads. By 6 February all of Rommel's forces were in Tunisia and he had joined with von Arnim. Rommel now depended to a large extent for supplies upon small coastal craft, and RAF fighter-bombers, in spite of bad weather, found good hunting among them. Meanwhile, however, the ground pursuit was hampered by heavy rains which turned salt flats into bogs, across which causeways had to be built. RAF aircraft took advantage of breaks in the weather to harry the road transport of the retreating enemy.

The weakening of the German rear guard enabled the Eighth Army to occupy Medinine on 20 February, and an armored action which followed forced Rommel to withdraw completely to the Mareth Line the next day. Air activity during the last days was almost nil, due to bad weather. Within a few days, however, the attacks on coastal shipping were renewed with such success that Rommel had to place his chief reliance for supplies upon overland transport from Tunis, a distance of about 300 miles. The delay necessary for the Eighth Army to consolidate for the attack enabled the Desert Fox to divert some of his attention to the American threat to his rear and to dig more deeply along the Mareth Line.

The Mareth Line was really a defensive zone of fortifications in depth which extended for some 60 miles inland from the Gulf of Gabes. The coastal flank was unsuitable for amphibious operations and the right flank extended into rough country. Basically the defenses were remodelings of the old French fortifications, which had been partially destroyed in conformity with the stipulations of the armistice of 1940. Antitank ditches were dug, concrete tank obstacles emplaced, and mine fields sown. It was significant, however, that Rommel did not use the old casements extensively, but preferred to preserve the mobility of his artillery by posting it at points between.

Preliminary Air Actions Near the Mareth Line

The Western Desert Air Force lost no time in attempting to neutralize Rommel's air defense by sending out night bombers against his landing fields and following them with morning attacks by fighter-bombers. Axis fighters put up a stiff resistance but in one day at least seven of them were shot down. In the end the enemy had to abandon several of his airfields and the RAF won air superiority but not complete control.

On the night of 23-24 February air attacks were begun on the Mareth Line itself and upon road transport. Rommel countered on 6 March with an air-covered armored thrust, but was thrown back by Montgomery's artillery and by fighter-bombers which defied the weather as well as the enemy. On the 10th a light blow against Fighting French units was attempted, but it was defeated by fighter-bomber attack. From 11 March USAAF and RAF aircraft subjected the Mareth Line to repeated bombing with considerable success.

There was a lull in the ground battle during the first half of February while both armies piled up supplies and reinforcements for the coming struggle. The RAF remained active with attacks on the Pont-du-Fahs-Enfidaville road and southward. XII Air Support Command gave its attention to the Faid area, attacking with some success Rommel's gathering transport and armor. Bridges and guns north of Maknassy were bombed, but the usual bad weather limited operations.

General Montgomery's pause in Tripolitania to clear Tripoli harbor and to build up his supplies gave Rommel the leisure to put into practice his plan for a thrust toward Thelepte. For this movement he had at his disposal the 21st Armored Division and about half of the 10th. On 14 February he moved his armor in two columns, one out of Faid toward Sbeitla, and one out of Maknassy toward Gafsa. The first, of 80-100 tanks, reached a point within 15 miles of Sbeitla by nightfall despite the opposition of American armored units. At the same time another force of about 30 tanks cut in south of Sbeitla, and in addition small tank units were operating over the area as far south as Sened. That night the Americans withdrew toward Feriana. Next day the Americans thrust toward Sidi-bou-Zid, near Faid, but after a day of

fighting were pushed back again in spite of furious strafing and bombing cooperation furnished by XII Air Support Command. The infantry had to abandon much of its transport. The 168th Infantry Regiment, completely isolated, was finally forced to surrender. The U. S. armored force had suffered heavily, losing 98 medium tanks, 57 half-tracks, and 29 guns.

On the 17th Rommel's 21st Armored Division occupied Sbeitla and went on to seize Kasserine; at the same time his southern column entered Feriana and Thelepte, forcing the hasty abandonment of the airfields. Strong cooperation by AAF and RAF elements was provided, and they reported some success against enemy tanks, vehicles, and fighters. On the 18th weather prevented bombing missions, but fighters ranged along the German lines, strafing troops and encampments.

Rommel struck on 19 February at the Americans near Kasserine and Sbeitla. The latter point held, but the Kasserine Pass was forced on the 20th and Rommel poised for an attack on the U. S. supply areas between Thala and Tebessa, with a possibility of pushing toward Constantine, Philippeville, and Bone, thus cutting off the Allies' main communication with Tunisia. His movements had been aided on the 19th and 20th by weather conditions which had made it all but impossible for Allied aircraft to operate, and the pilots of the few sorties flown were unable to assess the damage they caused.

On 21 February Rommel debouched from Kasserine Pass and sent a column of 20 tanks north toward Thala and another of 40 tanks toward Tebessa. The first column was met and stopped about 10 miles in front of Thala by the British 6th Armored Division; the other spearhead was halted by the American 1st Armored Division. The battle continued on the 22d; again the Germans failed to break through. That night they began the retreat to Kasserine.

The withdrawal on 14 and 15 February from the Thelepte airfields had jumbled up communications, so that for a few days some of the XII Air Support Command units in the area were almost on their own. The units moved out of Thelepte and occupied airfields at Youks-les-Bains, Tebessa, Le Kouif, and Kalaat Djerda. Although the withdrawal occurred at night, most of the organizational equipment was saved, but 50,000 gallons of gasoline and a number of disabled aircraft were burned. The 31st, 52d, and 81st Fighter Groups and the

47th (Light) Bombardment Group operated to the limit of endurance. Weather prevented adequate coordination of results of reconnaissance, and aircraft searched for their targets through the mist. The speed of the withdrawal to interior airfields did not stop operations, for upon returning from missions flown from old fields, our aircraft came down at the new fields for refueling, and took off from there.

Rommel's retreat was pressed closely by our armor and aircraft, and his ranks were shelled in the Kasserine Pass by Allied artillery and strafed by Allied planes. German elements left to hold the pass were dislodged and the Allies pushed on to the Kasserine plain. Patrols also advanced south from Sbiba, which had remained continuously in our hands.

The Allied advance was slowed by German demolitions and mine fields, which also enabled Rommel to avoid contact and take up a position on the general line Hadjeb-el-Aioun, Sidi-bou-Zid, and Gafsa. If the German commander had contemplated cutting through to Bone, or even to Le Kef, he had completely failed. If he intended merely to gain elbow room and to protect his lines of communication, the result was scarcely worth the price he paid. In any event he had to turn quickly to meet the threat from the south.

Air Victories and Losses, 8 November 1942- 18 February 1943

The following table, from NAAF *Air Intelligence Weekly Summary*, No. 29, does not include aircraft destroyed and damaged on the ground, but does include USAAF planes destroyed in the air or missing more than one week:

Organization	E/A destroyed	E/A probably destroyed	E/A damaged	Allied A/C lost and missing
Eastern Air Command	255	55	160	No report
Twelfth Air Force	384	127	166	184
Lafayette Escadrille	5	-----	-----	5
	644	182	326	189

The reorganization planned at the Casablanca Conference was implemented in February 1943. All Allied ground forces opposing Rommel and von Arnim were united into the 18th Army Group, commanded by Gen. Sir Harold R. L. G. Alexander, who set up his headquarters on 20 February at Constantine. Under him were the British First Army, commanded by General Anderson; the French XIX Corps, with General Juin in charge; the U. S. II Corps, headed by General Patton, and the British Eighth Army with General Montgomery as GOC.

On 18 February the Mediterranean Air Command, led by Air Chief Marshal Sir Arthur Tedder, and including all Allied air forces in the Mediterranean, was organized. The USAAF and RAF components facing Rommel and von Arnim were comprehended in the Northwest African Air Forces under General Spaatz. Under it were Coastal Air Command, headed by Air Marshal H. P. Lloyd and made up of XII Fighter Command and RAF elements; Strategic Air Force, commanded by General Doolittle and composed of XII Bomber Command and RAF night bombers; and Tactical Air force, in charge of Air Marshal Sir Arthur Coningham and including the RAF 242 Group and Western Desert Air Force (embracing USAAF elements), and XII Air Support Command. A Tactical Bomber Force was added on 20 March. Coastal Air Command, composed of general reconnaissance aircraft, bombers, and day and night fighters, was responsible for defense of ports and convoys, and for shipping sweeps and submarine patrols. Strategic Air Force, made up of bombers and long-range fighters, was intended to attack enemy bases and convoys. Tactical Air Force, comprising chiefly fighters and light bombers, was to supply close cooperation with the ground forces. General Eisenhower was in command of all Allied forces in the western Mediterranean, with General Alexander as deputy.

As of 27 February 1943, Coastal Air Force had 162 aircraft assigned. This total included Spitfires, Hurricanes, Beaufighters, Hudsons, Swordfish, and P-39's. Strategic Air Force had 426 B-17's, B-25's, B-26's, P-38's, P-40's, and Wellingtons. Under the Tactical Air Force, XII Air Support Command had 178 assigned aircraft, made up of Spitfires, P-39's, and A-20's; while Spitfires, Bisleys, and Hurribombers comprised 242 Group's 184 assigned planes.

The following paragraphs are taken from *Tactical Air Force Report on Tunisian Operations*:

One of the greatest problems confronting the Tunisian forces in February was the availability and serviceability of landing grounds. In the Northern sector the only suitable area was the valley running east from SOUK-EL-ARBA and SOUK-EL-KHEMIS, ideal for fine weather conditions with ample space for any number of landing grounds, but badly placed amongst high hills for the cloudy winter weather and with heavy soil which went unserviceable on the slightest hint of rain.

There was, however, no alternative, and three landing grounds with all-weather strips were used in this valley at the outset; unserviceability was high and greatly hindered a force operating against enemy air located in open country with reasonable runways. The Sommerfeld tracking was proving of very little value when laid on normal soil, but fortunately some sandy soil was found which provided a foundation and therefore gave reasonable certainty for operations except under heavy rainfall when pools gathered on the landing strip.

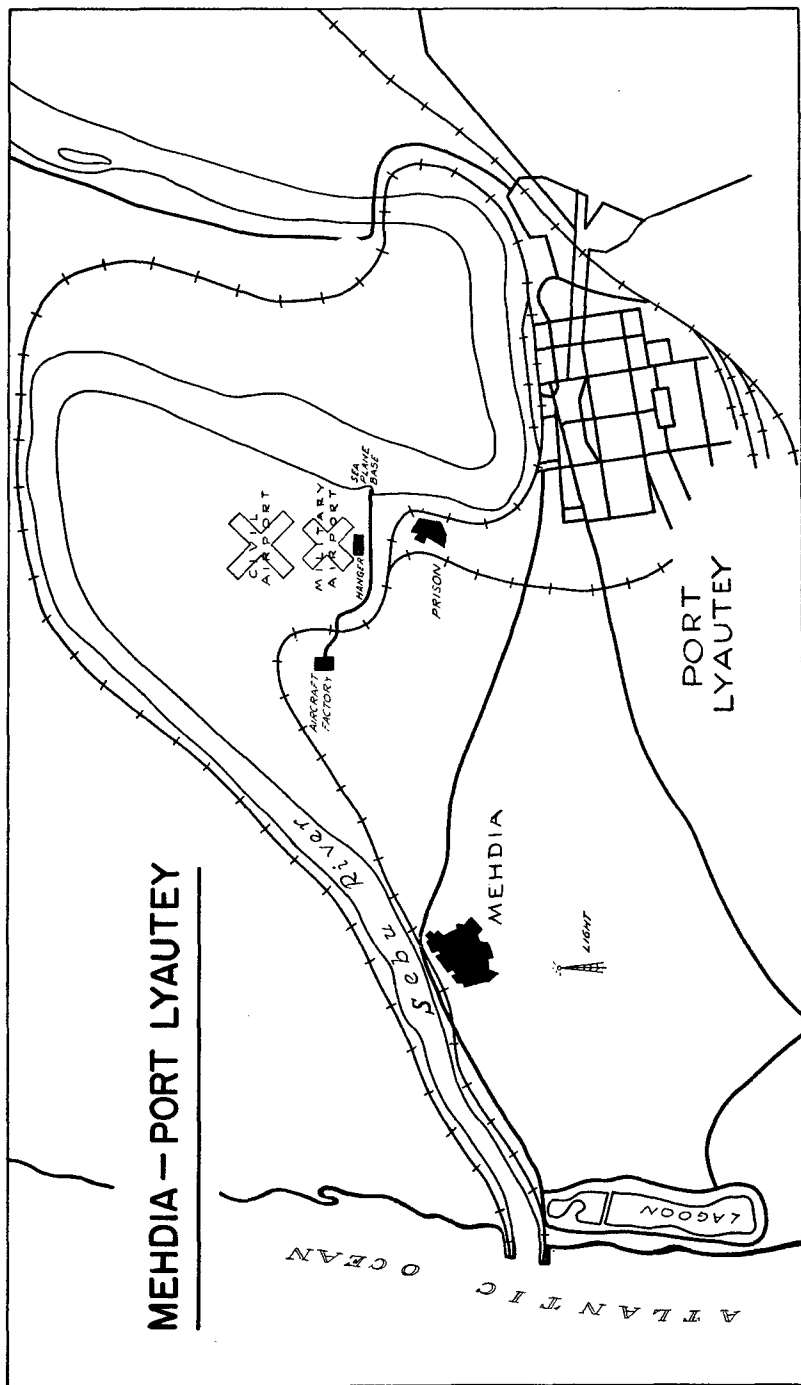
In the central sector, high ground and mountains stretched northeast from KASSERINE to PICHON, and the country directly to the west was extremely bad for landing grounds, either from the point of view of flying or of ground serviceability.

To the east the country was open semi-desert, particularly in the THELEPTE area, and most suitable for all-weather landing grounds. Farther west, and out of fighter range of the front line, the CANROBERT and CONSTANTINE plains offered good landing ground facilities for bombers, although unserviceable after heavy rain; also, it was frequently difficult to get clear of the mountains and rendezvous with fighters in open country.

To operate in this area at all successfully, it was vital for the Army to secure the open country to the east of KASSERINE. This was done, and throughout the battle these landing grounds at THELEPTE and SBEITLA gave a higher rate of serviceability than any others until settled weather dried up those in the Northern area.

Western Desert had more problems in the MEDENINE area than heretofore, but on the whole landing grounds did not present any problem to them even during the advances to the North, when the serviceability and the available space of the coastal plain remained high throughout. The rapidity of the German retreat from the WADI AKARIT enabled them to use all the Axis landing grounds south of ENFIDAVILLE, with only minor extensions and improvements.

The construction program ahead for airfields was a heavy one. The aim was to provide a semicircle of landing grounds capable of housing the whole tactical fighter and bomber force around the Axis bridgehead, the main centers being SOUK-EL-KHEMIS, LE KEF, KAIROUAN, and the SOUSSE area. The plan could not be put into effect until the enemy were pinned back in the Southern sector, and yet the new airfields had to be prepared to keep step with



the advance of the Eighth Army. It was a case of employing all resources to meet requirements at short notice.

Machinery for the construction of landing grounds was a problem in the early stages, but U. S. Aviation Engineers and British airfield construction groups worked in close unison and good will, and on this note the heavy program was carried out according to timetable.

Von Arnim took advantage of the regrouping of units that followed the formation of the 18th Army Group to launch an assault against the British First Army on the northern front. On 26 February several prongs issued from the German lines heading toward Sedjenane, Beja, and Bou Arada, strongly accompanied by dive bombers. The British, caught at a disadvantage, and mustering only inferior numbers, were forced back in three weeks of bitter fighting. A stand was then made despite the heavy rains which had turned the clay roads into sloughs and prohibited the use of motor transport. Pack animals had to be used to carry supplies over the precipitous mountain paths. But the hardships were conquered and von Arnim was pushed back by early April practically to his original positions; most important of all, the British retained Medjez-el-Bab, the key to Tunis.

Air cooperation against the German attack was more vital than in any other sector, as the enemy was operating from firm bases in Tunis and Bizerte which were capable of rapid reinforcement and had a number of all-weather runways. The situation justified 242 Group's maximum effort in compliance with instructions to render full air cooperation with the First Army while the German attack continued. The available forces were nine squadrons of Spitfires, of which only four were on forward landing grounds, one squadron of Hurribombers, and two squadrons of Mitchells. These forces were employed to the full, the main feature being that fighters were given permission to strafe any moving targets throughout the period. This was necessary because of a shortage of bomber force and unsuitable bombing weather.

Tactical reconnaissance, carried out on a heavy scale, located a large number of targets for the Hurribombers and Spitfires in the battle zone itself; while the medium bombers, operating from the Constantine plain and using the all-weather airfield at Tingley, near Bone, attacked communication centers and in particular Mateur. After severe fighting the enemy attack was held, and in March it ceased to be a major threat. During that period 242 Group carried out

3,500 fighter sorties and 250 fighter-bomber sorties, and escorted 160 medium bomber sorties. They destroyed many enemy aircraft and a large number of motor vehicles. The weather was not suitable for a high rate of interception, nor were the forward control and warning systems fully operational, but by the end of the period the Luftwaffe was well under control and attacks on our troops were on a light scale.

The Tunisian Spring Campaign

The Tunisian spring campaign consisted of two principal phases:

1. The breaking of the Mareth Line, beginning 20-21 March 1943, and Rommel's retreat to a line north of Enfidaville.
2. The advance of the Allied armies on Bizerte, Tunis, and Cape Bon, 22 April-13 May.

According to the aircraft status report of 21 March 1943, Tactical Air Force had 567 aircraft assigned, of which 319 were USAAF Spitfires, P-39's, P-40's, and A-20's, and 248 were RAF Spitfires, Bisleys, and Hurribombers. By 1 May, 22 B-25's and 18 P-39's had been added. The tasks allotted to the Tactical Air Force during the spring campaign were:

1. 242 Group to maintain and hold fighter superiority over enemy aircraft in the Tunis and northern areas, and to be ready to detach squadrons to give operational support to XII Air Support Command.
2. XII Air Support Command to obtain and hold air superiority over the enemy air forces opposed to it to an extent which would insure complete freedom of action by the Western Desert Air Force in direct ground cooperation with the Eighth Army. In addition, XII Air Support Command to protect the forward move by the U. S. II Corps.
3. Tactical Bomber Force to provide the striking force to XII Air Support Command, with the primary task of hitting enemy airfields.
4. Western Desert Air Force, from the time (20 March) of the attack on the Mareth Line, to concentrate the whole of its forces upon direct cooperation with the Eighth Army.

5. By agreement with the Air Officers Commanding, Mediterranean Air Command and Northwest African Air Forces, the Strategic Air Force to be available to bomb enemy landing grounds, during the critical days of the attack, on request of Northwest African Tactical Air Force.

Night bombers of the Western Desert Air Force were to keep up a continuous pounding of the enemy forward troops in the Mareth region on the two nights prior to the attack, and to continue in advance of our troops as the battle progressed.

Tactical Bomber Force Bisleys, supplemented by Wellingtons from the Algiers vicinity, would attack the southern enemy airfields with road movement as alternate targets.

This general policy was agreed to in conjunction with the Army formations concerned and dictated by General Montgomery's realization that ground attacks alone might not be sufficient to break the Mareth and Gabes lines within the allotted time.

We have examined the Tactical Air Force strength of 21 March 1943. On this date the Strategic Air Force aircraft status report showed the USAAF component to have 383 aircraft assigned—B-17's, B-25's, B-26's and P-38's. The RAF had 24 Wellingtons. By 1 May 174 more USAAF planes had been added; these were B-26's, B-17's, and P-40's, bringing the grand total to 581 aircraft.

It was during the spring campaign in Tunisia that the Strategic Air Force came into its own. Hitherto its principal objectives had been the ports, airdromes, railways, and roads of Tunisia; now, even while increasing the intensity of its attack in Tunisia, it raised its sights and even more seriously undertook to include seaborne traffic, together with ports in Italy and the Mediterranean islands.

The Twelfth Air Force before 19 February had flown slightly fewer than 200 bombing missions, all but five on Tunisian targets, and had dropped about 3,300 tons of bombs. March was still almost wholly devoted to Tunisia. In April about 200 bombing missions were flown, one-fifth against Italian targets; about 3,700 tons were dropped. May, with 186 missions and 6,225 tons, was concentrated almost entirely on Italy. The Tunisian work was done.

Strategic Air Force work was outstandingly effective. The U. S. heavies and mediums, escorted by P-38's, flew over the targets during daylight hours and did precision bombing. Wellingtons in ever-

increasing numbers further smashed the targets. Frequently Ninth Air Force Liberators chimed in with the powerful blasts of their bombs. Bomb damage assessment, both by photographic interpretation and by visual inspection on the ground after the campaign, showed extremely gratifying results. The port areas of Sousse, Sfax, La Goulette, and Bizerte were all but completely devastated. Marshalling yards were cratered and rolling stock strewn about in hopeless ruin. Airdromes were abandoned or the landing areas limited, while hangars were blasted and fire-twisted, with irreplaceable Axis aircraft heaped in airplane graveyards.

Implicit in the preceding paragraph is a picture of the purpose and methods of air power. Long before intensive ground operations were started, the Strategic Air Force began the softening-up process in the enemy's rear. First, airdromes and landing grounds were bombed to immobilize the opposing air force as far as possible and to reduce its interference with the next step, the bombing of communications, principally ports and railway yards. The third phase was concerned with isolating the enemy's combat troops from their bases; here the Tactical Air Force usually performed the major share of the task before undertaking the fourth phase, direct cooperation with the ground force advance. Meanwhile, Strategic was pounding away in preparation for the next drive into enemy territory. There was in addition Strategic's commitment of breaking up the enemy's more distant communication centers and airfields in order to hamper his reinforcement, supply, and air cooperation with his troops.

The use of tactical aircraft was developing. During the early part of the Tunisian campaign they had been used mainly in direct ground cooperation, either along the front or against vehicles directly in the enemy's rear. In part this was in response to the natural desire of ground troops and commanders to see their cooperating aircraft while in action, and it no doubt also was brought about by our tendency to separate the purely fighter from the air-ground cooperation function. Our losses gave ample evidence, however, that our tactics were not appreciably affecting the enemy's control of the air. The result was that ground strafing gave way to fighter sweeps as a primary mission. Thus fighter-bombers were able both to harry the enemy on the ground and to meet him in the air. The P-39 gave way to the P-40

and the P-38, and eventually to other types intended to drive the Axis from the sky and then to devote themselves to ground installations and traffic. By April the evolution was well under way.

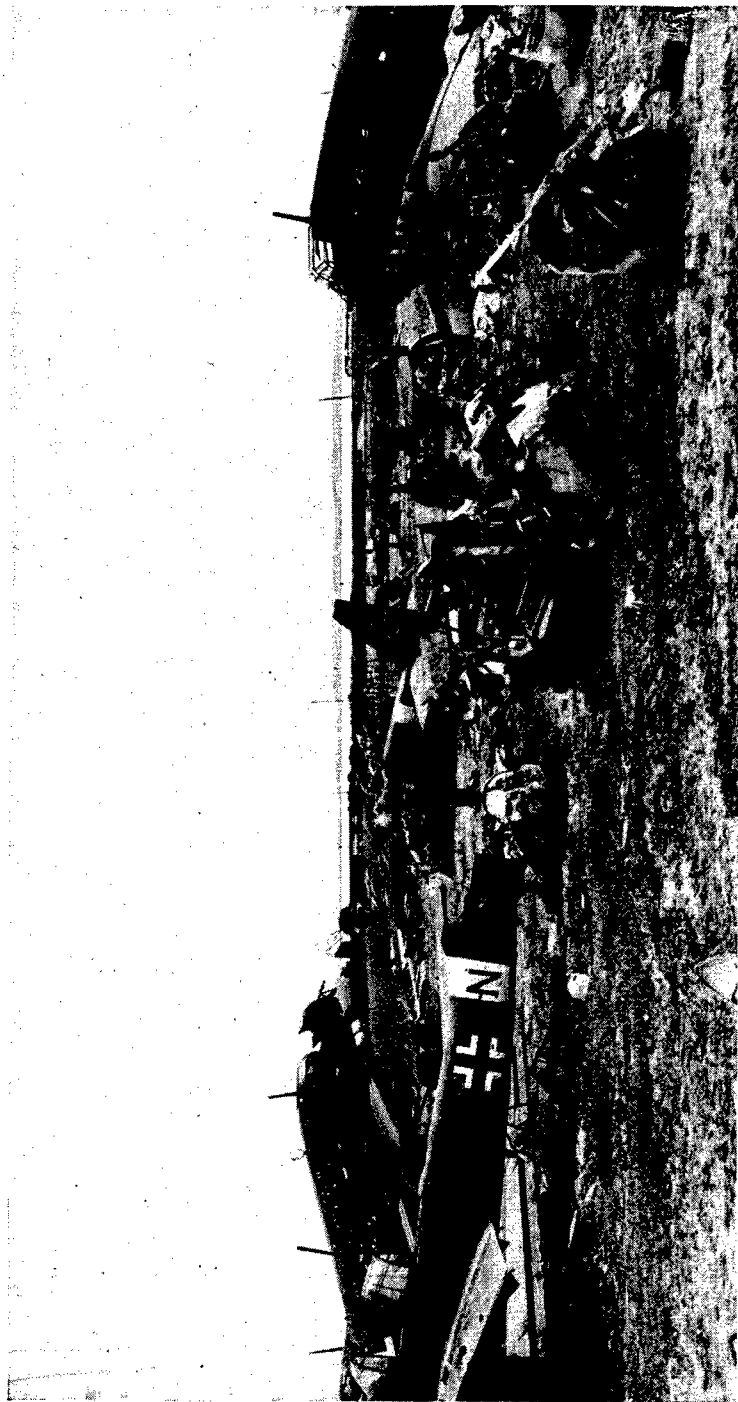
Strategic Attacks on Air Fields, April 1943

Attacks on enemy airfields by the Strategic Air Force opened with a 4 April assault on Capodichino by 27 B-17's. Next day, strikes were delivered against Bo Rizzo, Bocca di Falco, and Milo. Others followed on Castelvetrano, Decimomannu, Monserrato, Elmas, and Villacidro. The damage was widespread, particularly on parked aircraft. Later in the month repeat attacks were made, and Grosseto and Alghero were added. The Ninth Air Force made one attack on Bari airdrome, covered the field with craters, and set fire to the buildings. The total bombs dropped in April, including those of the Tactical Air Force, were 3,675 tons; previous to April the total tonnage dropped by Northwest African Air Forces was only 2,253 tons.

Naples, Palermo, Messina, Trapani, and of course Tunis and Bizerte were bombed heavily during this period. Wellingtons, preceded by Pathfinders, visited Tunis three times and Bizerte twice. Day bomber attacks on these two ports were hindered by weather, but effective strikes by B-17's were delivered in 18 sorties against Tunis and 27 against Bizerte. Also, Ferryville was hit by 16 B-17's and its docks were badly damaged.

On 4 April Naples received 99 Middle East-based Liberator and 64 B-17 sorties. The Fortresses hit the power and gas plants, barracks, docks, and shipping. Palermo took three attacks from Northwest Africa and five from the Middle East. B-17's flew 95 sorties on the 16th, 17th, and 18th, and hit six ships, the power station, and the marshalling yards. Messina, which had already suffered extensively from Malta-based and Middle East bombers, continued to be scourged, with the ferry slips as principal targets. Trapani received one Wellington and two B-17 attacks. The Fortresses registered direct hits on merchant ships and barges. Other Strategic Air Force missions were directed against Marsala, La Maddalena, and Carloforte.

Complete statistics of Axis vessels sunk or damaged are hard to arrive at, as accounts differ widely without giving the bases of decisions. *RAF Middle East Review* (No. 3, p. 24) states that in April



LUFTWAFFE BONEYARD. Wreckage of German and Italian aircraft litters the El Aouina airfield at Tunis after concentrated Allied air attacks.

Official Photo USAAF

20 ships were sunk, 16 severely damaged, and 32 damaged; this figure apparently refers to the results of attacks on Axis harbors and at sea, and must apply only to sizeable ships.

General Patton's advance on Gafsa began before General Montgomery's push toward the Mareth Line, but the two movements soon merged into one. On 17 March the U. S. 1st Armored Division defeated the Italian defenders of Gafsa and entered the town. By the 22d, in spite of rainy weather, Maknassy was occupied. Meanwhile the U. S. 1st Infantry Division had advanced beyond El Guettar, and between that point and Maknassy the front was established.

The XII Air Support Command was active in breaking the way, and for the first time light and medium bombers in 18-aircraft formations rendezvoused with fighters and blasted targets. On the 19th a full-dress air attack was commenced by Tactical Bomber Force on Tebaga and Gabes landing grounds, and during the next two days Strategic also delivered maximum-weight strikes. Spitfires covered the returning bombers and spread havoc among pursuing Messerschmitts. Fragmentation bombs were employed, and experiments were conducted to determine the best bombing patterns to use in order to destroy aircraft on the ground. The object of interdicting the use of the Axis air forces against the Eighth Army was almost perfectly attained; in these days only five enemy aircraft appeared over the Eighth Army in offensive roles.

The bombing of German-held southern Tunisian airfields was almost continuous; those well forward were covered every 15 minutes on the 22d while the Desert Air Force was attacking the Ksar-Rhilane position. By 7 April the enemy had abandoned the forward airdromes, and combined assaults by Tactical and Desert Air Forces soon forced his aircraft out of Sfax.

General Montgomery launched his frontal attack on the Mareth Line on the night of 20-21 March, well preceded by night bombers. It took two days to make good the crossing of the Oued Zigzaou, the natural tank obstacle on Rommel's front. Western Desert's full force was utilized in cooperating with the advance by day and night, and it was of great aid in bombing tanks, convoys, and gun positions, and in the general softening-up of the enemy.

The key to General Montgomery's strategy was a "left hook" to Rommel's right near El Hamma, which was delivered by the New

Zealand infantry and the British 1st Armored Division. This movement was preceded on 26 March by one of the most intensive and concentrated air cooperation offensives on record up to that time, in an effort to blast a hole through Rommel's panzers.

Air Cooperation With New Zealanders

Since the scene of the projected operation presented navigation difficulties, columns of colored smoke were sent up from landmarks, and the British lines were defined by smoke of a different color. British artillery then shelled the Axis strongpoints with smoke shells to indicate them to fighter-bombers. Half an hour after the air attack began, artillery laid down a creeping barrage which moved forward at the rate of 100 feet a minute, marking the bomb line ahead of the ground advance. The fighter-bombers and light bombers bombed and strafed particular positions on which they were briefed, and the Hurricane tank busters assailed the enemy's armor. Spitfires were flying high cover.

Rommel retreated to a hastily prepared line behind the swollen waters of the Wadi Akarit. An attempted German ground counter-attack was nipped in the bud on 6 April by a heavy concentration of bombers and fighter-bombers, though a tank-buster attack on a concentration of armor at Chekira lost heavily because of a ring of mobile flak. That night Rommel's troops left their position and streamed northward. Both the Western Desert Air Force and XII Air Support Command dedicated themselves wholeheartedly to harassing the retreating enemy forces, destroying on the first day alone more than 200 motor vehicles. As the retreat progressed it outran the range of the Western Desert Air Force, and 242 Group now joined XII Air Support Command in the attack. There was little interference from flak or, most of the time, from enemy fighters. Pressure by the U. S. II Corps in the Maknassy area, and by the British IX Corps, forced an acceleration of Rommel's flight by taking Fondouk and threatening Kairouan, which controlled his communications. Sfax and Sousse fell to the Eighth Army, which then broke through Rommel's new position at Enfidaville on 19 April. The German commander withdrew northward a few miles and dug in, strengthening his position with mine fields.

It was after the beginning of the retreat from the Mareth Line that our offensive against the Axis air transport shuttle service between Sicily and Tunis reached its height. Air transport had made possible the consolidation of German control and had enabled the enemy to offer bitter resistance. Daily traffic between Italy and North Africa was in excess of 100 sorties and rose to a peak of nearly 250. About the middle of March, the Strategic Air Force offered a plan for the suppression of this traffic. The plan's features were:

1. Simultaneous bombing attacks on the main transport landing grounds in Sicily, Italy, and North Africa.
2. P-38 fighter sweeps in the Sicilian Straits at the same time, to catch transports in transit.
3. Spitfire and P-40 sweeps over the landing areas to shoot down any aircraft that got through, and to protect both P-38's and Strategic Air Force bombers by pinning down hostile Africa-based fighters which might seek to interfere.

Also, it was planned to let the Axis build up sufficient numbers of transport aircraft so that their loss would be a serious blow, and to time the attacks with battle progress so that the lack would come when air transport was most needed.

The initial effort came on 5 April. On that day 12 missions were flown by the Strategic Air Force in connection with the transport-throttling program, 6 missions by 142 P-38's, 2 by 54 B-25's and 4 by 91 B-17's—a total of 287 sorties. Forty enemy planes were shot down in the air, and photographic coverage added enough destroyed on the ground to bring the day's total bag to 201 aircraft. Our losses were 9 shot down and missing. As a bonus, an enemy destroyer was blown up and direct hits were made on 2 other vessels. Transport airdromes at Sidi Ahmed, El Aouina, Bo Rizzo, Bocca di Falco, and Milo were bombed, and on the same day Ninth Air Force B-24's struck at Naples, one of the termini of the shuttle service. On 10 April the operation was repeated on a smaller scale and brought down 45 Ju-52's and 12 fighters. The following day an entire convoy of 21 transports was downed, with 5 of its escorts. A few hours later 5 more transports were annihilated by P-38's.

With the Germans' southern army in full retreat to Enfidaville the shuttle service took a spurt, and Me-323's were added to Ju-52's; these

flew across in large convoys numbering not more than 2 a day, escorted by short-range fighters from both sides. The whole Spitfire and P-40 force of the Western Desert Air Force was now concentrated in an effort to catch these convoys during the fleeting minutes when they could be reached. At last, late in the afternoon of 18 April, about 100 Ju-52's were intercepted, heavily escorted by fighters. Seventy-three transports and 16 fighters were shot down, and some of the rest crash-landed on the beach of Cape Bon peninsula. The next morning 12 more transports and 8 escort aircraft were down in ruins; on the 22d, 21 ME-323's were intercepted and all were destroyed, along with 16 fighters. All but 1 of the formations were under escort, but the protectors failed to protect. In these anti-transport operations no fewer than 432 enemy aircraft were destroyed, 341 of these in the air, at a cost to us of about 35.

Thereafter the use of enemy air transports was confined to the nights, but with their limited capabilities they failed to accomplish much. During the last nights of the campaign, with only two airdromes available to the foe, our fighters further reduced the meager number of arrivals. This campaign to interdict the use of German air transport undoubtedly played an important part in bringing about the enemy's sudden and complete collapse.

The Tactical Air Force came into its own with the beginning of the phase of the campaign wherein the Allied armies pushed on to Bizerte and Tunis for the kill. Since the entire area was within the range of Tactical Air Force planes, the organization was simplified by subordinating XII Air Support Command to 242 Group. The Western Desert Air Force and 242 Group were divided by the Medjerda River, with Western Desert on the south and 242 Group on the north. Headquarters of Tactical Air Force during this period was located at Haidra and later about 18 kilometers southwest of Le Kef. The Tactical Air Force was given four tasks:

1. To destroy the Axis air forces in Tunisia.
2. To disrupt the enemy's supply lines, both by air and by sea.
3. To furnish direct cooperation with ground forces.
4. To prevent another "Dunkerque" by blocking the enemy's escape to Sicily.

Because the Strategic and Coastal Air Forces were involved in carrying out certain aspects of the above program, the following account

will not be confined to Tactical's share. Strategic's role should also be borne in mind:

1. To neutralize Axis ports in Sardinia, Sicily, and Italy in order to interdict their use as bases of supply or the reception of evacuated troops.
2. To neutralize Axis airdromes in Sardinia, Sicily, and Italy in order to prevent their use as bases by Axis aircraft which might hamper Allied action in Tunisia.
3. To attack Axis air and sea transport wherever found.
4. To begin the softening-up process for the next Allied invasion, that of Sicily.

In preparation for the final assault on von Arnim and Rommel, the U. S. II Corps was moved to the extreme north. The First Army was centered on the key position of Medjez-el-Bab, and the French cleared the hills west of Enfidaville. The Eighth Army remained north of Enfidaville facing Rommel. The plan called for the Americans to drive on Bizerte while the British First Army, reinforced by elements from the Eighth, was to push toward Tunis. The Eighth Army was to engage Rommel and attempt to cut off any move to retreat into the Cape Bon peninsula. These moves were not regarded as easy, for the enemy's shortened lines enabled him to bring greater force to bear at threatened points.

End of the Axis in Tunisia

Operations were to begin in the center on 22 April and in the north on the 23d. Rommel, sensing the impending attack, struck on the night of the 21st between Medjez-el-Bab and Goubellat, but was unsuccessful and lost 33 tanks and 450 prisoners. The First Army's advance, however, was stiffly resisted, with mine fields presenting real hindrances. The French occupied Pont-du-Fahs, but were held up there. A week was spent in difficult local clearing actions in the hilly country. By 4 May the Americans, flanked on the coast by the French, had fought their way into Mateur. From there they went on, and on 7 May entered Bizerte. On the 9th the Germans in that sector surrendered, giving up 38,000 prisoners.

Meanwhile the main push by the First Army got under way on the

night of 4 May. Two days later Axis opposition was crumbling and the British entered Tunis on 7 May. The British armor then split into two parts, one heading northwest and the other southeast of Tunis to cut off the German retreat to the Cape Bon peninsula. Soliman, between the mountains and the Gulf of Tunis, fell on 10 May and the British swept into the peninsula, breaking up the last German resistance. Colonel General von Arnim surrendered on the 12th, and the Italian Field Marshal Messe the next day. Altogether, 248,000 prisoners were taken.

In order to perform its first task, that of destroying the Axis air forces, 242 Group laid on heavy attacks between 17 and 21 April on the airfields in the Protville region, while the Western Desert Air Force concentrated on night bombings of the eastern landing grounds in the Cape Bon peninsula. Meanwhile, the Strategic Air Force was attending to the airfields at Tunis and Bizerte. It soon became apparent to the German high command that its air resources would be lost if left in Tunisia. About the 22d they began to withdraw their planes to Sicily and Sardinia; the Ju-87's disappeared first. With this exodus the German Air Force, save for sporadic Sicily-based operations, ceased to play any serious part in the Tunisian battle and our attacks on Sicilian airdromes correspondingly dropped off. 6 May was the last day that enemy aircraft appeared in Tunisia. Some enemy aircraft tried to intercept our shipping and air-ground cooperation, but in three hours 20 Axis planes were shot down for the loss of two.

During this period the enemy depended almost wholly on air transport and small vessels. Supplies brought down the "leg" of Italy were ferried across the Strait of Messina and taken to western Sicilian ports. The menace of Malta-based aircraft made eastern Sicilian ports unsafe for this traffic. Large merchant vessels normally loaded at Naples and hugged the Sicilian coast on the way to Tunisia, or sailed out toward Sardinia to avoid Malta's aircraft. It was found that small ships could make the dash overnight from Sicily and off-load on the Tunisian beaches or discharge into lighters; this method was necessitated by the continuous blasting of the Tunisian ports.

High-altitude bombing, very effective against ships at sea, could sink a medium merchant vessel with an average of 28 tons of bombs; thus a formation of 18 B-17's could hope to sink two ships. B-25's and

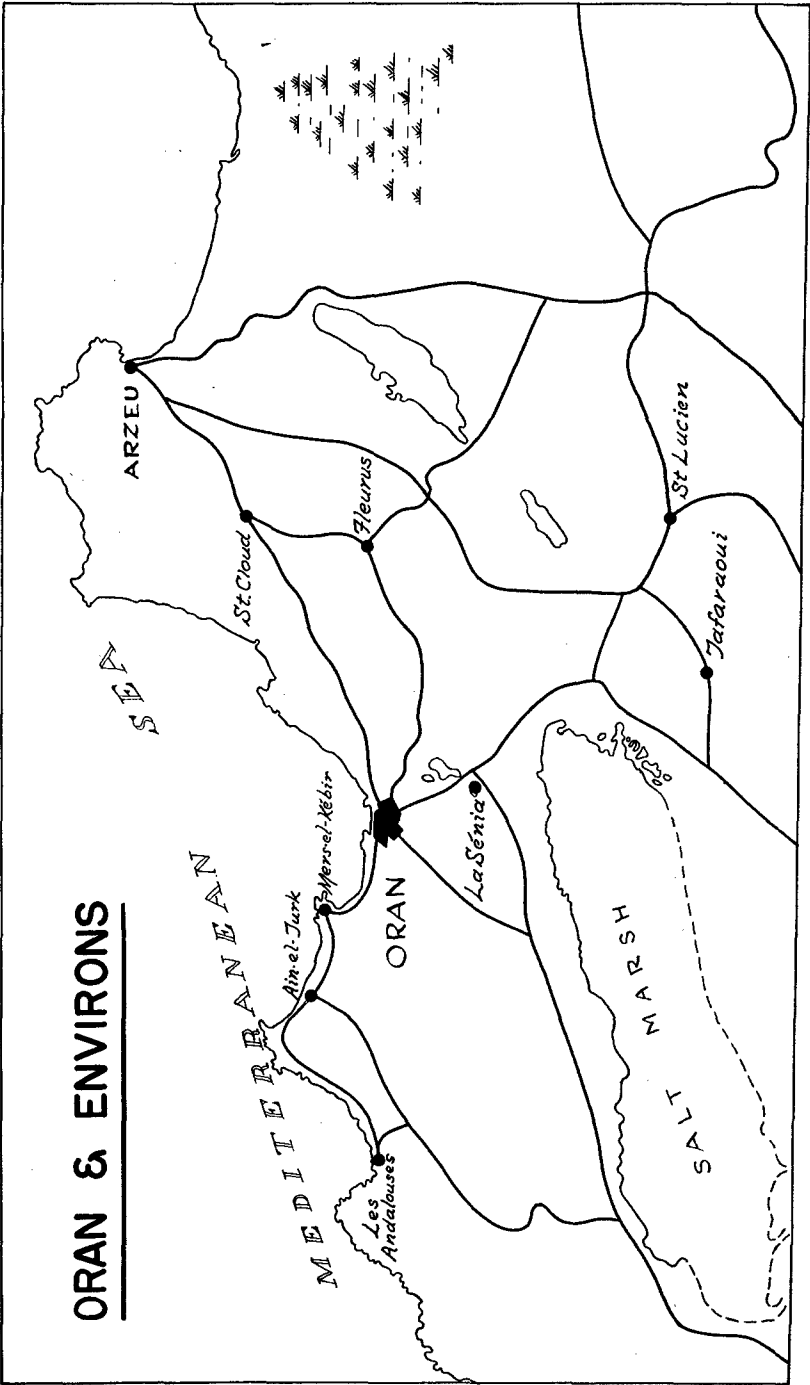
P-38's also proved effective, and were employed increasingly at sea. Convoys were usually attacked from the rear; each attacking flight of six, staggered at altitude intervals of 300-500 feet to allow room for evasive action, concentrated on one vessel. About 50 percent of the sorties failed to make strikes. The Coastal Air Force also engaged in day and night shipping sweeps. Strategic Air Force statistics for April, probably incomplete, showed 6 vessels sunk, 20 severely damaged, and 30 damaged. "Severely damaged" was defined as meaning that a ship was last seen heavily listing, in sinking position, or in flames.

Early in April photographic reconnaissance revealed that two of the Italian Navy's three remaining heavy cruisers, the *Trieste* and the *Gorizia*, were lying at La Maddalena. The third, the *Bolzano*, was undergoing repairs at Spezia. On 10 April 84 heavily escorted B-17 sorties sank the *Trieste* and severely damaged the *Gorizia*, which nevertheless was able to steam to Spezia for repairs. Wellingtons followed with blasts on that port. Toward the end of April the Tactical Air Force found opportunity to begin attacks on shipping in the Gulf of Tunis. Complete statistics are not available for April, but from 28 April to 13 May the Tactical Air Force claimed 22 small vessels (including 2 destroyers) sunk, 12 probably destroyed, and 9 damaged.

Air Cooperation in the Fall of Tunis

From 17 to 29 April, attempts were made to break through the German defensive line, first by the Eighth Army, second by the IX Corps, and third by the V Corps. All these drives were given full air cooperation, with no outstanding features except universally bad targets in very broken country. Bombing on pinpoints was practically the rule, and from photographic results it is clear that a very high standard of this class of bombing was maintained by the Tactical Bomber Force.

The U. S. II Corps, making excellent progress in the north, was within 16 miles of Bizerte and had pushed forward a salient toward Mateur. Cooperation was given in this sector whenever requested, and several heavy attacks were made on the enemy communication center at Mateur, but the terrain where the immediate fighting was taking place did not lend itself to air attacks by either side, nor could



the II Corps proceed with the main attack on Bizerte until strong forces on its southern flank had reached the plain of Tunis.

On 29 April it was clear that only the original conception, a breakthrough in great strength directly on Tunis, could succeed. Maximum available air power was to participate in this. The 242 Group, as Air Headquarters to the First Army, was given operational control, having at its disposal the whole Tactical Air Force, including air cooperation from the Western Desert Air Force and such medium bombers of the Strategic Air Force as were not required for vital strategic targets.

The operational plan provided for the air attack to commence on the evening of 5 May, with preliminary bombing in the Zaghuan area to soften positions on the ground which were to be stormed that night. The following day, starting at first light, the combined bombers of the Tactical Air Force put down a creeping barrage in front of our advancing army. Bombing was continuous from dawn to midday, with a heavy scale of attack continuing throughout the afternoon. By that time, however, the rapid advance was ahead of schedule, so that calls from the Army had to be waited for. Thus the number of sorties flown was well below the maximum effort which could have been exerted.

From 5 May, 205 Group was temporarily placed for operational control under the Northwest African Tactical Air Force in order to employ to the full the Wellington night-bomber effort in cooperation with the ground operations and in the bombardment of the enemy's rear-area communications. The axis of advance was Borj-Frendj-Djebel-Achour-Massicault-St. Cyprien, and these targets were worked over to the exclusion of everything else. By evening it was apparent that the battle for Tunis had been won. During the day 2,154 sorties had been carried out in cooperation with ground forces. This was a record for any Allied air force in any theater up to that time.

The following morning confirmation came that the main breakthrough had been accomplished. Our troops were in the outskirts of both Tunis and Bizerte and the enemy forces had been split, one segment to the north and west of Tunis and Bizerte, the other to the south and east in the region of the base of the Cape Bon peninsula and Enfidaville.

Tactical Cooperation 8-13 May 1943

The ground situation was changing too rapidly during the drive on Tunis for cooperation calls to be waited for or acted upon, and the air forces were ordered to disrupt the enemy's already disorganized movement. In particular, strong bombing and strafing attacks were made on the road from Tunis to Bizerte in the vicinity of Protville, on the roads and bottlenecks leading to the Cape Bon peninsula, and on the westward defile out of Tunis at Hamman Lif. The enemy forces between Tunis and Bizerte were surrounded; on 10 May they surrendered.

The important sector, however, was to the east, where large forces might reach the Cape Bon peninsula and fight a delaying action. The air task in this area was to assist our armor to force the defile at Hamman Lif, while fighter-bombers maintained constant pressure. On 9 May the Army broke through and moved rapidly down to Bou Fichta; this was the main stroke required to complete the dislocation of the enemy. Meanwhile all other air components were strafing and bombing any movement on the peninsula, blasting harbors, landing grounds, and coastal shipping.

By 10 May, with the enemy surrounded, no appreciable armed forces had reached the peninsula. From that day until the final surrender on 13 May, our air power was active against ground targets, but only to keep the pressure on until the end. Isolated pockets were attacked upon Army request. The last operation in the North African campaign was an attack by Western Desert Air Force bombers on the remaining enemy pocket north of Enfidaville.

The Tactical Bomber Force on 11 May 1943 had been in operation for 53 days, of which 41 were flying days. In that period it had flown 3,154 day and 783 night sorties, dropping 2,262.5 tons of bombs. This record was compiled in spite of shortage and unsuitability of aircraft crews, of equipment, and of maintenance crews. The lessons learned by the Tactical Bomber Force were:

1. That fighter-bombers were better suited than mediums for close cooperation, and that they could better utilize forward airfield space.

2. That medium bombers were better adapted to close-in strategic bombing, which is uneconomical for heavies and beyond the range of fighter-bombers.
3. That formation leaders should make reconnaissance flights to areas scheduled for attack.

During the campaign from 18 February to 11 May, less than three months, Tactical Air Force units completed 59,000 sorties, destroying 572 enemy aircraft, more than 500 motor vehicles, and 33 miscellaneous ships. These same units supplied the greatest weight of air attack ever undertaken in cooperation with ground forces up to that time.

In May one of the air forces' chief tasks was to interdict escape of the beaten Axis forces from Tunisia. For the first four days of the month the weather was so bad that few effective sorties could be flown, but on the 5th, Strategic and Tactical together sank two ships, severely damaged one, and damaged four. Tunis and La Goulette docks and marshalling yards were also damaged by 53 sorties of B-17's. Six SM-82 bombers and three fighters were also shot down during the day.

On the 6th, Strategic sank six Siebel ferries and four other small boats, and damaged five; all were headed for Sicily laden with troops. Meanwhile air strikes were delivered on Marsala, Trapani, and Favignana. At Marsala 10 ships were hit, two severely; at Favignana near misses were scored on two more vessels. On the same day Tactical Air Force aircraft blew up a destroyer and set another on fire. During the first week of May, 20 enemy vessels were sunk, seven probably sunk, and 12 damaged.

For the remainder of the campaign numerous Sicilian and Sardinian ports were bombed, chief among them Palermo, Marsala, and Cagliari. The strategy had now passed from cooperation and interdiction to softening-up for the next invasion. Palermo was the victim of 122 B-17's and 89 mediums on 9 May, and later, of 23 Wellingtons. A total of 458 tons of bombs was dropped. These blows were very destructive, with numerous fires and explosions among docks and railway yards. One ship was blown up. Seventeen enemy fighters were destroyed, with one B-17 shot down and more than 50 others damaged, mostly by flak. On the 11th Marsala was visited by 180 bombers, and again Wellingtons followed to the number of 22. About 450 tons of bombs were unloaded; numerous hits were scored on docks, railway

yards, shops, and warehouses; and fires were started that were visible 90 miles away.

On the 13th Cagliari was bombed by 107 B-17's, 96 B-25's, and 22 Wellingtons, which dropped 438 tons. One ship exploded and four more caught fire. As a result of this highly successful attack, Cagliari virtually lost its entire value as a port. Other effective assaults were made on Olbia, Alghero, Porto Torres, Civitavecchia, and Porto Ponte Romano.

With Axis aircraft now withdrawn to Sicily and Sardinia, airfields on those islands provided fruitful hunting grounds. Pantelleria was the prey of Desert Air Force light bombers, U. S. mediums, and Strategic's P-38's on 8 May and for the two days following. The landing ground was put out of commission, the doors of the underground hangar were jammed, and a large assortment of stores and aircraft was destroyed. Meanwhile bombers of the Strategic Air Force flew over Milo and Bo Rizzo airdromes, and Wellingtons over Villacidro, Elmas, and Decimomannu. The havoc was especially great among parked aircraft. The Strategic Air Force attacks were both made on the same day, 10 May, when 45 bombers attacked Milo airfield, causing fires and explosions and destroying 15 aircraft; at Bo Rizzo, attacked by 46 B-17's, there were many fires, but one B-17 was lost to enemy fighters.

Tactical Lessons Learned in the Campaign

This account concludes with a summary of tactical lessons learned in the conflict for Tunisia, as set forth in the Northwest African Tactical Air Force *Report of Operations in the Tunisian Campaign* (Paragraph 1, pp. 13-14):

Cooperation with U. S. forces:

1. U. S. and British air forces can work closely together on operational tasks, and units are interchangeable.
2. With mixed U. S. and British air forces it is desirable to have an integrated staff at main headquarters.
3. The trend with U. S. air forces is to make the group the entity; independent squadron identity is suffering in consequence.

4. U. S. tactical reconnaissance squadrons require further training. The tendency to regard reconnaissance as a secondary task is well developed and should be checked in the training stage.
5. The results achieved in close cooperation bombing by the 47th Bomber Group after a short period of training were up to the highest standard of more experienced squadrons.
6. U. S. point W/T communication requires strengthening. Communications in the Tunisian campaign were both erratic and very slow.

Tactics:

1. Despite its wide dispersal, the German Air Force can be demoralized by the sustained bombardment of its airfields.
2. The exploitation of superior equipment as a surprise measure has a most detrimental effect on enemy morale—e. g., the Spitfire IX in the Tunis battle.
3. The fighter-bomber, with experienced pilots, is a most versatile weapon, and can be readily switched to a variety of targets with confidence—e. g., attacks on shipping and field targets.
4. The efficiency of night bombing is materially increased by the use of pathfinder aircraft.
5. Ground signs put out by the land forces are of the greatest help in close cooperation bombing. This applies in all types of country, except where there exists most definite landmarks which cannot be confused.
6. The day bomber formation operating in the battle area is a very great stimulant to the morale of our ground forces.
7. Except in emergency, low-flying strafing attacks by fighters should not be carried out against an enemy until he is suffering some measure of disorganization.

Airfield construction:

1. Operational airfields used by the German Air Force are of a much lower standard than that required by us.
2. Sommerfeld tracking for an airfield is of little value if laid on a normal surface, as the tracking is soon immersed in mud. If laid on a sandy soil the effect is good. The same remarks apply to Pierce Steel Plank.

3. Tracked airfield (Sommerfeld or Pierce Steel Plank) requires considerable maintenance if in constant use.
4. The Tactical Headquarters in the field should be given a measure of control over the aviation engineers or airfield construction groups working on their airfields.

Aircraft:

1. Specialized aircraft—e. g., tank busters—are not an economical striking force. The one tank-buster squadron with the Western Desert Air Force traveled 2,000 miles over a period of four months and operated for approximately one week. By the end of a week the surprise element of their employment had gone and the losses (mostly recoverable aircraft with the pilots unarmed) were very heavy.
2. P-39 aircraft are unsuitable for tactical reconnaissance or as fighters in the battle area.
3. The B-25 is the most acceptable type of tactical bomber for day and night operations with a satisfactory bomb load.
4. The value of the Spitfire IX as a stimulant to morale in fighter squadrons is high.
5. The Ju-87 cannot operate without very heavy casualties in a battle area where a resolute fighter defense is established.

Equipment:

1. The U. S. fragmentation cluster is a most effective weapon.
2. The mobile U. S. operations room (S. C. R.) is a well designed and practicable vehicle and very suitable for its task.

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