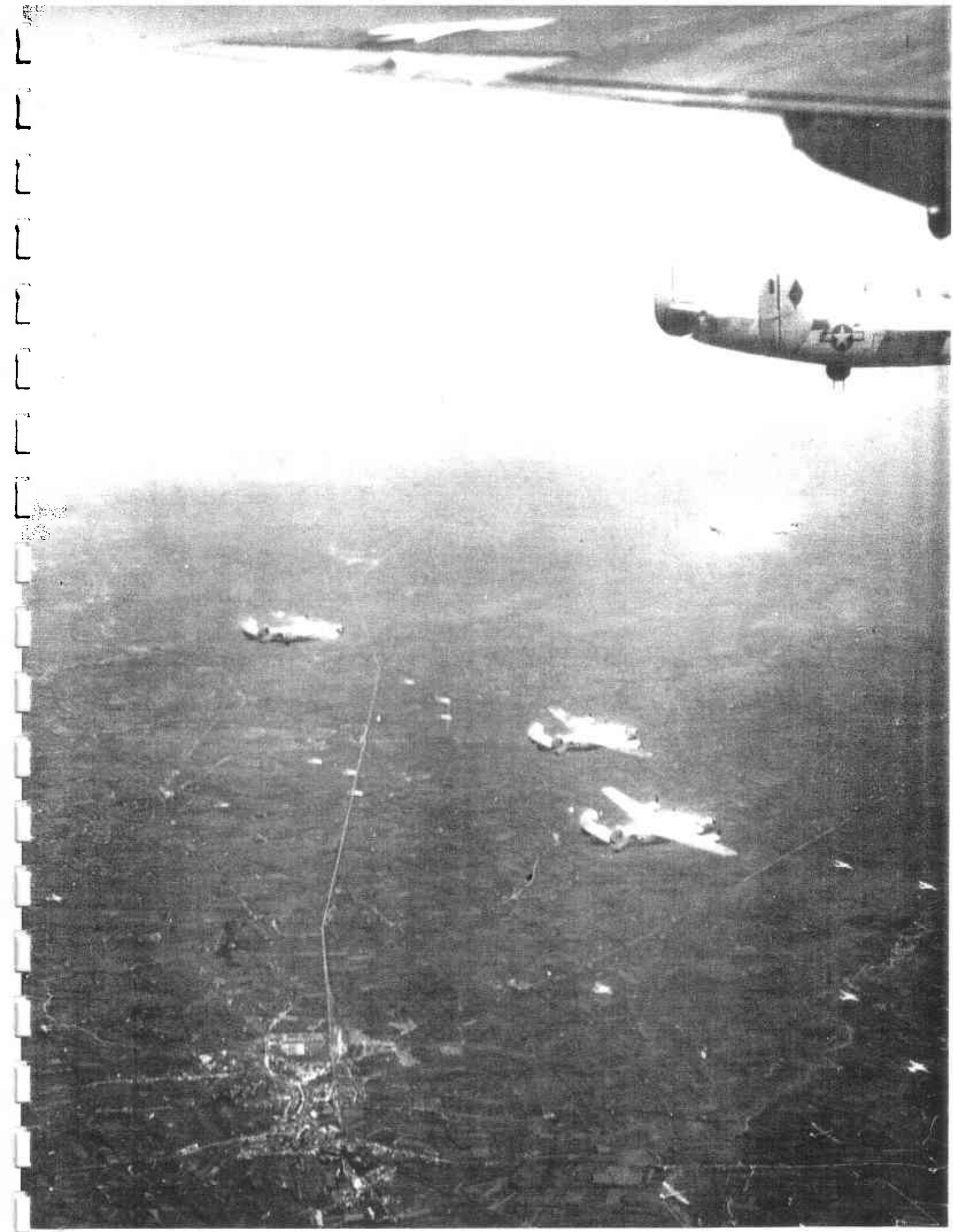
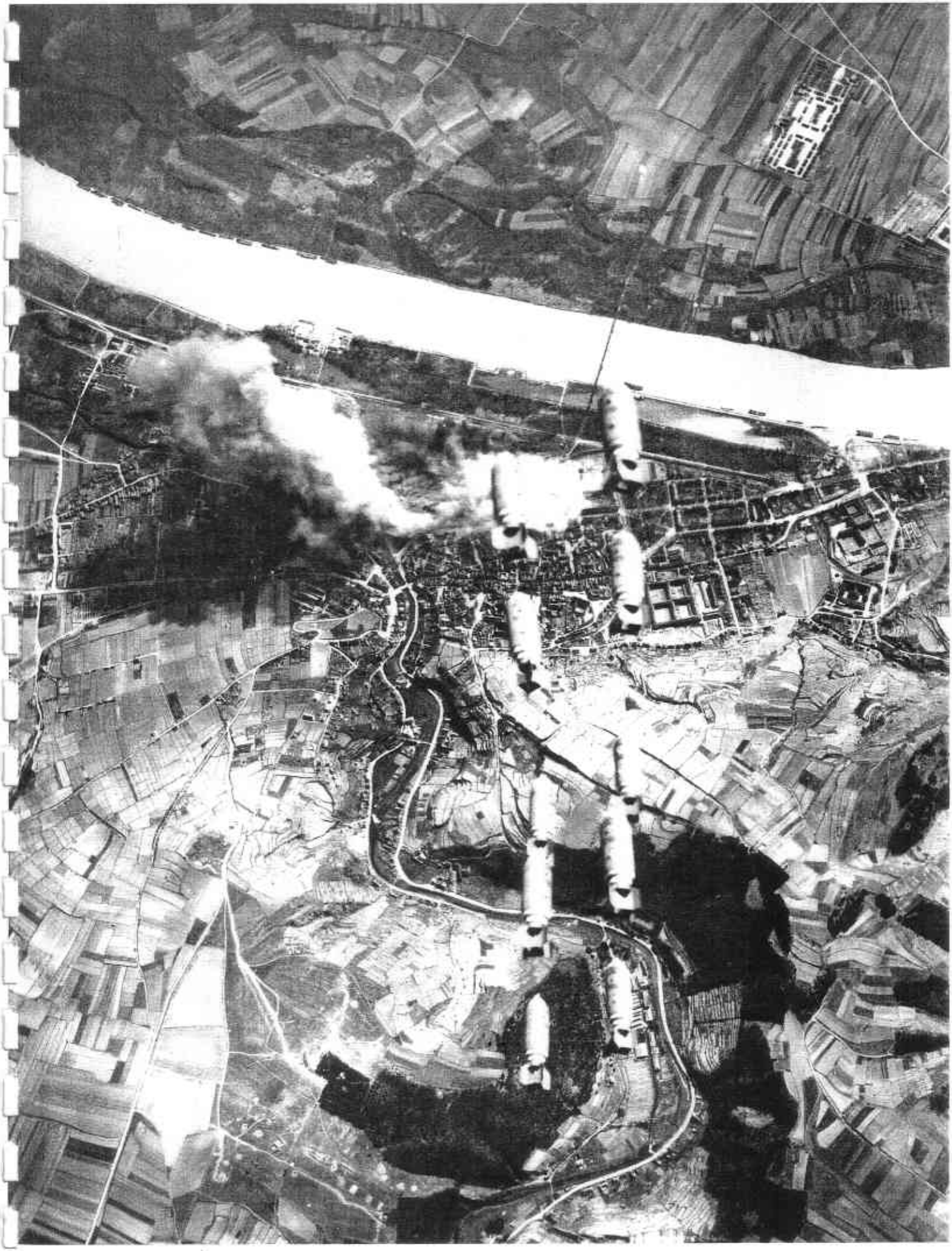
Flight of the Vulgar Vultures

1943-1945





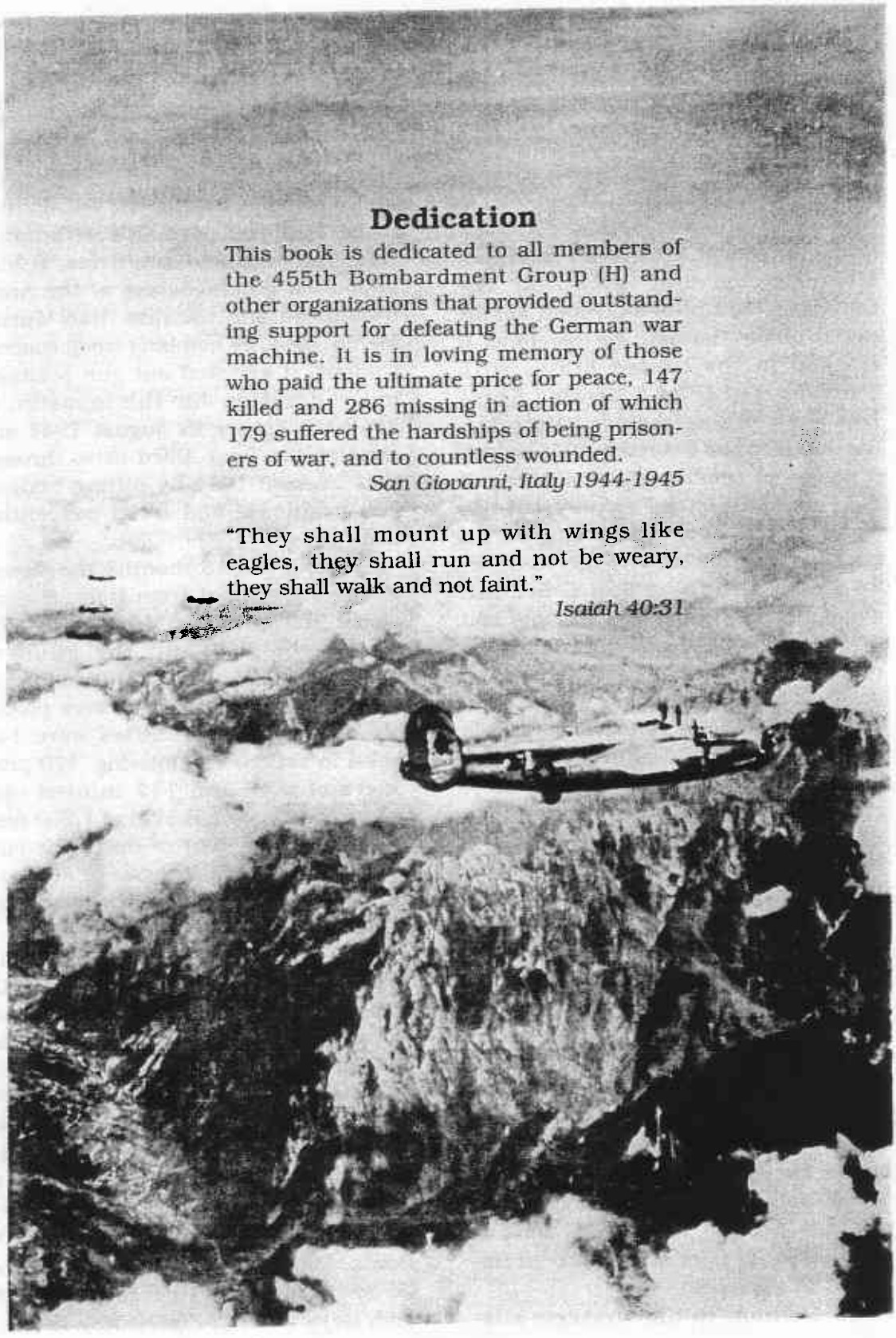
The Story of the Four Hundred and Fifty-fifth Bombardment Group (H) WW II

Flight of the Vulgar Vultures

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Dedication

This book is dedicated to all members of the 455th Bombardment Group (H) and other organizations that provided outstanding support for defeating the German war machine. It is in loving memory of those who paid the ultimate price for peace, 147 killed and 286 missing in action of which 179 suffered the hardships of being prisoners of war, and to countless wounded.

San Giovanni, Italy 1944-1945

"They shall mount up with wings like eagles, they shall run and not be weary, they shall walk and not faint."

Isaiah 40:31

Forward

The group was constituted as the 455th Bombardment Group (Heavy) United States Army Air Corps (AAC) in May 1943, and was activated the following month. It became an important strategic bombing group in the European Theatre of Operation for the defeat of the German war machine. It trained in the United States with Consolidated B-24 Liberator heavy bombers and then moved to Italy during January and February 1944, where it served in combat with the Fifteenth Air Force (AF) from February 1944 to April 1945. The Group shared an improvised airdrome with the 454th B-24 Bomb Group at San Giovanni, about five miles west of Cerignola and 20 miles southwest of Foggia. It engaged primarily in bombardment of strategic targets such as factories, marshalling yards, oil refineries, storage areas, harbors, and airdromes. These targets were in France, Italy, Germany, Poland, Hungary, Austria, and the Balkans. The Group received a Distinguished Unit Citation (DUC) for a mission on 2 April 1944 when it contributed to the Fifteenth AF's campaign against enemy industry by attacking a ball bearing plant at Steyer, Austria. Another DUC was received for the bombing of the Moosbierbaum oil refinery at Vienna, Austria on 26 June 1944. The results were highly successful for both targets, but the costs were high. The Group was under severe fighter opposition and heavy barrages of flak and lost several bombers, four on the Steyer raid and ten at Moosbierbaum from a standard formation of 36 airplanes.

In addition to the strategic missions, the Group bombed troop concentrations, bridges, marshalling yards, and airdromes during the fall of 1944 to hamper the German's withdrawal from the occupied countries. It also supported ground forces at the Anzio beachhead and Cassino, Italy during March 1944, by bombing troop concentrations. It knocked out gun positions in preparation for the invasion of Southern France in August 1944 and assisted the final Allied drive through Italy in April 1945 by hitting bridges, gun positions, and troop concentrations.

During the 15 months the Group was flying combat from Italy, it completed 252 missions, dropped 14,702 tons of bombs, and the gunners destroyed 119 enemy fighter aircraft. Another 78 enemy aircraft were probably destroyed. Casualties were 147 killed in action, 268 missing, 173 prisoners of war, and 112 injured and returned to action. A total of 1,200 men completed their tour of duty. The outstanding performances can be attributed to the dedication of the air crews and the ground echelon.

The Group participated in the following campaigns: Air Combat, EAME Theatre; Air Offensive, Europe; Anzio; Rome-Arno; Normandy; Northern and Southern France; North Apennines; Rhineland; Central Europe; and, the Po Valley. Group commanders were: Colonel Kenneth A. Cool, July 1943 to September 1944; Colonel William I. Snowden, September 1944 to May 1945; Lieutenant Colonel William R. Boutz, May 1945 to July 1945; Major Jerome Hoss, July 1945 to July 1946; and, Major John C. Smith, July 1946.

In the Beginning

In the beginning, the 455th Bombardment Group was only an idea. Planning for air defense and the defeat of the Axis Powers occurred much earlier than the actual declaration of war in December 1941. At that time, the Air Force was part of the Army and was called the United States Army Air Corps (AAC). The Army Chief of Staff was General George C. Marshall with General Henry Hawley "Hap" Arnold, Chief of Staff of the AAC, reporting to General Marshall. There was a civilian post for Assistant Secretary of War for Air that President Roosevelt declined to fill the first eight years of his administration.

With a full scale war threatening in Europe, President Roosevelt in January 1939, declared that American defenses were "utterly inadequate." The AAC had only 1,700 aircraft and 1,600 officers. Projections were made by the AAC planners to determine the size and composition of the necessary forces to defend the Western Hemisphere. World events were changing so rapidly that it was almost impossible to determine requirements. Within just one year, estimates went from 24 air combat-ready groups to 84, with a force of 5,500 airplanes. This was considered large enough to make a dictator think twice before attacking North or South America. The planners, however, simply did not envision fighting a war on the massive scale then being conducted in Europe. They and the American public were taken completely by surprise by the President suddenly calling for 50,000 airplanes, an unbelievable number. There was a new-found attraction for air power by the President and he appointed Robert A. Lovett to the post of Assistant Secretary of War for Air.

A major problem in the planning process was determining the force structure. Should America have an independent air force of heavy bombers for strikes against the enemy's industrial/military complex, or a ground support arm of attack with observation and medium aircraft? There were strong proponents for both positions, but a position was not taken to develop drop tanks or other range extension devices for the pursuit aircraft that would allow the escorting of heavy bombers over long distances. The irony of this struggle was that few aircraft were actually built in the early stages.

The Air Corps had been pushing expansion for years. The President's 50,000 aircraft announcement provided an opportunity to move forward. Not only did the President want a strong U.S. Air Corps, he also wanted to supply the British, French, Chinese, and others with aircraft. The aircraft industry was just emerging from the depression years and orders for new aircraft were most welcome. However, there simply was not enough production capacity in place to build an adequate U.S. Air Corps and meet the requirements of our future allies.

With the Germans overrunning the European countries and the withdrawal of British troops at Dunkirk, President Roosevelt was becoming more concerned about the outcome of the war in Europe. Further, the Japanese were waging one successful campaign after another in the Far East. On 9 July 1941, he sent a letter to the Secretaries of War and Navy asking for a detailed

plan for a build-up of U.S. forces sufficient to defeat the Axis powers in Europe should the United States be drawn into the war. Just four weeks prior to the President's letter, General Arnold had established an Air Wars Plans Division (AWPD). Four of the most experienced Army Air Corps flying officers were assigned to AWPD to develop an air war plan that would become an annex to a larger plan that included ground warfare. They were given just nine days to complete a plan. This corresponded with President Roosevelt, Generals Marshall and Arnold, and others returning from a meeting with England's Prime Minister, Winston Churchill, held on the battleship, Prince of Wales, anchored in Placentia Bay at Newfoundland. The stated purpose of the meeting was to consider ways to strengthen Britain without sending Americans into combat.

Keeping the United States out of the conflict was emphasized at two press conferences immediately following the President's return to Washington. One, on 16 August 1941, where the President said the United States was no closer to entering the war and, on 19 August, he stated that Churchill was extremely confident of Britain's ability to win the war without United States entry. These statements were made at the same time air and other war plans were being written for the United States to defeat the Axis Powers.

At the meeting, the British announced a requirement for a fighting air strength of 10,000 airplanes, of which 4,000 would be heavy bombers. General Arnold was surprised by the large numbers and wondered where the airplanes would come from as the production capacity of the British was 500 airplanes of all types per month. He soon learned why the British requested 500 airplanes per month from the U.S. This closely matched the production capacity of the U.S. at that time. This would leave nothing for the U.S. Army AAC and Navy as well as other countries, for instance, China. The British requirement would place a tremendous demand on the production capacity of the U.S. to satisfy all requirements.

Developing the Air War Plan was a monumental task. The planners had to analyze the strengths and weaknesses of the potential enemy and then predict the kinds and amounts of munitions and equipment needed to win a war. Following this, a determination had to be made for the number of men needed and the best way of allocating and training them. The planners also had to take into consideration the possible fall of England, denying air bases close to Germany. Thus, the plan called for development of a very long range bomber that could operate from the United States, the B-36.

The assumption about the German economy was that it was operating under heavy strain with its war operations imposing a very heavy drain on the social and economic structure of the country. Destruction of that structure would break down the capacity of the German nation to wage war. It was not know that the German economy was devoting only 49% of the gross national product (GNP) to war costs in 1941 and that later it would increase the effort to 64% of GNP. Further, it could not be predicted that the Germans would develop new manufacturing techniques to greatly strengthen their industry, more than tripling armament production by July 1944, while reducing the number of workers per unit by 60%.

The Plan was completed in nine days and was named AWPD-1. Briefings were prepared to carry it through the

approval process. The Plan called for 21,813 combat airplanes, not counting monthly replacements, and 2,164,916 uniformed personnel in the AAC. Of the total number of airplanes, 6,860 heavy bombers alone were estimated as needed to destroy principal targets in Germany and German-held territory. The planners were rightly concerned about the approval response when requesting a number of airplanes of all types (combat and support) more than ten times the 5,500 projected in 1939. Equal concern was felt about the manpower in that the AAC, in August 1941, was just growing toward its authorized personnel limit of 152,000 compared to the total Army strength of 1,531,800. The Plan proposed to recruit, train, and equip within two and one-half years an Air Force that would outnumber by one-half million the entire 1941 Army. It is ironic that at the same time, Congress was debating to release 669,500 men drafted for the Army during 1940 for one year and there was considerable opposition to the United States entering the war by the American public. There was labor unrest and the Office of Production Management announced that a large number of factories might be forced to close within a year because of inadequate supplies of aluminum, copper, nickel, alloy steel, tungsten, zinc, and tin. Nevertheless, AWPD-1 was approved with little difficulty. The planners had done their homework.

The planning group started with determining what bombing accuracy could be expected from 20,000 feet by using training data and experience information furnished by the British. Related factors had to be considered such as unfavorable weather, camouflaged targets, anti-aircraft artillery, and enemy fighters. The planners finally arrived at requiring 30 group missions to achieve 90% probability of destroying a target. Intelligence information about the target system was obtained from the British. The types of targets considered were Germany's electrical systems, transportation systems, oil refineries, aircraft factories, aluminum and magnesium plants.

The planners arrived at 98 heavy bomber groups to destroy these targets by applying the planning factors against the target structure and with the assumption there would be six months of all-out offensive running from April to September 1944. Each group would have 72 airplanes with the use of 36 for each mission. A bomb group could be expected to fly eight missions per month, or 48 in six months. The number of combat bombers would dictate the number of air bases, fighters to defend the bases, support aircraft, training, and so forth. Little did the planners know that the Germans would develop a capability to restore bomb damage and be back into production within a very short time.

The forward bases became another problem. There were only a total of 39 bases in Britain and British-controlled land areas in the Mediterranean region, e.g., Egypt and Palestine, that would accommodate heavy bombers. Considering the total number of airplanes to carry the war to Germany, another 117 bases would be required for bomber, fighter, and support aircraft. The Suez area was considered for building air bases although there would be problems of construction materials, water, and supply difficulties. Heavy bomber bases would have priority over fighter bases. The attitude was that the bombers could get through enemy opposition without fighter escort although heavy losses could be expect-

ed. Coupled with the plan were three broad assumptions: 1) There would be a holding action in the Pacific if war should break out there with U.S. involvement; 2) Conduct an active defense of North and South America; and, 3) Launch a European offensive to defeat Germany as soon as possible should the U.S. become involved.

There continued to be opposition to the U.S. becoming involved in a war with Germany and Japan by some elements of Congress and the American public. The AWPD-1 and the corresponding Army and Navy plans were leaked to the press on 4 December 1941. The *Chicago Tribune* and the *Washington Times Herald* published the contents of the plans in spite of their high security classification. President Roosevelt's opponents pointed to the plan as proof of him leading the U.S. into a major war. The source of the leak was not definitely found nor would anybody in the government admit the plans were valid or approved by the War Department. Nevertheless, the German General Staff took them seriously and recommended to Hitler certain actions, among them was to stabilize the Russian front, begin renewed war activity against Britain and launch immediate attacks on all American shipping.

On 8 December 1941, Hitler, having just returned to Berlin from the Russian front, approved the recommendations of his staff. By then, the Japanese had attacked Pearl Harbor, but Germany and the United States had not declared war on each other. On 11 December 1941, Hitler declared war on the United States and cited the war plans as major provocations. This resulted in a "Fuhrer Directive Number 39" which included: steps for ending the Russian campaign without complete victory and establishing a strong defensive line in Russia; moving enough forces into the Mediterranean area to completely secure it, thus denying American bases there for striking German targets; developing massive air defenses around German industrial targets; and, increasing air and naval attacks in the Atlantic to isolate England and prevent the United States from moving forces to Europe.

Soon after this, Hitler returned to the Russian front and became outraged by the success of Russian counterattacks along the line. He had intended to advance past Moscow and Leningrad before establishing a defensive line for the winter. He held General Field Marshall von Brauchitsch, commander of the entire German Army, responsible. He advised Hitler to withdraw to safer defensive positions as Germany was ill-equipped to fight a war in Russia because of the severe winter weather. Thereupon, Hitler fired von Brauchitsch and he assumed command of the German Army. He ordered the positions to be maintained and planned a renewal offensive for the spring. This spelled the end of Directive 39, as the Russians inflicted heavy losses on the German Army during the winter months. Over 100 divisions that might have been shifted to the Mediterranean remained committed to the Eastern Front.

The irrational actions by Hitler made it possible to implement AWPD-1. The German Army and a significant part of the Luftwaffe became "bogged" down in Russia. This opened the way for the invasion of North Africa by the United States and it permitted British General Montgomery and American forces to push the German and Italian forces from all of Africa. Subsequently, the invasion of Sicily and Italy gave the Allies air bases which would be used to bomb the "underbelly" of the German

military/industrial complex. The might of the 15th Air Force from Italy coupled with the mighty 8th Air Force from England eventually rendered the German industrial complex and Luftwaffe almost useless. Had Hitler been more rational and taken the advice from his General Staff, the results of the war would probably have been much different. Certainly, the war planning would have required major changes, placing more emphasis on developing a bomber that could operate from the United States to hit German targets, the B-36.

President Roosevelt requested updating of the war plans in August 1942. The updated air plan was called AWPD-2. There were some changes made, but the basic plan remained intact. The target structure had some changes, e.g., ball bearing plants and submarine pens were added and given high priority. German bombers had earlier disrupted British engine production with a single strike on a bearing factory, causing British and American planners to suspect that German production might similarly be vulnerable. Further, the submarine menace was taking its toll on North Atlantic shipping. Also, the planners correctly foresaw a high priority for destroying the German Air Force, aircraft factories, petroleum refineries, synthetic fuel plants and transportation networks. At a time when work stoppages had been slowing American industrial production, the AWPD-2 envisioned an industrial expansion to provide a force of 7,097 heavy bombers, not counting the very long range B-36. In March 1945, a total of 7,177 American bombers were flying combat missions in Europe. The planners had done their job well. The AWPD-2 recognized that England would survive thereby reducing the need for development and production of the B-36. However, a serious shortcoming was the continuing failure to recognize the need for long range fighter escort for the bombers.

With the declaration of war, the labor problems in the U.S. started to disappear. Industry converted to wartime production and the Americans fully supported the war effort.



COLONEL KENNETH A. COOL
Colonel Cool was a native Ohioan, residing in Cleveland. He attended flying school at Randolf Field, Texas in the late twenties following graduating from Rutgers University. After receiving his commission, he flew the US Air Mail as well as being a member of the Ohio National Guard during the thirties. In 1941, Colonel Cool was called to active duty to serve his country for command duties as a senior pilot. He served in command positions with the 93rd Bombardment Group and flew combat missions in B-24's from England, North Africa and the Middle East during the latter part of 1942 and the first half of 1943. Colonel Cool was then selected to return to the United States to assume command of the 455th Bombardment Group. He led the Group through training, equipping and deployment to Italy where he remained in command through more than 100 combat missions. Colonel Cool was transferred to the 304th Wing Headquarters as Operations Officer on 28 September 1944.

Activation and Training



With the war successes in Europe and the Pacific and the validation of daylight high altitude bombing, the 455th Bomb Group (H) no longer remained just a number in a war plan. General Order No. 1, dated 8 July 1943 of the 455th, cited the authority for activation of the Group. The authority was paragraph 1, General Order 74 by Headquarters, Second Air Force, Fort George Wright, Washington, dated 22 May 1943. The four bomb squadrons, 740th, 741st, 742nd, and 743rd were activated soon after. The organization was without personnel.

The actual organization of the Group was accomplished at the Clovis Army Air Base (AAB) in New Mexico under the provisions of a letter from Headquarters, Second Air Force. Lt. Colonel Kenneth A. Cool assumed command of the Group under the 455th, General Order No. 1 cited above. He, with four other officers (Captains William E. Keefer, Frank J. Rinehart, David S. Thayer and 1st Lt. Alfred Asch), had just returned from flying combat in Consolidated B-24 Liberators with the 93rd Bomb Group which operated from England and Africa. The initial assignment of officers to Group Headquarters was as follows: Lt. Colonel Kenneth A. Cool, Commander; Capt. David W. Harp, Deputy Group Commander; Major Philip J. John, Executive Officer; Capt. Carroll A. Olsen, Adjutant; Capt. Alvin E. Coons, Intelligence Officer; Capt. Hugh R. Graff, Operations Officer; 1st Lt. Forest A. Harding, Engineering Officer. The squadron commanders were appointed soon thereafter. They were: Capt. William E. Keefer, 740th Bomb Squadron; Capt. Horace W. Lanford, Jr., 741st Bomb Squadron; Capt. Edwin C. Ambrosen, 742nd Bomb Squadron; Capt. David S. Thayer, 743rd Bomb Squadron. Most of the original personnel making up the 455th cadre were transferred from the 302nd Bomb Group (H) at Clovis AAB per Special Order No. 179, Headquarters AAB Clovis, 16 July 1943.

The four squadrons were organized to operate as independent combat units. They consisted of all organizational elements needed to operate, including squadron administration, operations, maintenance, supply, organization equipment, intelligence, signal, medical, ordinance, armament, messing, special services, and security. All the aircraft were assigned to each squadron.

The Group Headquarters served the staff functions of planning, coordinating, directing, training, administration, logistical support, intelligence, weather

information, mission planning direction, and assignment of personnel and aircraft to the squadrons. The Group Headquarters was interfaced with higher headquarters and interpreted policy and mission directives for action by the squadrons.

School of Applied Tactics at Orlando, Florida

On 19 July 1943, 45 officers and 67 enlisted men left from Clovis, New Mexico by train for the School of Applied Tactics at Orlando, Florida. The military ground echelon remaining at Clovis AAB drilled, attended lectures and spent time on the gunnery range. Arriving in Orlando on 22 July, the men departed from the train in the humid heat of the Florida summer. Most of the men lived in barracks with no air conditioning on the Orlando AAB and ate Army rations in the mess hall. A few men brought their wives and families and were permitted to live off base. Housing was short in Orlando, but the local citizens accepted the Group with "open arms." Living off base was sometimes difficult because of the rationing of food, gasoline, and other items. These people had to spend a lot of time at the local Rationing Board getting stamps to buy their necessities.

The ground school classes were held from 0800 to 1700 hours. Each of the men was trained in his specialty. The aircrew training included navigation over strange territory, emergency procedures (such as how to ditch and escape from a crippled aircraft), how to recognize and fire at enemy fighters, bombing techniques, and other areas.

Other personnel were trained in: Operations; Intelligence; Communications; Statistical; Transportation; Armament; Gunnery; Radio Operation; Aircraft Maintenance; and Material Support.

Academic classes lasted for two weeks, from 23 July to 2 August. The principal intent of this training was to prepare the cadre of personnel so they could train others as the Group reached its full complement of men and equipment.

Flight Training at Pinecastle AAB, Florida

Following the two weeks of academic training, the Group transferred to the Pinecastle AAB for practical combat training and experience in operating under field conditions. Four B-24's were assigned for the flight training. The base had a single asphalt runway hewn from the Everglade swamp area south of Orlando. Life at Pinecastle was endurable, but little more. The men were housed in pyramidal tents and were without power or water. Water was brought in by tank and Lister bags were scattered about the bivouac area for drinking. It was the first time for some to use the aluminum mess kit and canteen for eating and drinking. Webb belts were issued for carrying the water canteen in a canvas pouch and for those authorized to have the 45 calibre automatic pistol. Mess was cooked with field equipment and served in tents. The field rations were edible, but not much more. Toilet facilities were well placed slit trenches. Men used their steel helmets for bathing. Although the weather was unusually favorable, the mosquitoes were almost unbearable. Perhaps this served as conditioning for the mosquitoes yet to come in Italy. The aircrews looked forward to flying to get away from the mosquitoes.

The flying training consisted of daily missions, "bombing" Miami, Charleston, Washington, D.C., Philadelphia, Baltimore, and other cities along the

Atlantic coast. The missions were long, some over eight hours, with extended periods of high altitude. The navigators would bring the airplanes to an initial point (IP) for the bombardiers to simulate attacks and release the empty bomb stations over the target. There was no way to determine the accuracy of the flight. Seven training missions were flown, including three and four airplane practice formation flying.

Alamogordo AAB, New Mexico

While at Orlando, the Group was first informed its training station would be at Salinas, California. Later on, this was changed and the next station would be at Lowery AAB, Colorado. The final order came through designating Alamogordo, New Mexico as the next equipping and training station. It took some time to find Alamogordo on the maps because of its small size. Many men were disappointed about going to the "boondocks." Forty-eight officers and enlisted men flew to Alamogordo with the four Group airplanes and the remaining 64 traveled by rail 23 August. The ground echelon at Clovis departed on 12 August for Alamogordo to arrange for the arrival of the personnel from Orlando.

Offices were established and ground school initiated. Building space was at a premium and the buildings themselves were widely separated because of the planned dispersal on the base. Transportation was likewise limited and maintenance support for the four aircraft was inadequate. While at Alamogordo, eight additional crews, not all complete, joined the Group. On 2 September, approximately 300 ground support personnel were also transferred to the Group. At best, training was difficult to accomplish.

The town of Alamogordo by any standard was small and offered little in the way of recreation to the Group personnel. It is located in the desert near the White Sands National Monument and the current White Sands Missile Range of the Army. Mountains to the east, northeast, and west of the base made night and bad weather flying dangerous with inexperienced crews and limited navigation and instrument landing aids. The people of Alamogordo were warm and friendly and did their best to provide housing for dependents. One autocourt, movie house, grocery store, gasoline station, and restaurant provided the only entertainment. The Group personnel were almost totally dependent on the base for living and recreation. The post exchange (PX) and club would fill up during leisure hours. By the end of the evening, with the empty beer bottles cluttering the tables, members of the Group gathered in friendly "bull sessions" to tell how much better their last assignments had been. The WW I styled barracks were two story buildings with no air conditioning and unfinished inside. There was no privacy, with the iron cots arranged in two rows in large bays with latrine and bathing facilities shared. Nevertheless, the Group did proceed with its organization by making key assignments of the officers and enlisted men, making other assignments and conducting ground training. The lead air crews started to form and train together.

Salt Lake City, Utah

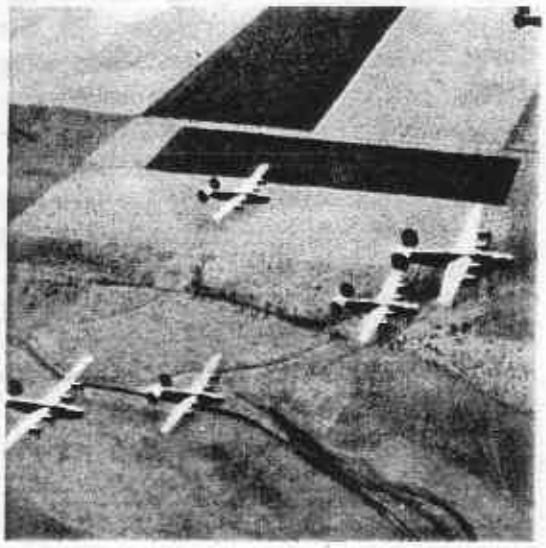
No tears were shed by the 560 officers and enlisted men when orders came to transfer the Group to Salt Lake City, Utah. An air echelon, led by Lt. Colonel Cool, traveled to Salt Lake City by air in the four Group airplanes. The ground personnel traveled by rail, with all personnel arriving between 6 and 9

September 1943. Again, there was disappointment because of the lack of training and support facilities at Salt Lake City. The first phase of training as a Group was to begin on 1 September and the personnel strength should have included all ground personnel and the 24 combat crews which would become flight leaders. With the Group's four airplanes and little ground support equipment for maintenance, very little flight training was accomplished.

Ground school started, but classroom space was inadequate and supplies were almost nonexistent. The base's mission had been as a replacement center, not for training. To compound the problem, the base was overcrowded. It was originally planned that the ground echelon would be at Camp Kearns, Utah, 16 miles away from the Salt Lake City air base where gunnery and other training facilities existed; however, this arrangement could not be made. Although excellent gunnery ranges were available for use at Camp Kearns, there was little transportation to move the men back and forth. Furthermore, most of the maintenance on the aircraft had to be accomplished at the Army Depot in Ogden, Utah which was just a few miles north of Salt Lake City.

An additional 12 combat crews reported to the Group and the balance of the ground personnel were assigned from the Base Replacement Wing. The uncertainty of how training would be accomplished and when it would start caused low morale. The Group commanding officer and his staff spent an inordinate amount of time "haggling" with headquarters and base personnel to solve the problems of training, maintenance, supply, housing, and other support. The men had too much idle time. They were in cramped barracks and the base recreational facilities were totally inadequate. Some men lived in tents. Salt Lake City, however, provided considerable recreational pleasures and the citizens were warm and friendly. Although there were "gripes," the men were to be admired for tolerating the uncertainty of moving, lack of training, and the poor living conditions.

Lt. Colonel Cool and his staff worked diligently with the 1st Bomber Command Headquarters to solve the training and other problems. The Group was finally ordered to proceed to Langley AAB, Virginia on 29 September 1943. Additional airplanes had begun to arrive but most were in very poor condition. Movement of the air echelon had to be delayed to accomplish repairs on the airplanes and make them safe for the long trip to Langley. The movement was finally completed 6 October. The morale of the Group began to rise upon arrival. A total of 1,510 officers and enlisted men made the trip and 50 additional combat crews joined the Group in Langley.



The B-24 Liberator



This history would not be complete without covering the origin of the B-24 Liberator, designed and built by the Consolidated Aircraft Corporation, San Diego, California. The French Government in May 1938 gave Consolidated specifications for a heavy bomber. Then the United States Army, in early 1939, developed a requirement for a heavy bomber of better performance than the existing B-17. The Army specified a bomber capable of top speeds of 300 m.p.h. with a range of 3,000 miles and a ceiling of 35,000 feet. From these, Consolidated initiated further design studies which led to the development of the B-24.

Consolidated's initial study was to develop a land-based bomber version of their new Model 29 flying boat, designated PB2Y, which accounted for the large rounded fuselage and high wing design of the B-24. The engineers continued design studies, designated XB-24, which incorporated Davis R. Davis' high aspect ratio wing (The Davis Wing) and twin-finned tail empannage used on the Model 31 flying boat, the P4Y-1. On 26 October 1939, the Davis Wing was married to the fuselage and on 29 December 1939, the Liberator flew for the first time.

In its day, the B-24 was by far the most complicated airplane and certainly the most expensive. One of the most unusual features was the tricycle undercarriage. The main gear was long to accommodate the tall bomb bays and it retracted outward by electric motor power. Equally unconventional was the roller/shutter bomb bay doors covering the 8,000 lb. bomb load which was stowed vertically in the two halves of the bomb bay, separated by a catwalk connecting the flight deck and the tail section where the gunners operated. The high wing loading of the Davis airfoil was also unique at that time.

The French entered into a production contract in September 1939 for 139 aircraft designated LB-30, the first overseas version. After the fall of France to the Germans in June 1940, the English assumed deliveries of the French order of 139 airplanes and increased it to 165. They started using these in a variety of roles. The United States AAC placed an order for seven YB-24's on 11 April 1939 for service testing. This was soon increased to 38 additional airplanes designated the B-24A, enough at that time for a bomber group. The combat experience of the French and English, and service testing by the AAC led to several major modifications. These included 50 calibre machine guns in the tail in place of the 30 calibre guns, self-sealing fuel tanks, addi-

tional armor plate, and engines upgraded from Wright to the Pratt and Whitney R-1830-41 with turbo superchargers. Gun turrets were added to the tail and above the flight deck. With these improvements, the designation progressed from YB-24 to B-24D, the first version to see combat service by the United States AAC. Its gross weight had gone from 46,400 to 56,000 lbs. with a service ceiling of 28,000 ft. and operational cruising speed of 175 m.p.h. Modifications became so numerous that it became impossible for implementation on the production lines. Modification centers were established to handle the changes.

The name "Liberator" came from the British and was endorsed by Consolidated through a company-wide naming contest held in 1942. It became a very versatile airplane. Apart from its bombing role in all theatres of operation, it hauled fuel to France during the push toward Germany, carried troops and fought the U-boats in the Atlantic Ocean. It served as Prime Minister Churchill's personal airplane for his frequent trips to other countries and combat theatres to carry out foreign policy and coordinate the war effort. It also made a major contribution in winning the war in the Pacific. Throughout its relatively short operational career, the B-24 was overshadowed by the B-17 Flying Fortress. It did not receive the notoriety in press and other media that it deserved. The B-17 "glory boys" looked upon the slab-sided B-24 with disdain, referring to it as "the crate our's came in." Some affectionately called it "the pregnant cow." It is probably best remembered for its use in the low altitude raid on the Ploesti oil refineries and storage facilities during August 1943. A total of 18,188 were built, more than any other aircraft before or since WW II.

Other companies built B-24's from the Consolidated design: Convair and Douglas Aircraft Companies at Ft. Worth, Texas, and Tulsa, Oklahoma respectively; the Ford Company at Willow Run, Michigan, where the latest production line techniques were employed; and, the North American Company at Dallas, Texas. Construction at the Ford plant started in 1941 and, at completion, cost 165 million dollars and was a quarter mile long with 70 assembly lines. Although North American did not go into production until 1943, they were the first to introduce the nose gun turret with 50 calibre machine guns. Additional improvements were made resulting from early combat experiences. The belly turret, with 50 calibre machine guns, was also added. The bomb sight was tied into the auto pilot to improve bombing accuracy. The bombardier was able to make course corrections with the system rather than the pilot manually making them by following the pilot directional indicator (PDI). There were three other improvements made which were important for high altitude bombing operations, seldom if ever, written about. The first was a change to the oxygen system. The early version, operating from England, had a pressure feed system whereby oxygen flowed constantly to the face mask. The mask had a rubber sack at the bottom to collect the oxygen. After a few hours at high altitude in frigid weather, the mask tended to freeze up from the collection of moisture from a man's breath, cutting off the oxygen supply. The radio operators, having the least to do in and out of the target area, saved many crew members by feeding them oxygen from a "walk-around" bottle while restoring the operation of the mask. The installa-



740th airmen test the strength of a B-24.

tion of the demand system and redesign of the oxygen mask corrected the problem. Another improvement was the addition of electronic supercharger controls, replacing the manual type. After reaching altitude, the pilot changes the power for formation flying by changing the setting of the superchargers rather than the throttles. The problem was that the control handles to the superchargers had to be staggered to get uniform power from all four engines. If the pilots used the throttles for changing power, it would sometimes "blow" the supercharger gaskets, thus loss of power. The electronic controls, operated by turning a knob on the throttle pedestal, synchronized the four superchargers to the engines. This feature made it considerably easier to fly high altitude formation.

The introduction of the electric flying suit, including gloves and boots, saved crews from frostbite in the frigid weather at high altitudes. Unfortunately, they often shorted out and caused burns at the most crucial times. Crews that would use them, wore them inside flying suits and jackets in case of failure. Also, if a man had to bail out over enemy territory, he needed more than an electric flying suit to survive prison camp or escape enemy capture.

Another important improvement was in the sights of the 50 calibre machine guns. Although the gunners were making high claims for shooting down enemy fighters, actual results were disappointing. The sights were simplistic, amounting to only a spike at the end of the barrel and a sighting ring at the stock. The gunners had to judge the distance and speed of the incoming fighters. Although every fifth bullet was a tracer to assist the gunner's accuracy, there wasn't time to make aiming adjustments during the attack. The gunners were instructed to lead the fighters more in their sighting. There was no account taken of the fact that both the bombers and fighters were moving forward. One could observe the tracers going behind the oncoming fighters. Mathematicians and armament officers designed new gun sights that had a series of circular rings to aid the gunners in determining range, speed, and direction. Improvements in accuracy resulted overnight.

The B-24 in Early Combat



The first group of B-24's. the 93rd Bomb Group, to fly combat arrived in England during September 1942. The B-24 remained in the shadows of the B-17 Flying Fortress for some time. Over 100 Fortresses, enough for three groups, had been flying high altitude bombing missions over France since 17 August 1942. The maiden B-24 mission from England was flown on 9 October 1942 against the Fives-Lille steel works in Belgium. The Group came under heavy fighter and anti-aircraft fire. In October 1942, the 44th Bomb Group was the second B-24 group to arrive in England. It fell to the B-24 and B-17 Groups to prove conclusively that daylight precision bombing could succeed in the deadly skies over Europe. The British Royal Air Force (RAF) remained unconvinced. In November 1942, even American instructors doubted their crew's ability to bomb in daylight and survive German opposition.

Daylight high altitude precision bombing started gaining credibility after making equipment and operational improvements which led to good bombing results on the early missions. The first equipment change was the installation of two additional 50 calibre machine guns in the vulnerable nose section to combat head-on attacks by Luftwaffe fighters. The Luftwaffe soon learned they could make quarter head-on attacks without being fired upon. This modification was concocted by enterprising armament officers and installed by a small company in Northern Ireland. The guns had a ball joint, making them movable for sighting by the navigator and bombardier. One pointed forward and one out each side of the plexiglass nose section. The navi-

gator and bombardier had to lie on their stomachs to sight and operate the guns. Also, automatic belt feeding systems were installed on all gun armament through field modifications, replacing the cumbersome process of changing 36 round drums during the heat of battle. The Luftwaffe soon developed a respect for the new armament and their losses started to mount from the B-24 gunners' improved fire power and accuracy. Consolidated started adding these improvements to future production models.

Experimentation was undertaken to determine optimum altitudes, flight formations and bomb run methods to destroy targets and counteract German defenses of flak and fighters. In November 1942, B-24's and B17s were sent to Saint Nazaire in France to destroy submarine pens. Thirty-one B-17's went in first, followed by 12 B-24's. All flew at 500 feet to avoid enemy radar detection before climbing to bombing heights ranging from 7,500 feet for the B-17's to 18,000 feet for the B-24's. The B-17's suffered heavy losses which included three airplanes missing in action (MIA) with 32 crewmen, 22 damaged, one crew member killed, 11 wounded, and one aircraft crash landing on the return. The B-24's, bombing at 18,000 feet, suffered no aircraft losses with only one slightly damaged. This raid confirmed that the bombers could not attack a target from low levels and come through without suffering unacceptable losses. This and earlier raids also confirmed what the planners knew all along. The B-24, with its high wing loading, made it difficult to maintain a tight formation above 21,000 feet, even though its service ceiling was 28,000 feet. In addition, its operational cruising speed of 175 m.p.h. made it 10-20 m.p.h. faster than the B-17's. This made it difficult for the B-24's to follow the B-17's to bomb a common target.

After experimentation, the flight formation settled on a three flight arrangement with a lead flight of six aircraft and a high flight stacked to the right and low flight stacked to the left of six aircraft each. Each flight had three aircraft in a diamond formation. When the group strength reached 36 or more aircraft, a second section of 18 aircraft was added. This formation carried over from the 8th Air Force to the 15th for operations from Italy.

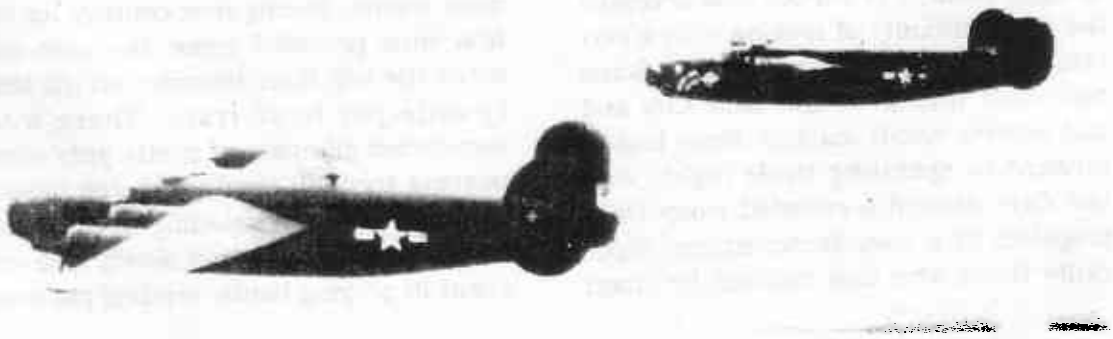
The method of making bombing runs changed with experience. The pilot in the lead airplane frequently took evasive action to avoid flak from the initial point (IP) to the target and at the last moment would follow the PDI at the direction of the bombardier operating the Norden bomb sight. The evasive action was a series of small turns to the left and right. This made it difficult to hold a large formation together and only the best pilots could conduct this maneuver, then follow the PDI at the last moment and hit the target. All airplanes dropped their bombs in formation with each bombardier setting the range in the bomb sight. Results were often unsatisfactory and the bomb strikes tended to be scattered. Changes were made whereby all groups were ordered to fly straight and level from the IP to the target and only the lead ships in each flight were to drop their bombs from the bombardier's setting of the range. All others were to drop their bombs when the bombardiers visually observed the bombs dropping from the lead ships in their flight. Bombing results improved and much better concentration of strikes occurred in the target area.

The accuracy of high altitude daylight bombing started taking its toll on

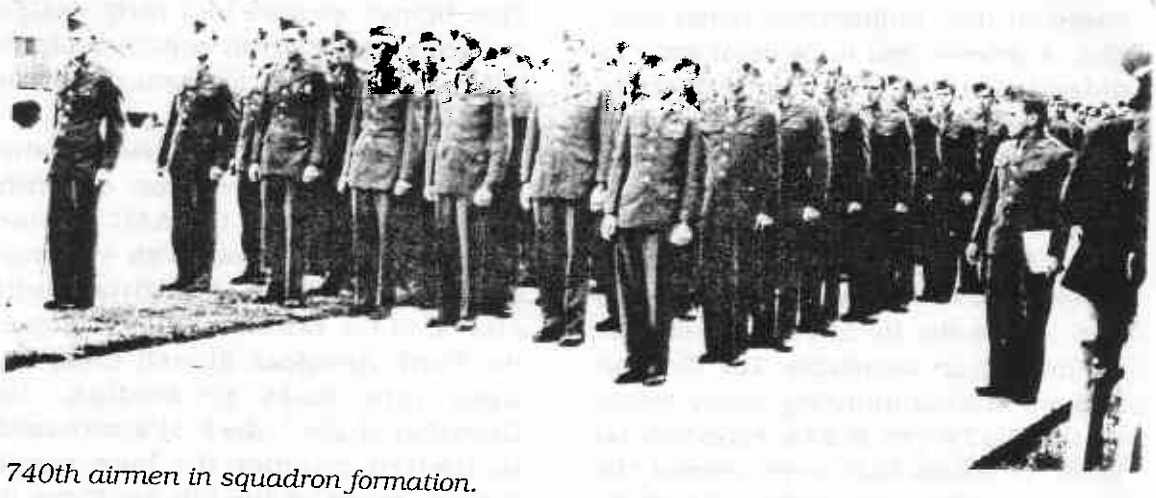
German targets. Some called it "pinpoint" bombing. The bombers were getting through in spite of enemy opposition, but they suffered heavy losses on some missions. They were getting through, nevertheless, without fighter escort. The Germans started to realize that a large buildup of the American bomber forces could wreck havoc on their military/industrial complex. A defense had to be developed. To defend against the bombers, they moved many fighter aircraft from the Russian front and the Mediterranean area to Germany, France, Belgium, and Holland. This relieved pressure from the air in these active war areas and greatly assisted the Russians on their front and also helped the British and Americans in the African campaign. The German fighters started inflicting heavy losses on the B-17's and B-24's, especially on those missions that were beyond the coastal targets of France, Belgium, Holland and Germany.

The RAF provided some escort, but its Spitfires had very limited range, thus providing protection for bombing only the coastal targets of Europe. American P-38 and P-47 aircraft were in production, but had not been fitted with external fuel tanks nor were there enough numbers for effective bomber escort on long missions. The lack of escort fighters resulted from an error in planning in 1941 and 1942. By August 1943, the P-47's were fitted with auxiliary fuel tanks which gave them the capability of longer range bomber escort. Shortly thereafter, up to 200 of these aircraft were dispatched to fly bomber escort, but they were greatly outnumbered by the Luftwaffe. It was not until the fall of 1943, that the P-38 started flying escorts in small numbers. This fighter aircraft had early design problems with its twin engines and tail booms and external fuel tanks had not been fitted.

The P-51 became the most effective escort fighter. It evolved from a British design in 1940 and the AAC became interested in the fighter. With a change in the engine from the British-built Allision to the British built Rolls-Royce, the North American Aircraft Company went into mass production. By December of 1943, the P-51's were used in limited number for long range bomber escort of the 8th Air Force in England. By the time the 455th started operations from Italy during the spring of 1944, it enjoyed long range escort by the P-51, P-47 and P-38 aircraft on most missions where fighter opposition was expected. External fuel tanks had been added for long range bomber escort and the design problems for the P-38 had been corrected. Even so, the Group lost a significant number of B-24's from enemy fighters.



Langley Field



740th airmen in squadron formation.

The movement of the personnel and airplanes from Salt Lake City to Langley AAB was completed on 6 October 1943. Morale of the Group began to revive with their arrival at Langley. A total of 292 men traveled by air in the Squadron's B-24's and another 1,418 came by rail.

The troop train was commonplace during WW II. There was always a certain amount of mysticism surrounding a troop movement because of the secrecy placed on it by the Army. Most of the men were comparative rookies with six to eight months of service who accepted the confidentiality of moving with a certain amount of awe and suspense. Some had made friends at Salt Lake City and had regrets about leaving. None looked forward to spending three nights and two days aboard a crowded troop train propelled by a slow steam engine, especially those who had traveled by troop train from Clovis to Orlando, to Alamogordo and then onto Salt Lake City. Each squadron had a troop commander and its own troop kitchen. Two meals per day were served but fresh meat, fruit and vegetables were not common. The rights of the men to "bitch" were fully exercised by complaining about the food; stuffiness of the coaches; the lack of fresh air; the dust and smoke from the road bed and engine; and, discomfort from the crowded, hard riding seats. The bitching failed to improve conditions but made the trip seem easier. Seeing new country for the first time provided some diversion and made the trip more bearable on the thirty-mile-per-hour train. There were sometimes glimpses of pretty girls when passing through towns with the associated hooting and whistling by the men. Time, nevertheless, went slowly and was spent in playing cards, reading old mag-



Armament shop, checking .50 caliber machine guns. l to r: Lt. T. Shimrock, M/Sgt A. Riewe, Sgt R. Bradley, Cpl C. Murphee, Cpl J. Bonska, Cpl J. Macavot and PFC K. Jones.

azines and catching a few winks of sleep sitting up in the hard seats. Upon reaching Langley, everyone was ready for a hot shower, decent meal and a bed with clean sheets. These "amenities" helped relieve the aching backs and sore muscles produced by the cramped train quarters.

Langley Field provided the best living accommodations the men experienced to date. The quarters were permanent with reddish tile on the floors and also laid eye level up the walls. The bunks were double-decked with lots of room between them. The latrine and showers were tiled and there were even doors on the toilet stalls! The food was good with the mess hall located downstairs from the sleeping quarters. The base provided recreation facilities which included a PX where one could buy toilet articles, beer, candy bars, magazines; clubs for the men; gymnasium; and, a movie theatre. Further, bus transportation was provided for those wanting to visit the town of Norfolk. However, with the large Navy bases, there was competition from Navy men in sharing the "goodies" of the town.

The flight echelon had a much easier trip to Langley with a flying time of seven hours. Some stopped en route to visit friends and family. The squadron navigators got cross country navigation training from the long flight and the pilots gained experience in weather flying and radio navigation. The most experienced pilots were assigned to each airplane as airplane commanders as some pilots had little experience in cross country flying. The low frequency radio ranges were sometimes unreliable for navigation, especially in mountainous areas and the presence of thunderstorms. Also, there was not complete coverage of the low frequency radio airways throughout the United States. Although there were radio compasses in each airplane, which were relatively easy for the pilot to follow and home in on a range station, they were not always reliable because of poor maintenance and outside interference from mountains and bad weather. The most reliable procedure was to fly the range into and out of a radio transmitting station. The system was quite reliable, depending on the skill of the pilot and outside interference to the signals.

One airplane, piloted by Tom Ramey, had an emergency landing at Olathe, Kansas. This is his story: "We were flying a 'war weary' pink colored B-



Time out for fun. Halloween dance, Langley Field Officers Club.

24 that had been used in the Libyan Desert. We lost two engines on the right side. We got the main gear down but not the nose wheel. We had a squadron crew chief and the aerial engineer working to manually get the nose gear down but they had to give up and return to the flight deck because we were getting too low. The skidding on the nose portion of the fuselage gave us braking action, thus we were able to stop before going off the end of a short runway. With no hydraulic system, there was only limited braking action provided by the two accumulators as emergency back-up. No one was injured." Tom's exceptional piloting ability saved the airplane for use at another time. Another incident occurred at the Chicago Midway Airport as related by Captain Horace Lanford, Squadron Commander of the 741st Squadron: "We stopped overnight at Midway. When it came time to leave, we could not get the number four engine started because of a defective starter. I got permission from the Midway tower to use the active runway for starting the engine. We gained enough speed down the runway with the three operating engines to get number four 'windmilling' from a feathered position. It turned over fast enough before reaching the runway end to start running. We taxied back and took off with all four engines running and arrived at Langley with no further problems." End of quote. There is no way this sort of thing would be permitted today. All other airplanes arrived safely at Langley without incident.

The officer's quarters were excellent and the club was one of the best in the AAC at the time. Those fortunate enough to have their families with them found temporary quarters with a room and bath at the hotel at Fortress Monroe which was operated by the Navy. Meals were served at the hotel (such as they were). While the officers were at work, the ladies occupied themselves by playing cards and nickel slot machines. Gambling proved to be expensive to those who overindulged in playing the "one-armed bandits." Temporary living quarters from the local economy were difficult to find. Nevertheless, some found them and solved the gambling problem by moving from the hotel. Pooling the limited transportation resources became the rule for the officers and enlisted men to travel to and from work.

Langley was perhaps the best air base of the AAC for organizing the squadrons and accomplishing the equipping, training and staging for overseas movement. It provided an opportunity for the squadrons to learn how to get things done and become self-sufficient; learn about the capabilities of the personnel; and, more importantly, making friends and establishing an esprit-de-corps which lasted throughout the war months. All personnel worked hard in training and mastered their jobs. There was little time for recreation because of the accelerated training program. Working 12 hours per day, seven days per week was not uncommon. All types of training were emphasized, i.e., administration, aircraft maintenance, armament, ordinance, signal, supply, flying, bombing, survival, and of course, the usual marching of the men.

There were the traditional Army legionary lines of men for messing, monthly examination by the doctors and the once per month pay call. Payments, all in cash, were made by the squadron adjutants and the payroll clerks. They would sit at an olive-colored field table with a 45 calibre revolver at hand and disperse the payments by rank, in

alphabetical order. The pay was so small that most men were broke from one pay day to the next.

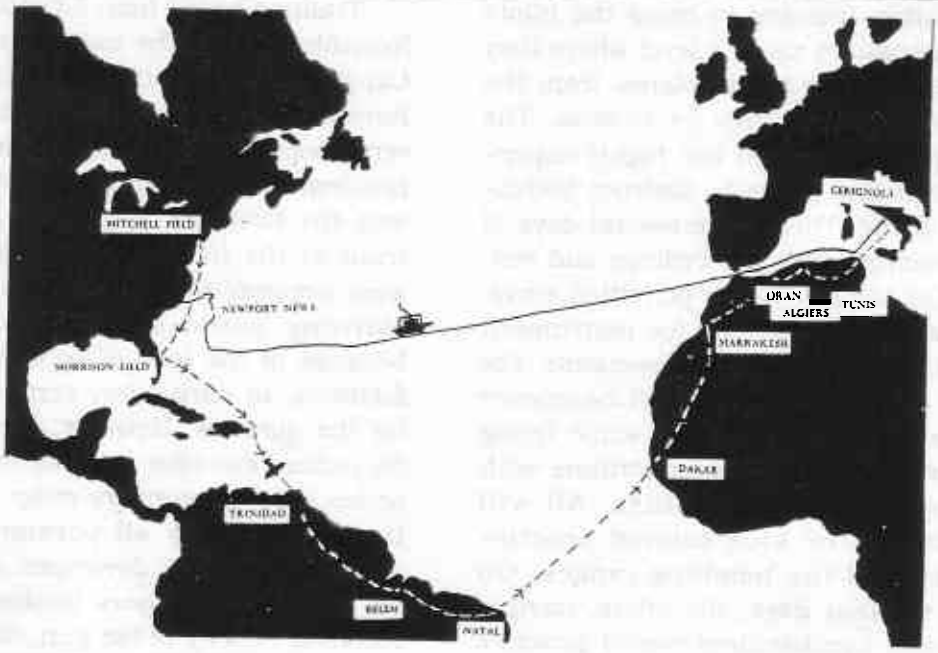
There was emphasis on flying and navigation training to bring the pilots and navigators up to a level where they could safely fly the airplanes from the United States to Italy for combat. The Group was assigned two highly experienced airline pilots to instruct instrument flying. There were several days of bad weather with low ceilings and visibility at Langley which permitted excellent actual conditions for instrument flying. The training was invaluable. For some pilots, it was their first experience for takeoffs and landings while flying under actual weather conditions with low visibility and ceilings. All will remember the blue colored practice bombs and the bombing ranges. On good weather days, the pilots, navigators and bombardiers would practice high altitude navigation and bombing. The squadron operations officers had some opportunity to fly with the pilots to evaluate their capabilities prior to the long flight overseas. However, with 50 crews joining the Group at Langley, it was impossible to evaluate all crews.

Most of the training of the ground support personnel, e.g., aircraft maintenance, radio, armament and ordinance, was on-the-job provided by the most experienced sergeants. There was pressure on the aircraft maintenance personnel to keep in commission the few airplanes the squadrons had for air crew training. The ground support by all organizations was excellent and the morale was exceptionally high. There were several social functions at the clubs for both enlisted men and officers which brought the personnel even closer together. This was extremely important in preparing for combat. The entertainment was provided by "big band" groups of the day, playing ballroom and swing music of the 1930s and early 40s, and remains the favorite of many of us today.

Training lasted from 5 October to 30 November 1943. The base personnel at Langley, and particularly the First Bomber Command Detachment, were very cooperative. Although a number of problems arose from the fact that this was the first heavy bomber group to train at the field, all training phases were accomplished on schedule. Some training could not be completed because of the lack of equipment and facilities, in particular, aerial gunnery for the gunners. However, there was a 50 calibre machine gun mounted on a pedestal at the gunnery range for practice shooting by all personnel. The ground personnel developed a respect for the aerial gunners because of the recoiling velocity of the gun. All personnel were qualified in small arms fire. In spite of the grumbling by the men, there was a great deal of marching, some with full field equipment, and exercises to get us in shape. The flight training was accomplished without a complete loss of an airplane and there was no loss of life or personnel injuries. Two accidents did occur: one when a B-24 had a gear collapse on landing and the other when one of the airplanes had engine failure and was forced to land on the beach.

Finally, the Group was ready to receive its new airplanes, supporting equipment, clothing, etc., for the journey overseas. The censors had started censoring the mail and a temporary APO number was assigned for the overseas postal address.

Destination Italy



The Group staging was to be performed for the ground personnel for the long trip by boat to Italy at Fort Patrick Henry, and for the flight echelon at Mitchell Field on Long Island, New York. Staging for the ground personnel, however, was actually accomplished at Langley Field. Restrictions began at midnight on 5 December 1943 where all military personnel were confined to the field. The first contingent of the flight echelon took off for Mitchell Field on 2 December 1943 and the last B-24 left Langley 15 December 1943.

The loading of equipment to travel by ship began 4 December at Hampton Roads, Virginia. A total of 2,004 personnel were involved in the movement, 868 by air and 1,136 by boat. The staging process involved the receiving of organization field equipment, clothing and personal equipment such as mess kits, carbine rifles with six rounds of ammunition, steel helmets and overseas physicals. Again, there were long lines to receive the personal items which were carried in the famous duffel bag and lines for the final overseas physical examination. Every 20th man in line also received a Thompson submachine gun. The famous cough for checking for a hernia became a part of barrack's humor. Those resenting the examination coughed in the doctor's face...those more polite turned their heads. One of the physical checkup jokes had a man bending over for one doctor while another would look down his throat. If the doctors didn't see each other, the person was pronounced physically fit for overseas combat. The final stop was getting one's immunization shots up-to-date.

The Air Journey

The squadrons started receiving their B-24H airplanes during November 1943 while at Langley. A total of 64



were received, or 16 airplanes for each squadron. Training continued and equipment shakedown was accomplished at Langley before the trip to Mitchell Field for final staging. Most crews had works of "art" done on their airplanes, usually a well-stacked, scantily clad girl. All the crews named their airplanes and fell in love with them, each boasting how much better theirs was from anyone else's. Having their own airplanes was a morale booster for the combat crews and their assigned maintenance personnel, the apex for what they had been working toward during the hard months of training.

Excitement was at a high pitch with the crews realizing the plunge overseas was directly ahead. The dependents started leaving for home and there were many sad partings. The squadrons started losing their identity as the long process of moving overseas began. However, the air crews remained intact but Group and Squadron Headquarters personnel and maintenance men were assigned to various airplanes, making a total of 14 people for each B-24H for the trip to Italy. Wherever possible, the most experienced pilots were assigned to each crew as airplane commanders. All crews made the trip safely to Mitchell, with the last one arriving on 15 December 1943.

Time was spent at Mitchell in final checking and shaking down the airplanes and receiving overseas equipment. A fuel tank holding 400 gallons of fuel was installed in the bomb bay compartment on each airplane for additional range on the long over-water leg between South America and Africa. With the added fuel weight, 14 men and their baggage, critical spare parts and supplies stacked in the bomb bay, there was concern about overload and the weight and balance of the airplane. The test was that if the nose wheel remained on the taxi strip during taxi, the B-24H would become safely airborne. If it nosed up and rested on its rear skid, one had to shift the cargo and move the men forward in the airplane during taxi and take-off. This was not a very scientific way to get the proper weight and balance, but it worked. There were no accidents during taxi and take-off because of improper weight and balance.

The living conditions at Mitchell, although crowded, were quite good as it was one of the permanent bases of the Army Air Corps. It was a relaxed environment with open post every night and many celebrations. The only formation anyone had to meet was at 8:00 a.m. each morning for a pilot's meeting. Some dependents followed their husbands and stayed in and around Garden City, Long Island to be with their loved ones a few more days before the overseas departure. One place was the quaint old Garden City Hotel with its high ceilings, hand cable operated elevator, and its formal dining room with chandeliers, linen table cloths and napkins and sterling silverware. It was relatively easy to visit New York City for

excellent entertainment at the movie houses, live theatres, night life and sightseeing using the Long Island commuter train. The crews were confined to the field two days before their scheduled departure time. Some broke this rule to be with their dependents a few more hours by jumping the fence and there were a few who rode in the back of an Army ambulance to get through the gate. Confinement was an old Army custom to insure that all personnel would be on the boat or, in this case, the airplane. There was not a single person that would have missed this one for the action to follow in Italy. It is said that the departure of the crews and depletion of their money arrived at the same time.

Flying The Ocean

Excitement ran high everywhere at the prospect of crossing the "big pond" with one's own airplane. Navigators were treated with "kid gloves" and were given the "glad hand" everywhere they went. All crews took off from Morrison Field, Florida, the first stop from Mitchell. The trips over were enjoyable as a whole, with few complaints. The crews traveled in new territory and their eyes saw new and interesting things everyday. The routes flown were a bit different.

Some crews stopped at Borinquen, Puerto Rico the first night, others at Waller Field, Trinidad. Crews that stopped at Borinquen marveled at the Caribbean tropical night and the supply of rum drinks. Some crews stopped at Atkisson Field, British Guiana, where it was damp and jungle-like. It rained off and on every day. There was the "Jungle Jolly's Joint" to help everyone forget the weather and home so recently left. Stops in Brazil were Belem and either Fortaleza or Natal. Everyone was held up at either of the latter due to overcrowding of the route. Crews bought Brazilian boots and basked in the sun. The hop was at hand. The great Atlantic spread before all. Everyone "sweated" it out, but all made it without mishap. The coast of Africa was a most welcome sight. The following is a description of the route taken by the author.

To Morrison Field, Florida

Only a few days before Christmas and as soon as their airplanes and equipment were ready, the crews started leaving on the first leg of the flight to Morrison Field, Miami, Florida. Takeoff at Mitchell was generally to the west and a few pilots flew low over Garden City and its hotel, waving their wings as a final "goodbye" gesture. The flight to Morrison was seven hours and 30 minutes along the east coast of the United States. It was a gorgeous flight, with part of it over water. Nevertheless, the crews could always see the beautiful east coast from an altitude of 8,000 feet. Thoughts flashed through some of our minds whether this would be the last sight of our country.

To Trinidad

The crews stayed at Morrison just one day for final airplane and equipment checking and refueling. By 23 December, many of the first airplanes took off to make the ten hour and 45 minute flight to Waller Field, Trinidad. The takeoff was near midnight so as to arrive during daylight hours. Takeoff was to the northwest over the Everglades. Soon after "wheels-up," the airplanes plunged into darkness as there were no ground lights for reference. Our airplanes were very heavy with gasoline, personnel and equipment; one had to admire the skills of

our pilots to transition to instrument flying soon after leaving the runway. At least one pilot of another group did not make it on 23 December as his airplane crashed just ahead of us and burst into flames. Nevertheless, takeoffs of the 455th continued.

The flight to Trinidad was about one-half at night and one-half during daylight hours. The tropical thunderstorms were circumnavigated. At daybreak, the crews could see many of the Caribbean Islands which gave them a sense of security for those flying over water for the first time. Navigation was left up to our own devices with no radio aids except a short-range, low frequency beacon at the airfield in Trinidad.

Several of the crews spent Christmas in Trinidad. They shared the club facilities for celebrating Christmas Eve. The layover there was, on the average, three days. Some crews visited the capital, Port-of-Spain, to get a "flavor" of how the indigenous people lived. We were surprised at the open air markets with no refrigeration for meat products, with swarming flies and stench. The refreshment enjoyed by the local people was milk and meat from fresh coconuts, a native crop. A young, shirtless man had a stack of green coconuts and he used a machete knife to chop a small hole in one end. The customer drank the milk by holding the coconut to his mouth. Following this, the young man split the coconut in half and the customer would scrape out the meat and eat it by using a splinter chipped from the coconut shell. This was quite different from getting refreshments from a soda bar in the U.S.

To Belem, Brazil

Takeoff for Belem was early morning, about 30 minutes before sunrise so as to arrive during daylight hours and early enough to avoid afternoon thunderstorms over the tropical forests of Guyana and Brazil. The flying time was seven hours. One could look down and see nothing but a mass of greenery, with no signs of human life except directly over the Amazon River. Thoughts flashed through our minds if one would ever be rescued in the event of going down. Certainly, no one would survive parachuting into the jungle. The weather at Belem for landing was about 500 foot ceiling and two miles of visibility. We all made good use of the low frequency radio beacon for the letdown and landing. All landed safely and without incident, a feat we were all proud of. Our training at Langley was paying big dividends.

Belem was practically on the equator, hot and steamy. We were introduced to using mosquito nets to defend against many different kinds of bugs and small rodents completely foreign to all of us. There was nothing to do as the airport was carved out of a thick jungle. Our clothing was soaked with perspiration as well as our sheets. Everything had a musty odor and there was no way to dry out and cool off as air conditioning was unheard of. The barracks were hastily constructed from shiplap lumber and set about two feet off the ground to discourage snakes and other animals from entering. We were getting a taste of field conditions where we had common showers and latrines and started using our mess kits to eat field rations which were poorly prepared.

To Natal, Brazil

One day at Belem was enough for everyone. The crews eagerly looked forward to takeoff and getting some altitude to escape the "steam bath" at Belem. However, some crews had to

remain longer because of congestion at Natal. Flying time to Natal was four hours and 15 minutes, all daylight. Again, takeoffs were early morning to avoid the afternoon tropical storms. Flight was again over dense jungle, with no signs of life. Living conditions were about the same as Belem with the airfield chopped from the jungle. However, the weather wasn't so hot and it was much dryer.

Some had a two to three day layover before making the long flight over the Atlantic Ocean to Dakar, Africa. Some ventured into town which had lovely sandy beaches. The principal commodity was homemade leather ankle-high boots which some purchased at seemingly bargain prices. They turned out to be more like paper than leather as they fell to pieces after wearing a few times. Some bargain! Nevertheless, we had a few humorous moments teasing those who took advantage of the "bargain." The crews got well-rested at Natal before the long over-water flight to Dakar.

To Dakar, Africa

The day arrived for takeoff to fly the longest leg of the trip, Natal to Dakar, a total of 12 hours with more than half at night and about one-fourth in bad weather. The navigators and pilots received separate briefings prior to takeoff. This was to be the first experience by most crews for flying over water with no ground navigation check points and only low frequency short-range radio beacons on departure and arrival. The airplanes were heavily loaded and takeoff was over jungle with no reference lights soon after the wheels were up. Nevertheless, we all got off without incident and arrived safely at our destination. A few aircraft started running short of fuel before reaching Dakar and at least one crew dumped their guns and other equipment to lighten the load to conserve fuel. The food and living quarters were not much better than our last two stops. However, the weather was pleasant, a most welcomed respite from the "steam bath" weather of South America.

To Marrakesh, Africa

The flight to Marrakesh was seven hours and 45 minutes, and quite easy to navigate over land and along the African coastline with no cloudy weather. Marrakesh had been under the colonial rule of the French prior to WW II but the large presence of the French people indicated there was no practical change. Although our layover was generally one day, some crew members went into town for recreation. Some ventured into the Casba but with extreme caution and soon returned as one got the feeling that trouble could be just around the corner. They quickly departed and returned to the airfield.

One airplane piloted by 2nd Lt. Clyde P. Brunson crashed on take-off at Dakar. He lost power on numbers one and two engines part way down the runway. This pulled the airplane off the runway, it cartwheeled and caught fire. Two men lost their lives and three were injured. The remaining personnel were put on other aircraft for the remainder of the trip to Cerignola. Lieutenant Brunson and his crew regrouped and distinguished themselves in combat.

To Tunis, Algeria

Most crews left Marrakesh the day after arrival and flew to Djedeida Field, a short distance from the city of Tunis. This was between 2 and 5 January 1944. We were to stay at Djedeida until our base would be ready for us at Cerignola, Italy. The flight time to

Djedeida was six hours and 45 minutes over barren desert with few landmarks for navigation. The weather was excellent for flying and all crews arrived on schedule. We were starting to become quite comfortable with our crews in their piloting, navigation, and the maintenance of the aircraft and its radio and flight equipment. When we arrived and circled the field for landing, we saw one black landing strip and swarms of tents which would be our "home" for two weeks.

The officers of each crew shared a tent as did the enlisted men. Being January, the weather was cold at night. We heated the tents by applying "yankee ingenuity" to the materials at hand, i.e., the halving of 55 gallon steel drums placed on rocks with a fuel line made of tubing from crashed airplanes which we pinched and punched with holes to act as a burner. There was a tank outside the tent holding volatile 100 octane airplane gasoline. The trick was to regulate the flow of gasoline to the burner for an even flame. The saying was "a tent a night up in flames." Everyone stacked their bags near the exit for a fast escape if a fire should occur. Although we had a few tent fires, very few lost their belongings nor was anyone badly burned. To this day, the source of all those 55 gallon steel drums remains a mystery. We were introduced to the canvas field cot for the first time with racks built for the mosquito nets which we used for the entire time overseas. Some filled mattress covers with straw to make the cots more comfortable.

The Group remained at Djedeida from 4 to 17 January 1944 awaiting the ground personnel and Army Corps of Engineers to prepare the base at Cerignola for the flight crews and airplanes. We put this time to good use in formation flying, especially by the squadrons. It was during this time where the crews could be further evaluated and the flight leaders chosen. There was one serious accident. An aircraft of the 740th Squadron took off with the control surfaces locked. It had rained the night before and shrunk the cloth webbed strap that locked the controls. This oversight was not discovered until the pilot had applied full throttle and the airplane was well down the runway. The copilot could not disengage the strap because it had shrunk from the rain and was too snug. It was too late to abort the takeoff and get stopped while still on the runway. The airplane proceeded into a freshly plowed field, the nose wheel dug into the loose soil, and the new B-24H flipped over on its back.

The pilot and copilot were trapped in their seats hanging upside down from their seat belts but unhurt. All other crew members escaped with minor cuts, bruises and scratches. Luckily, the airplane did not catch fire although some gasoline was leaking from the tanks, giving off strong fumes. We witnessed the first feat of heroism by Doctor James H. Gosman of the 740th Squadron and the base firefighter personnel. A crane and hack saws were used to remove the men. Doctor Gosman was directly at the side of the airplane attaching the hooks of the crane cables, directing the operator and sawing aluminum pieces to remove the men. The gasoline could have been ignited at any time. Doctor Gosman had a total disregard for his own safety during the two hours to remove the pilots. From that moment on, the use of checklists was re-emphasized before takeoff and landing.

Another Group lost a B-24 on takeoff on the field and caught fire when it flipped over on its back. Men were

trapped inside and one could hear their screams as the fire started burning them. The historical records has this account: "One (1) Officer, Lieutenant William F. Markham, and three (3) enlisted men, Master Sergeant Robert C. Betsinger, Technical Sergeant Darrell T. Morrison, and Technical Sergeant Ray W. Smith, were recommended for Soldier's Medal for heroism. These men risked their lives to remove trapped men from a B-24 which crashed and burst into flames while taking off at Djedeida, Tunis, 19 January 1944." These men were of the 740th Squadron. Two officers of Group Headquarters also helped in the rescue, Captain Hugh Graff and First Lieutenant Francis T. Bradley. The rescuers used iron pipes to jam against the skin of the airplane to open a hole to remove the trapped men. The flames soon engulfed the airplane and the men had to scurry away to save themselves and those rescued. An explosion occurred soon after, throwing burning gasoline in the air. They risked their lives to save others.

Another incident was a wing man getting caught in the propwash of the lead ship while flying formation. His wing tip struck the vertical stabilizer of the lead ship and slightly damaged it. His wing tip was bent upward but both airplanes landed safely. There were a few lectures following this on the art of formation flying.

When we were not flying, a few visited Tunis where there wasn't much to do except observe the results of war in the bomb torn village. The airmen and officers rummaged the war materials left behind by the Germans' hasty retreat and found parts of several motorcycles from which they built one good one. Many of us took turns riding it. A few spills were experienced from riding it through the slippery clay soil following a rain, but no one was seriously hurt. There was disappointment when the motorcycle had to be left behind. Other amusement came from letter writing, card playing and drinking the local wine bought from the farmers. We did not venture far from camp as the Germans left land mines when they retreated. They were rigged to aircraft engines, acres of burned-out tanks from the tank battles of North Africa, large dumps of wrecked aircraft from the air and ground battles and large dumps of reclaimable vehicles – if one could find the necessary parts and expertise to install them. The dumps included both German and Allies' wrecked war equipment. Two men from another organization were blown up from the mines nearby. After two weeks, we were happy to leave.

To Cerignola, Italy



When you saw the cathedral dome in Cerignola, you knew you were home.

Most of the crews left on 1 February 1944 for the four hour and 15 minute flight to Cerignola. The airplanes were filled with lumber, make-shift stoves and other items known to be useful in Italy to make living more comfortable. Upon arriving, we circled the field and saw two parallel 6,000 foot clay and gravel runways and several tent cities dispersed in Italian olive groves. (The

454th B-24 Group was to occupy the east side of the field and use the east runway.) This was to be the home for many until the defeat of the German military machine. It was the end of a long trip which consisted of 60 hours and 15 minutes of flying time, much of it at night with some under actual weather conditions. Other than the accidents which occurred at Dakar and Djedeida, all aircraft arrived on schedule and in good working order. This can be attributed to the skills of our pilots, navigators, radio operators and airplane maintenance personnel. Our medical people saw to it that we stayed healthy and the base support at the many places we stopped was excellent. It was also a good testament to the ruggedness of the B-24H that would carry us through many exciting combat missions yet to come.

Cerignola, the closest town to our base, had a population of about 50,000 people in an area built to house only 25,000. The years of neglect caused by the dictatorship of Mussolini's reign sapped the area of resources which were used to build his military machine. The 304th Wing Flight Surgeon had this to say about Cerignola, obtained from Air Force historical records. "The town was a reservoir of malaria, venereal disease and dysentery with flies and mosquitoes (and of course human carriers) to insure spread. The streets were filled with pot-bellied bambinos openly defecating in emulation of their elders because there was no sewer system or toilets. They ate food (when they could get it on the black market) obtained from fly-infested fruit stands and vermin-filled butcher shops where rotten meat was the rule. There were no medicines, the death rate among children was appalling, the splenic index was 40% and malaria was a children's disease – all the adults had it long since. Avitaminosis, tuberculosis, and frank starvation were everywhere. The only music to be heard was the sound of a passing funeral, and that band had a full-time job."

Like most Italian towns, the best and most conspicuous building was the Catholic church, usually off the town square. It was the most used building in town. There were a few bars that served Italian wine where a few of the bravest men visited. The town was safe and the Red Cross had a large canteen to serve the large military population within ten miles. Some established a friendship with families that would do their laundry for just a few lire. The few Italian workers at the base would scour our kitchen garbage for food to take home to their families.

The area around Cerignola was chosen for the heavy bomb groups because of its relatively good flying weather and flat terrain. It had long been the home of the Italian Air Force. The climate is fair to warm with three rainy months in the winter when it gets cold and very uncomfortable for tent living. The base was near the Adriatic sea where one could bring his bomber to a very low altitude to get below a cloud deck and "hedge-hop" to the base and land. This was a safe practice as the ground is flat over a wide area. There are a few streams, one which flowed through the base. The standing water was a problem as it was absorbed very slowly because of an almost impervious sandstone layer just beneath the surface. The ground is so hard that it was used as a building stone (tufa) in blocks about 9" x 7" x 15". As a correllary, excavation for latrines and soaking pits were major projects.

The Journey by Ship



On 13 December 1943, months of training were culminated for the ground echelon which was going overseas. Early in the morning, at Langley Field, the ground echelon had their final meal in the United States, consisting of steaks and pancakes. With full field packs, the Group was moved to the Hampton Roads Port of Debarkation. A short train ride and a rather tightly packed ferry boat ride brought the Group to the liberty ships which were to carry the men and equipment to the combat area in Italy. The 740th and 743rd Squadrons shared the "Charles Brantley Aycock." The Group Headquarters and 742nd Squadron personnel shared the "William T. Barry," another liberty ship, and the 741st Squadron personnel traveled on the "S.S. James Monroe." After boarding the ships, the remainder of the day was spent in watching the loading of the cargo. The Merchant Marines were in charge of the ships and provided all services, including mess. There was a small contingent of Navy personnel aboard each ship to serve as gunners for protection from German submarines and aircraft. The men still had not been informed of their final destination.

The men had their first look at the tiered bunks in the holds where they would spend much of their time during the next few weeks. The bunks, made of canvas, were held in place by chains at each corner. They were stacked five-high which gave the men only 18 inches between bunks. The non-smokers tried to get the lower bunks to avoid the smoke-filled air at the upper levels. To climb into the upper bunks, the men had to step on the edge of the lower ones which gave the men in the lower levels many bounces and some bruises before arriving in Italy.

By the afternoon of the 14th, the ships moved out of the harbor to meet its convoy. By late evening, the convoy was formed and proceeded toward its destination "X." The speed of the convoy was dictated by the speed of the slowest ship to provide protection to all. A convoy rule was that if a ship developed problems and could not keep up, it was left behind to fare for itself against German submarines and aircraft as well as the sea. The convoy was made up of ships from east coast ports of the United States. There were big ones, little ones, tankers, cargo ships and escort vessels. All the while, small, speedy sub-chasers were churning up the sea going in circles about the convoy, a comforting sight indeed. The 455th ships were positioned in the center of the convoy for maximum protection because they carried troops. One could not see either end of the convoy because of its length.

The William T. Barry collided with a destroyer of the convoy the second day out which tore a gaping hole in its bow. There were no injuries but the ship had to return to port for repairs. The personnel were temporarily housed at Camp Patrick Henry until 24 December 1943 when they again boarded the William T. Barry. It then joined another convoy, destination Italy. The following account of the incident was furnished

by Dave "Stormy" Wolf of Group Headquarters:

"Support personnel from Group Headquarters and, I believe, the 742nd Squadron (Major Horton of 742nd was aboard) departed Newport News on Merchant Marine Liberty Ship, 'William T. Berry,' on 13 December 1943. The pilot had not come aboard to take us through the mine fields in time for us to leave with the rest of the convoy, so our ship was sailing alone. The sea was very rough. Some things on deck had not been tied down, and since our quarters were below deck, it sounded like a bowling alley above. As I recall, it was around midnight or shortly after when we felt the ship 'shudder' and the engines stopped. Bells rang, but not having any emergency drills or instruction up to this time, no one knew what was happening. Then an announcement was made on the ship's P.A. (public address) system that we should all dress and put on our life jackets. Because of the rough sea, the majority of the people were sick. Major Olson, who was in charge of the troops, although ill, called the officers together. He sent Major Horton to locate the ship's captain and determine what had happened. He assigned the rest of the officers to help those men who were too sick to get themselves dressed and put on their life jackets.

"After some time, Major Horton reported back that our ship had caught up with the rest of the convoy and had run broadside into a Navy destroyer escort which was circling the convoy in front of our bow. We were then told we could take off our life jackets, but to keep them with us and remain dressed. With the weather conditions and our lack of emergency instructions, had we been forced to abandon ship it would have been a disaster.

"In the morning we were told that our ship had a hole in the bow 'big enough to drive a jeep through,' leaving water in the front hold, where it was confined and that we could return to port under our own power. The ship's crew later told us they could see men in the engine room of the destroyer escort, and that it would have to be towed to port.

"On reaching port we were trucked to Camp Patrick Henry, Virginia and restricted there while the ship was being repaired. On Christmas Eve 1943, we again boarded the William T. Berry and started out under the cover of darkness. I remember John Troy (Special Services) carrying a Christmas tree over his shoulder as we went aboard.

"The second time out, this time with a convoy, was uneventful, although I do recall depth charges being dropped from the stern on one occasion. Our top speed with torpedo nets was about ten knots. Barrage balloons used in the Mediterranean slowed us down another knot.

"I understood our original destination was to have been Bari, but that the harbor there had been bombed. We were taken ashore at Toranto where we stayed overnight. The next morning, we boarded a train for Cerignola. This was an overnight trip because the train stopped during darkness, presumably so that fire and smoke from the engine could not be seen from aircraft. We shared the train ride with Italian civilians. Our journey ended, at long last, with a truck ride from Cerignola to San Giovanni."

Mess aboard ship was two meals per day and there were long lines at chow time when the weather was smooth. However, rough weather, which occurred during the third day out, had the men bending over the bowls in the latrines from seasickness. Those who

could not make it to the latrine used their steel helmets. Many who did not get seasick from the tossing of the ship did so from the stench and foul air in the hold. The few fortunate ones that didn't get sick could go through the chow line as many times as they chose to eat the excess food not eaten by those who were seasick. The men were required to stay in the hold during the tossing of the ship to avoid being thrown overboard. The door to the hold was kept open but a canvas cover was used to keep out the rain and seawater. Nevertheless, water came in during the rough seas, covering the floor with three to four inches of water. The duffel bags, shoes and other items had to be tied off the floor to the bunk posts to keep one's belongings dry. The ships twisted and creaked, and the chains holding the bunks to the deck and ceiling squeaked with each link straining itself against the other. There was a large open space in the center of the hold with bolted down tables for dining from one's mess kit. Watching the men trying to keep the kits, which were full of food, from sliding off the tables was sometimes hilarious.

By the fifth day out, the men seemed to get their sea legs as the storm subsided. To avoid detection by a German submarine, the security was very strict with no lights to be shown at night and absolutely nothing was to be thrown overboard. There was concern that the ships would run into each other in the night with no lights but there were no accidents. All personnel had life jackets and there were "abandon ship" drills throughout the trip. Time was spent sun bathing, playing cards, rolling dice, writing letters, reading magazines and books from the Merchant Marine library and in "bull" sessions. There were physical exercises to keep everyone in shape and to take up time as were usual inspections conducted. On the Charles Brantley Aycock, the energetic Special Services Officer, Lt. Gregg, brought out a Signal Corps victrola. Number one on the G.I. Hit Parade was "The Wabash Cannonball." The record and needles were worn out by the time the convoy reached its destination.

Keeping clean and shaving was a problem. Cold seawater was piped into the latrines and the men avoided using it. The kitchen started providing hot water after the evening meal in large vats with spigots. The men would catch a steel helmet of the hot water and use it for shaving and bathing. The men never got used to the rows of seatless toilets which were uncomfortable and their use was quite an adventure during rough weather. Allen Weitzenhoffer of the 741st reported the following: "The latrines of the liberty ship were, I believe, 'eight-holers' going from port to starboard with water being pumped in one side and draining out the other. Those at each end had to be wary when the ship was pitching and rolling."

With the weather clearing, it became warm and pleasant. Some of the men rigged up little shacks made from their shelter halves and spent the nights sleeping on deck. Some did their laundry. There were practice submarine alerts held on good weather days. Although there were several actual alerts during the trip, no German submarines appeared. It, nevertheless, caused a few anxious moments.

On 24 December, the weather was good and the men spent most of the day on deck singing Christmas carols and enjoying the weather. Rumors had it that turkey would be served on Christmas Day. The Christmas spirit was kindled well into the night with

spontaneous songs by all personnel. It was a Merry Christmas the next day. A service was delivered and the chow line began by 1100 hours. Turkey, cranberry sauce, peas, sweet potatoes, mince pie, candy and cookies were served. The "chow hounds" had a "Roman Holiday." A bit later, gift packages from the American Red Cross containing cigarettes, shoe laces, soap with a container, reading material, shoe shine rags, sewing kits, cards, candy and spiritual items were distributed. It was not known that the Merchant Marines had the packages stored for just such an occasion. That afternoon, some of the men of the 743rd Squadron held boxing matches with Navy gun crews on the Charles Brantley Aycock. The life rafts were cleared away and a boxing ring was built by the Merchant Marine personnel. One of the bouts included a clown act. All were called winners. All personnel retired that evening quite contented.

The weather and spirits of the men remained good. New Year's Eve was spent singing old and new songs, with "Auld Lang Syne" the favorite. On New Year's Day, the men were notified that they were near the African coast and that the final destination was Italy! Some of the men accepted the privilege in helping stand watch with the Navy gun crews at the 20mm anti-aircraft guns. Enemy aircraft started to become a reality and everyone became alert to this possibility. At sunrise on 2 January 1944, the African and European coastlines were in view. During the morning, the ships passed through the Straits of Gibraltar. The weather remained good through 4 January. The men had received a partial payment of five dollars which gave new life to the card and dice games. On 5 January, it was no longer the peaceful Mediterranean. A heavy storm broke and the "latrine huggers" were at it again from seasickness. The Charles Brantley Aycock got separated from the convoy and was near Oran harbor before returning to the convoy. Precautions against enemy aircraft and submarine attacks were greatly strengthened. There were several alerts, but no actual attacks. The men were given their first visual lesson in the use of smoke screens in combat areas. All the ships in the convoy laid smoke screens at twilight to avoid possible strikes from German aircraft and submarines.

On 7 January, the weather broke and the ships pulled into the port of Augusto, Sicily and dropped anchor. One could see Mount Etna in the distance. Barrage balloons were let out by cable to deter low level air attacks. The ships stayed at Augusto until 12 January, when the anchor was lifted at 12 noon. The men were not permitted to go ashore except for a few who bought provisions from the local people. Crates of oranges were brought on board and the men thoroughly enjoyed the Sicilian fruit. Some men were entertained by using the ship's lifeboats to paddle around the harbor. There was one actual air raid alert, with the shore batteries firing at the enemy aircraft. There was a good display of a flak barrage but no damage was done. This was the first time the squadrons were under actual combat conditions where guns were used. In the evening of 13 January, the ships moved into the harbor of Taranto, Italy. After chow that day, the men were issued ammunition and their American paper money was collected. The men made ready to disembark the next morning.

Bright and early on 14 January, an American Air Corps Officer, Naval Officer and Air Corps Sergeant boarded

the ship and announced "Welcome to Italy. The Chamber of Commerce has come to greet the 455th Bomb Group." Within the hour, the men loaded bag and baggage on an invasion barge and within 20 minutes landed on the Italian mainland and smelled the aroma of rancid oil and cheese. The men were quite impressed by the metropolitan look of the city of Taranto. All were marched through town to the square that fronted the railroad station. A mess had been set up with British rations of canned beef, bread, canned bacon, potatoes and jam. It seemed as though all the children in town came to sell their wares to the men and they were amused by the kids scrambling for the discarded cigarette butts.

At about 6:00 p.m., the men boarded a train for the overnight trip to Cerignola. They rode in box cars. The ride was bumpy, dark and cold. The men scrambled in the darkness to find enough room to lie down on the cold, hard floor. Flashlights were not a G.I. issue. At dawn of 15 January, the train arrived at Cerignola, the final destination for the men for the remainder of the war. They were fed by the 43rd Service Squadron at the other end of town and toward the airfield where combat operations were to be conducted. Trucks carried the men to an olive grove at the San Giovanni Air Base which would be "home."

The Group Headquarters and 741st Squadron personnel finally arrived at Cerignola on 21 January 1943 after a long train trip from Taranto. The 741st and 743rd Squadrons provided food and other support until the new arrivals became self-sufficient. They were welcomed with "open arms" as they had been given up as lost.



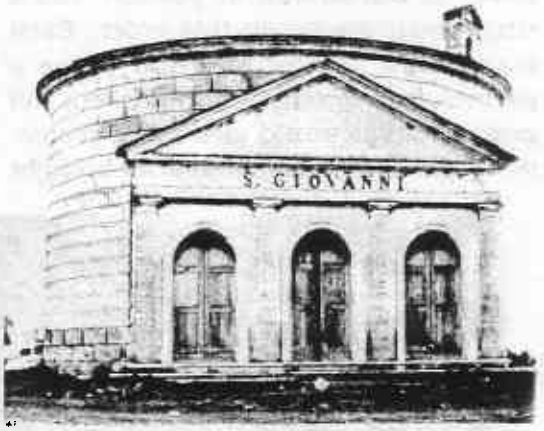
Making Camp

The long, hard trip, which started 13 December 1943 from Langley Field and ended in Cerignola 15 January 1944, was over and the men were ready to make camp and become as comfortable as possible for the duration of the war. Little can be said here that has not already been written in other histories about the dedication of the men and the hardships they endured for their country.

The trip to the San Giovanni Field, located about five miles southwest of Cerignola, was a short one. It was a miserable and discouraging sight. It was a part of a nobleman's large farm, but since the war, the fields had been given back to nature. The olive trees were gnarled and twisted from neglect, and the only building in sight was a farm animal stable that was to be used for Group operations and for briefing the crews for the combat missions. The building was sunken into the ground, made of Italian stone with no windows. The men had to clean out the manure what seemed to be years of accumula-



Group Headquarters
Staff Headquarters



The church at San Giovanni.



After mission briefing. Two ounces of booze, hot coffee and tell your war stories; Maggie of the Red Cross presiding.



Home away from home!

tion. The building was later used as a movie house as well as for mission briefings. It was unpleasant for a time as the men had to fight off the fleas left over from the animals. Group administration was conducted from an old castle at San Giovanni. Group Headquarters used an annex to the castle for living quarters. (San Giovanni was a land grant from Frederick II, 13th century, and has been in the family of the present owners for over 400 years. Under land reform since the war, the family was forced to sell some of the land and the castle is now a girls' school. The old chapel just east of the castle has been renovated and is now an active parish.)

The men were told to make themselves as comfortable as possible. Not a single man disobeyed this order. Each man had a shelter half and chose a partner with another half to have a full pup tent that would give some protection from the elements. Trucks brought



A clean mess kit is a healthy airman!



At home in the old olive grove.

hay for the men to use inside the tents. The pup tents were too short, too low; it was hard to believe that the Army had bought them to use as a shelter for a normal grown soldier. Stretching their bodies out in one caused an immediate decision for the men to make – whether to let their feet stick out one end or their heads out the other. There was a "beehive" of activity around the mess tent and that night, coffee, bread and jam tasted mighty good. When darkness came, the squadrons bedded down in tents for the first time in Italy.

It rained the first night and the men were introduced to muddy Italy. Some had water flowing through their pup tents, causing them a miserable night. Late in the afternoon, the erection of pyramidal tents began in a more desirable area on high ground and among better developed olive trees. More blankets were issued to the men to keep them warm from the harsh winter nights of Italy. The men started enjoying bartering with the natives for figs and almond nuts to supplement field rations. Some were using their six rounds of ammunition for target practice on the birds. Invasion money (script) was given to those who had turned in American dollars aboard ship. The script reminded the men of the old United Cigar coupons.

By 19 January, all personnel were housed in pyramidal tents. The problems of sanitation, water and mess were being solved to some extent. The men quickly applied their "yankee ingenuity" to make their tents more comfortable. It must have been mental telepathy for the men to solve the heating problem in the same way the air crews did at Tunis. Scouting parties scoured the hills to pick up bits of aluminum tubing from the wreckage of an airplane, 55 gallon drums, stove pipe material and bomb fin packing cases for wood flooring and building tent frames to give more room. (Later, packing cases for fragmentary bombs were used as well for this purpose.) The stoves were a "Rube Goldberg" contraption but they worked. They were made from 55 gallon drums cut in half at the circumference. Iron piping or number ten cans from the kitchen were wired together for stove pipe. Tubing from the wrecked airplanes was used to pipe in kerosene or aviation gasoline from a can outside the tents. The holes punched in the tubing had to be exact so that the right amount of fuel would drip on rocks and burn without exploding. The "drip system" was eventually perfected so that explosions and loss of tentage were practically eliminated. Before nightfall, smoke came pouring from many tents from their homemade stoves. Later that day, the first mail arrived, the first the men had received in over a month. It was a great day!

By the time the air echelon arrived, the area was made more livable. The mess was functioning so that it was serving three meals per day. There was no complaining about kitchen police (KP) as one could get better fed during that duty. The menu was Spam, Vienna sausages, stewed prunes and hash heated in garbage cans, powdered eggs and bread. Some wrote poems about the food as follows:

ODE TO SPAM

"When the cry is over and the smoke has cleared away, historians pick their pens up to record each bloody day. Some will tell of sieges, some of great retreats. But always there is one who'll dwell on what the airman eats.

When he makes that diary of beans, biscuits and stew, there's one thing he'll have to mention and devote a page or two. It won't be fried potatoes, or cans

of southern yams. 'Twill be the Air Corps standby...that mystery meat called SPAM!

Jackson had his acorns. Grant his precious rye. Teddy had his poison beef and the doughboy hardtack and jam. All armies move on their stomachs, but this one moves on SPAM!

For breakfast they will fry it. At dinner it is baked. For supper...what a delicacy, they have it paddy caked. Next morning it's with flapjacks...or maybe powdered eggs. Where the hell do they get it all, they must order it by kegs!

Oh, you haven't seen the last of it, there's plenty left to go. For dinner it's in a G.I. pan, with a lovely crust of dough. Perhaps you didn't like it, it leaves you in a rash. But if you're specially watchful, it's in the supper hash.

Next morning's winding chow line, leaves you with regrets. You never would have believed it, now it's SPAM croquettes! And when at noon as you return to get your ration dole, your eyes bulge out, you start to swear...it's SPAM on casserole.

Surely for this evening's meal they could cook up something new. But these cooks sure are uncanny, now it's in the stew. And thus this endless cycle goes, it never seems to cease, SPAM in stew, SPAM in pies, and SPAM in boiling grease!

We've had it tucked in salads with cabbage for corned beef. We've had it for an entrée, perhaps an appetizer. We've had it with spaghetti, with chili and rice. I remember such a happy day, we only had it twice!

Back home I have an angel, whose name I'm going to change. I'll buy her such a fancy home and with a new-fangled range, I'll let her cook... cook...



455th from the air.

cook...all she can. But, she positively will never cook with SPAM!"

Anon, appeared in "Weekly Briefing," ARC Club, Foggia, Italy. (To this day, many if not all of us forbid the serving of Spam, Vienna sausages and powdered eggs in our homes.) The men had been given passes to visit Cerignola to get baths, visit the Red Cross for refreshments and trade with the natives. It is said they bought all the kerosene lamps available in the town. Small tent PXs were opened where one could buy cigarettes and candy under a rationing system. There was payday on 31 January and the cards and dice got a workout that night with two months back pay in the men's pockets.

Arrival of the Combat Crews

On 1 February 1944 the combat crews arrived in their new B-24H aircraft, flying in loose formation. They circled once, broke formation and landed one at a time. The crews were welcomed with "open arms." The pilots were led into their revetments where the maintenance, armament and ordinance crews would perform the maintenance and servicing of the aircraft for combat operations. A close relationship developed between these supporting personnel and the aircrews during combat operation. The supporting personnel often times worked around the clock in cold, rainy weather with inadequate ground support equipment to have the airplanes ready for the next day's mission. The 55 gallon drums were used as stands to reach the high places on the B-24's for maintenance. How did the drums get to Italy? The war would have been much more difficult to win without them. Alas, the Group Headquarters and squadrons were together again after almost two months of separation. The direction and leadership provided by the Group and squadron commanders, operations, maintenance, medical and noncommissioned officers started pulling people together again as a fighting team.

The flight crews had been held up at Djedeida until the Corps of Engineers scraped away topsoil and built runways, taxiways and hardstands from clay and crushed Italian limestone rock. They were to have been covered with pierced steel planking but a German JU-88 bombed shipping in Bari habor, hitting an ammunition ship resulting in several ships sunk, including the one carrying the steel planking and maintenance support equipment intended for the Group. Consequently, there was only planking for the touchdown ends of the runway and a part of each hardstand. That is why during much of the war the airplane maintenance people worked off of ammunition boxes and 55 gallon drums to perform maintenance. The airplanes were also held in Djedeida until the Corps of Engineers could complete a pipeline from Bari to provide aviator gasoline. All of the final pieces of four inch steel pipe used as chimneys for the homemade stoves in the tents were gifts from the Corps' pipeline.

Flight crews were assigned to pyramidal tents which were put up by the ground echelon but there were not enough to go around for all Squadron personnel. The ground echelon again had to pitch their pup tents and live in them for several days until more pyramidals arrived. The men had learned to dig a trench around their pup tents from their last experience to keep flooding rains out. There was no complaining about giving up their tents as the men knew the aircrews would be going through trying times flying combat.

An account of the conditions at San

Giovanni when the air echelon arrived was written by Captain James H. Gosman, the flight surgeon for the 740th Bomb Squadron. This account was found in the historical records at the Bolling Air Force Base Historical Library and is quoted here as typical for all the squadrons of the 455th Bomb Group, quote:

"The unit was placed in a rather precarious position from an environmental point of view when it landed in a wet cold season of the year in an area ripe for outbreaks of many communicable diseases. Tentage was difficult to obtain at first and the shelter halves were employed. The mess situation was beyond description upon the arrival of the squadron surgeon; latrine sanitation was open to the spread of intestinal disorders; most of the personnel had not had a bath for weeks and in view of the typhus uprising in an area not too far removed, an urgent need for bathing facilities was apparent; the supply of drinking water was entirely inadequate, in that a two hundred fifty-gallon water trailer was hauling water from a distance of twelve miles for cooking and washing facilities and providing water for close to seven to eight-hundred men. The unit was declared operational twenty-four hours after arrival and all available manpower was diverted to the servicing of the aircraft and its many complexing problems.

Tentage was gradually obtained and by individual ingenuity, an occasional floor and stove was added to relieve the housing situation. Bunks were constructed to meet the shortage of cots. Mattresses were made by packing straw into the mattress covers; this latter process evolved into a major fumigation process to eliminate the insect bites encountered.

Italian laborers were employed, Italian soldiers (ten) were assigned and by the local procurement of picks and shovels, soakage pits, urinals and latrine holes were dug. Fifty-gallon drums and packing crates were utilized in the construction of the above necessities. As materials became available, new methods for the disposal of wastes were constructed, the latrines were enclosed in canvas (salvaged) structures and screened (using salvaged mosquito netting).

Construction of a mess hall, officer's club and enlisted men's day room was begun in April. During the interval necessary for completion of the mess hall, a Nieson Hut was procured and used as a temporary kitchen, the building constructed for use as an orderly room was converted and served as an enlisted men's mess hall; tentage was utilized as an officer's mess. On 18 June 1944 the new mess hall was opened, complete with steam table, store room, underground storage, ice box, and separate mess for officers and enlisted personnel. An immediate drop in the gastrointestinal diseases was noted. On 21 June 1944 the Enlisted Men's Day Room opened and on 21 July 1944 the officers celebrated the completion of their club.

The water shortage was relieved by hauling water in 55 gallon drums. Passes were made available for men to seek bathing facilities in the nearest town and as transportation improved, regular runs were made to bathing areas. The creeks were utilized for bathing when weather permitted.

Difficulty was encountered early in selling the command on the necessity for absolute sanitation; however, in view of no existing buildings, the insurmountable obstacle encountered in procurement of tools and materials, it is felt that a major job has been accom-

plished with a minimum of days lost due to illness and no record of severe outbreaks of communicable disease.

The need for active steps against the menace of malaria became obvious and two medical enlisted men were sent to attend a course of instruction in mosquito control. Lectures were given to all personnel on the habits of the mosquito, the essential preventative measures and their uses. All new personnel arriving in the theatre were instructed in the regulations pertaining to malarial control upon their assignment to the unit. Frequent inspections were made, and malarial control officers appointed to assist in the proper control of this disease. All personnel were required to take one atabrine tablet daily from 15 April 1944 to 1 November 1944. Approximately three to four cases of intolerance to atabrine were encountered and these were satisfactorily protected with quinine. All instructions were repeated at intervals to further the program whenever a lag was anticipated. Adequate repellent was provided; however, difficulty was met in getting the personnel to use it.

Mosquito nets were available and their proper use insisted upon. Only the customary case of neglect in this phase was met. No deaths from this disease were reported.

Drainage, oiling of streams, puddles and cutting of brush, was carried out by the Service Group with the help of personnel assigned from each bombardment squadron. The camp areas were drained and supervised by the unit concerned." (End of quote.)

By 7 February, there were enough pyramidal tents to go around. The weather was cold and it rained for three days during this time. The men had learned not to touch the inside of their pup tents during rain as the water would start coming through, making a bad situation worse. All tents had stoves and the men started settling in as it would be home for most of the duration. The air and ground echelons became quickly integrated for a common purpose, to help win the war.

The Group soon felt the impact from the 304th Bomb Wing, which was our Headquarters and part of the 15th Air Force, by receiving orders, policy statements and guidance so that the Group could start flying combat missions as soon as possible.



The 15th Air Force



The 15th Air Force was activated on 1 November 1943 with its Headquarters located at Tunis, Africa. It undertook operations immediately by using aircraft from the 12th Air Force which was split into two Air Forces: a tactical Air Force, the 12th, and the new strategic Air Force, the 15th. The 15th received six heavy bomb groups: four B-17 and two B-24 groups. There were also three escort fighter groups with P-38 Lightnings, P-51 Mustangs and P-47 Thunderbolts. For a brief time, the 15th had two B-25 Mitchell and three B-26 Maurauder groups.

The 15th did not originate overnight. Its activation came about because of the combat successes and losses and decisions needed to be made about the overall war effort. From England, the U.S. 8th Air Force and Royal Air Force were engaged in combined bombing operations against military and industrial targets in Germany and German-occupied territory. The air battles, especially by day over Germany, had been fierce to the extent that during October 1943 the Allies had to cut back on bombing operations because of very heavy losses. The slowdown of operations was extended into the winter because of extremely bad weather over Europe, permitting only four missions per month by heavy bombers of the 8th.

On 9 May 1943, the North African campaign against the Axis Powers was successfully concluded. Following this, the Allies invaded Sicily and then Italy, giving excellent territory for establishing heavy bomber bases to strike targets in southern France, northern Italy, Germany, Czechoslovakia, Austria, southeastern Poland and the Balkan States occupied by Germany. In August 1943, the combined chiefs of staff worked on plans at a Quebec Conference for an invasion of France to be launched from England in the spring of 1944. General Arnold, Chief of the Army Air Corps, questioned whether the 8th Air Force would be able to conduct the required bomber offensive alone. British Air Chief Marshall Portal agreed and pointed out that operations from

southern Italy would be nearer to the vital German fighter aircraft factories in the area around Vienna, Austria. On 9 October 1943, General Arnold submitted the plan to the U.S. Joint Chiefs of Staff for the creation of the 15th, which was approved and immediately put in action after the Allied Combined Chiefs approved it 22 October 1943, thus the 15th Air Force.

Major General James H. Doolittle, of the famed B-25 Tokyo raid which was launched from a carrier ship in the Pacific, became the first commander. His first headquarters was a large, modern school building in Tunis, the Lycue Cornot. The first mission was flown on the same day of its activation. By 1 December 1943 the headquarters moved to Bari, Italy. The groups from north Africa also moved to Italy as soon as their airfields were ready. Movement was phased so that there was no stand down and operations continued for some time from both north Africa and Italy.

The bases for the B-17 and B-24 15th Air Force aircraft were established in and around the Foggia, Italy area where better weather conditions would presumably allow bombers to operate against German military and industrial targets twice as often in the winter as the 8th Air Force from England. Ironically, the 15th soon faced the same weather problems during the winter months. In addition, its airplanes had to face alpine clouds with their hazardous icing conditions and their interference with visibility when bombing targets in Germany and Austria. To complicate things, aircraft flying with one or two engines knocked out found it hard to go over or around the Alps on the return leg of a mission. Some went into Switzerland, a safe haven, where they stayed for the duration. From these bases in Italy, the area extended over a large territory stretching westward almost to the Franco-Spanish frontier, northward through Czechoslovakia to Berlin, eastward to the Black Sea and southward to the Peloponnesian Peninsula. Normally, its objectives lay within a 700 mile arc centered at Foggia, Italy.

The move was a classic case of logistics triumphing over adversity. Existing airfields in the Bari/Foggia area, which had been badly battered by Allied bombing, had to be repaired and new ones bulldozed out of the Italian plain. Steel mats had to be used on some runways to keep the bombers from bogging down in the spongy turf. Steady winter rains added to the misery of men and machines. Auxiliary road networks had to be built. Although a great supply problem existed, combat crews never lacked material with which to fight. Bomb stockage kept ahead of requirements and gasoline was piped in and stored in adequate field facilities.

A month after the move, General Doolittle was reassigned as commander of the 8th Air Force and was succeeded by Major General Nathan F. Twining, where he served for the remainder of the war. The 15th would soon reach a strength of 21 heavy bomb groups (six B-17's and fifteen B-24's) and seven fighter groups (three P-38's, three P-51's and one P-47). A photo reconnaissance group of F-5 aircraft was also assigned. The 15th was organized into several wings, a B-17, B-24, fighter and reconnaissance. Our group, the 455th, was assigned to the 304th Bomb Wing, along with the 14 other B-24 groups, from which we received operational orders, policy guidance and other direction. Colonel Fay R. Upthegrove was the Commander of the Wing. The 15th became second only in size to the 8th Air Force among overseas commands.

There was coordination between the operations of the 8th and 15th Air Forces through the Allied Combined Chiefs. The following main objectives were established for the 15th and became its concern throughout the war:

1. To destroy the German Air Force in the air (by making it come up and fight) and on the ground, wherever it might be located within range of 15th airplanes.

2. To participate in POINTBLANK (the Combined Bomber Offensive) which called for the destruction of German fighter aircraft plants, ball bearing plants, oil refineries, rubber plants, munition factories, submarine pen bases, etc.

3. To support the battle on the Italian mainland (mainly by attacking communications targets...in Italy, along the Brenner Pass route and also in neighboring Austria).

4. To weaken the German positions in the Balkans.

On 27 December 1943, General Arnold addressed to the commanding generals of the 8th and 15th Air Forces the following New Year's message:

"1. Aircraft factories in this country are turning out large quantities of airplanes, engines and accessories.

2. Our training establishments are operating 24 hours per day, seven days per week training crews.

3. We are now furnishing fully all the aircraft and crews to take care of your attrition.

4. It is a conceded fact that OVERLORD and ANVIL will not be possible unless the German Air Force is destroyed.

5. Therefore, my personal message — this is a MUST — is to, Destroy the Enemy Air Force wherever you find them, in the air, on the ground and in the factories."

Thus, the Commanding General of the Army Air Corps gave emphasis to the most urgent problems confronting the U.S. heavy bomber forces at the beginning of 1944.

The 15th Air Force command structure, organization, equipment, men, material and communications were in place to wage aerial war against the Nazis. The supply lines were in place to provide the forces with needed replacement equipment and crews. The interfaces and communications were established between commands, those in England as well as the United States, to coordinate the air offensive from Italy which was to last until 12:01 p.m. on 9 May 1945.



Left, General Upthegrove, 304th Wing Command. Right, Colonel Cool, our Group C.O. A close working relationship existed between the Wing and Bombardment Groups.

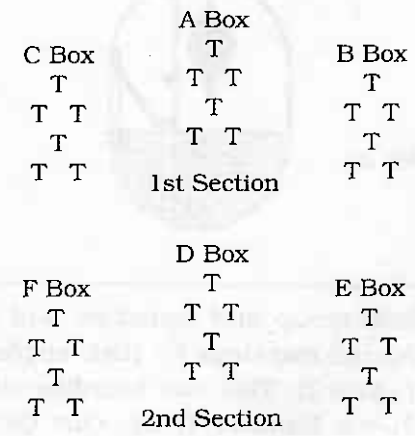
Final Preparation for Combat



The Group was a "beehive" of activity to get prepared for its first combat mission. Group and squadron administration was being organized and policy was developed for the management of men and resources in a war zone. Supply lines for both life support and airplane maintenance were identified and opened up, and interfaces with supporting organizations were established. Responsibilities of each man were re-emphasized to have a smooth operating organization. Equipment inventories were taken to insure adequacy for the first and subsequent combat missions. Shortages were requisitioned and sometimes "scrounged" except for airplane spare parts. The 43rd Service Group support organization for providing airplane spare parts and heavy maintenance was especially outstanding. Many of the spares came from crashed airplanes on or near the airfields. The 15th Air Force Headquarters established a policy that only the service support organization could remove the parts which survived the crash and could be reused. They were placed in a central depot inventory and were issued to the groups as needed. In this way, all groups could take advantage of the spares available and it prevented energetic line and crew chiefs from hoarding. This policy was strictly enforced and its violation was a court martial offense. Lectures were given to all personnel concerning health and conduct when visiting the Italian neighboring towns.

Flight training consisted of formation flying and practice bombing. The Group organized several mock missions with a full combat formation of 36 airplanes, with each squadron putting up

Figure 1
STANDARD GROUP FORMATION

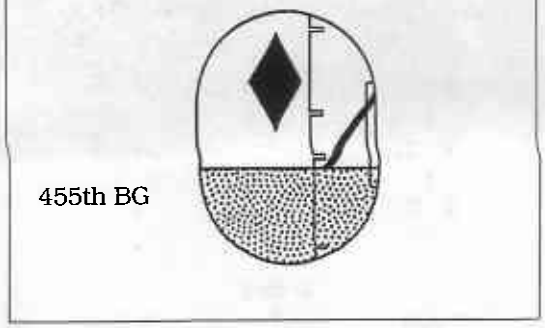


Flying close formation provided mutual protection from enemy fighters for all B-24's in the Group

nine airplanes (see figure 1). One or two fighter airplanes from a fighter group made mock passes at the formation to give the aircrews, especially the gunners, a "taste" of what to expect under actual combat. This training was invaluable in that it taught us how to rendezvous and manage a large formation to keep it together, and how to arrive at the departure point and the initial point (IP) to make the bomb run with the formation. The training also permitted the validation of flight leader selection, the pilots leading the boxes, and the capabilities of the pilots flying wing and other positions. Ground training was stressed to acquaint personnel with communications procedure, flying aids, intelligence procedures and air sea rescue in the theater. We had prepared for this day. Our first mission was flown on 16 February, 1944.

Tail Markings

Figure 2
GROUP TAIL MARKING



Each group and squadron had distinctive tail markings for their airplanes (see Figure 2). This was coordinated by the 304th Bomber Wing. Our Group had a black colored diamond shape on the upper half of both vertical stabilizers and yellow painted lower stabilizers and rudders. The squadron symbols were on the upper rudders — black rectangle 740th, black four leaf clover 741st, black diagonal stripe 742nd, black horizontal stripe 743rd. The aircraft numbers were in black on both sides of the rear part of the fuselage. These markings were especially useful during rendezvous to insure joining the proper group formation when flying a mission.

Vulgar Vulture – Group Emblem

Figure 3
GROUP EMBLEM



The origin of the **Group** emblem, the Vulgar Vulture, is not known for certain (see figure 3). It is believed that Tom Mitchell, the Intelligence Officer for the 743rd Squadron, did the design work and wrote the specifications. These were given to the Walt Disney Studios for the artwork, thus the Vulgar Vulture. Tom, now deceased, is remembered for his early work in finding 455th Group personnel for the establishment of our Association. He organized the first meeting that was held for the Group following the end of WW II. The emblem, sometimes referred to as a "Patch," was worn on the left breast of flight jackets by the crew members and on other clothing by the support personnel. It was a distinctive item that helped give everyone a sense of belonging and pride in the organization.

Combat Mission Profile



Little friends. Fighter escort, P-51's in formation.

The mission starts from receipt of the operations order from Wing Headquarters. It specifies the target, IP, bombing altitude, time over target, route in and out, bomb load, time of takeoff, departure point and time, and the position the Group will take in the bomber stream. An intelligence and weather summary is also given, i.e., what enemy opposition and weather that can be expected. It also indicated what friendly fighter protection to expect. The order was always classified "secret."

The order was received by Group Operations where the mission briefings were prepared and directives issued to ordinance for bomb loading, to armament for gun checking and loading of ammunition, maintenance for fueling and service activities, and to the squadrons for crew wake-up, preparation of breakfast and providing in-flight food. The target for the day was a closely held secret so as not to alert the Nazis of our coming. The group and squadron bombardiers and navigators, however, had folders for each target and were given the opportunity to study the target information in advance of the mission. The folders consisted of maps, photographs and some drawings of target configurations. The aircraft and crews to fly and their positions in the formation were determined by Squadron Operations the day before the mission. This information was given to Group Operations for total mission planning.

The Ordinance and Armament personnel worked through the night loading the aircraft with bombs and ammunition, and checking the bombing system and guns for proper operation. They carried the ammunition and bombs in a weapons carrier vehicle and a long string of low slung trailers which carried the bombs from the ammunition dump a few miles north of the field. The trailers were designed to fit next to the open bomb bay doors to load and fasten the bombs to the shackles with an electrically powered pulley-like device. The ordinance men were well trained in bomb handling as there were seldom smashed fingers and no accidents (explosions) from fusing and defusing the bombs. The men were admired for always having the bombs and ammunition loaded by mission time.

Wake-up was usually early, 4:00 to 5:00 a.m. This not only included the crews but the supporting personnel as well. The crews were carried to the Group briefing building in trucks by the squadrons. The briefing was prepared by the Group Operations Staff with the Group Commander and his deputy par-

ticipating in many briefing activities. The Group staff consisted of the operations officer, Group navigator, bombardier, intelligence and weather officers. There was a large map on the wall showing our total target areas. A string was used to show the route to be flown. The chaplain and medical personnel always attended the briefings and were at the flight line before takeoff to provide spiritual and medical help to those needing it.

The briefing included the takeoff time, squadron positions in the formation, rendezvous and departure point and time, route out, altitude and time over the IP and target, return route and overall flying times. Additionally, we were briefed on the activities of other groups and the fighter escort we could expect. This was followed by a briefing by Intelligence giving us an estimate of the opposition we could expect, including number and types of enemy fighters, flak guns and escape and evasion information in the event of going down over enemy territory. The enemy fighters were generally ME-109 single engine and ME-110 twin engine aircraft. The flak guns were 88mm and could always reach our altitude quite accurately. Our bombing altitudes were generally 17,000 to 22,000 feet. The bomb loads were from 6,000 to 8,000 pounds, depending upon the type of bombs carried. The last subject briefed was the weather conditions to be expected, both en route and over the target area.

Following the briefings, the crews with their flight gear were transported to their aircraft where final checking took place. The crew chiefs, however, had earlier run up the engines for final checkout and inspected other parts of the airplane for proper operation. The maintenance men took pride in not having an early return because of maintenance and many times they worked through cold and rainy nights to have their airplanes ready. There was idle chatter among the crew members and with the crew chief and his maintenance crew to relieve pre-mission jitters. With the ambulance and fire fighting crews standing by with their equipment, everyone was waiting for the green flare from the tower to start engines and taxi into position. Another green flare signaled takeoff. The spacing for takeoff was 30 seconds between airplanes. Occasionally, a crew would experience prop-wash from the airplane ahead, causing a few anxious moments in the turbulence. Some takeoffs were marginal with a full gas load and 8,000 pounds of bombs on a clay and gravel 6,000 foot runway. Another green flare from the formation lead airplane signaled it was over the departure point and proceeding on course to the target. The assembly of the formation was achieved by circling the field. After reaching an altitude of about 8,000 feet, the gunners tested their guns for proper operation and the bombardier checked his equipment.

The principal key to a successful mission was precise navigation. During the outbound leg to the target, the navigator must accurately determine wind speed and direction, and true altitude by reaching the IP. He gives this to the bombardier for input to the Norden bomb sight for his bombing run. The navigator must bring the formation directly over the IP at the bombing altitude so that the heading into the target will be exactly as planned. Following this, the bombardier controls the direction of the lead airplane through a hookup between the bombsight and automatic pilot. The pilot controls the airspeed and altitude with power settings and control elevator. If the target

was not obscured by weather or smoke, the probability of good bomb coverage was high. Flying good, close formation from the IP into the target was also very important as all airplanes dropped their bombs from sighting the release by the lead ship. On some missions, the box leaders dropped their bombs by setting the range in their bombsights, but not course. The second section was to arrive over the IP from flying formation with the lead section. The lead ship of the second section made the bomb run similar to the first section. After bombs away by all aircraft of the section, a shallow and slowly descending turn was made to leave the flak area as soon as possible and to disrupt the range setting of the ground anti-aircraft guns. On some targets, bombing was by flights of six B-24's.

Enemy fighters would attack the formation going into the target to disrupt it but would break off just before entering the flak area. They would also hit the formation leaving the target, especially for shooting down the stragglers. There was a strict rule not to slow up the formation for stragglers or for an airplane to leave the formation to help a straggler defend against fighters. It was a proven fact that through these heroics, two airplanes would be lost. It was difficult to accept this rule, observe good buddies and friends in trouble and not be permitted to join the stricken airplane to provide more firepower to fend off the fighters. Everyone anxiously watched for the billowing of parachutes from the stricken airplane.

The bombs carried depended upon the types of targets as follows:

- 100 lb. General Purpose – Transportation and industrial centers
- 250 lb. General Purpose – Oil storage, repair depots
- 500 lb. General Purpose – Harbors, factories, refineries
- 1,000 lb. General Purpose – Bridges, gun emplacements, shipyards
- 120 lb. Fragmentation Cluster – Airdromes, troop concentrations
- 100 lb. Incendiary Cluster – Airdromes, troop concentrations

The 500 pound general purpose bomb was most widely used. The crews disliked carrying the fragmentation and incendiary bomb clusters. It was not unusual for these bombs to get jammed in the bomb bay compartment at their release over the target. The bombs were dropped in "train" through the Norden sight connected electrically to the bomb shackles in the bomb bay. They could also be dropped all at once (salvoed) by the bombardier or, in the case of an



This is not a little friend: German ME-109.



Sweating it out! Waiting for the birds to come home.

emergency, by the pilot. The bombs were armed upon release from the bomb shackles so they would explode upon impact. Occasionally, the two thin steel straps holding the incendiary and fragmentation bomb clusters would not release together and the bombs would jam up and not drop. This presented a very dangerous situation as they would be armed. There were horror stories of how the crew members would set up a chain, with one member carefully picking each bomb from the bomb bay, passing it down the chain and the last man throwing it out the waist window. Some bombs could be carefully thrown out the open bomb bay doors. This sometimes meant leaving one's oxygen station and using walk-around oxygen bottles to keep from passing out at high altitude. Only a few missions were flown using these bombs.

It was a solemn time for the ground echelon and combat crews not flying "sweating" out those on the mission. Everyone on the ground would count the number of ships returning and make a sigh of relief if all returned safely. The firefighters and medical personnel were standing by with their equipment in case assistance was needed. The crews would shoot red flares if there were wounded aboard or if there were problems with the airplane. The crews were met by trucks at their hard stands and carried to the briefing room for interrogation by intelligence personnel. The crews were eager to tell about the enemy opposition, fighters shot down and fire and smoke coming from the target just bombed. Following this, the crews received coffee and doughnuts, courtesy of the American Red Cross, and two ounces of bourbon. Some men saved their bourbon allotment in a bottle until they had enough to go on a "binge." A quick evaluation was made by the squadrons of battle damage and condition of the aircraft and a report made to Group Headquarters on the number available for the mission for the following day. Many times, the maintenance crews worked through the night and in bad weather to get the airplanes ready for the next day's mission. We all admired the dedication of the maintenance men and how quickly they became skilled mechanics. For example, they learned to change an engine in less than 24 hours under adverse field conditions.

The proof of the mission success was from the aerial photographs which were taken the same day and sometimes a follow-up the next day if the target was obscured from smoke and



Our perimeter defense – British anti-aircraft battery.



Engine repair – day and night!

clouds. Damage assessment was accomplished at the 304th Wing Headquarters. Photographs of the successful missions were posted for all to see. This was indeed a morale booster and gave everyone a high sense of accomplishment.

Enemy Opposition



Flak so heavy you could walk on it.

The enemy opposition was from both fighter airplanes and anti-aircraft guns, called "flak." The fighters were Messerschmitt Me-109's, 110's and 210's with inline liquid-cooled engines. The Me-109 was a single engine fighter, the Me-110 and 210 were twin engined fighter/bombers. The Focke Wulf FW-190, with a single air-cooled radial engine, was also used. All could reach the bomber altitudes and provided an effective defense with their machine guns, 20mm cannons and some twin-engined fighters were equipped with rockets. The projectiles from the cannons were fused so they would explode upon impact or self-destruct. The crews could see puffs of smoke from those exploding which did not hit the target. On at least one mission, Steyr, the Germans in desperation sent JU-88 dive bombers carrying rockets to attack the Group. They were "sitting ducks" for the fighter protection. The German pilots were highly respected by both Allied bomber crews and fighter pilots. The Rumanians piloted German fighter aircraft in the defense of the oil refineries in and around Ploesti. The Me-109 and FW-190 matched up well with our P-38 and P-47 but the Me-110 and 210 twin engine fighter/bomber did not. Generally, the German fighters except the FW-190 were no match for our P-51 until jet fighter aircraft were introduced by the Nazis. However, they came so late in the war that they had no impact on its outcome. The last bomber lost by the Group from enemy fighters was on its 103rd mission flown on 26 August 1944 against barracks at Baneasa Airdrome. There were no further enemy aircraft attacks against the 455th Bomb Group.

The use of radio operators who could speak fluent German started in May and June of 1944. These operators were assigned to the Group from the 15th Air Force Headquarters. It was their job to monitor the German fighter voice radio frequencies. They had grids that were furnished by Intelligence that outlined the areas the German fighters used to direct fighters to the bomber stream. The operators were in the lead airplane of the Group, especially if it was leading the Wing that day. They informed our fighter protection what quadrant the enemy could be expected and the bombers were to expect a fighter attack. This alerted the gunners to be especially alert in danger quadrants. One should never underestimate the Intelligence people for gathering information about the enemy and developing counter measures.

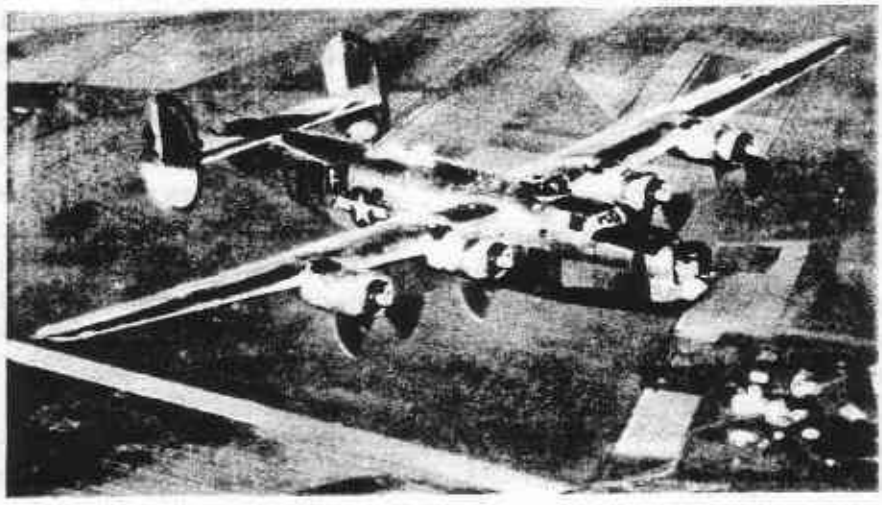
The flak defenses were another story. The most important targets to the

Germans were heavily defended by flak throughout the war, including the last Group mission flown 25 April 1945 against the Linz Main Station. The most deadly and effective anti-aircraft batteries were those operated by radar. These gun "laying sets" were known as "Wurzburgs." There were two parts, the "Great Wurzburg" provided the longer range identification and tracking, and the "Small Wurzburg" gave the range, bearing and elevation of the bombers. The gun batteries were synchronized with the gun laying radar equipment which gave excellent accuracy at the Group's bombing altitude.

The Allies were forced to develop radar countermeasures (RCM) to reduce the accuracy of the German flak. The 455th Bomb Group was given RCM devices for jamming the flak radar. These devices transmitted static or "noise" signals which, when transmitted at the same frequency as the German radar, blanked out the radar gun laying equipment. However, the correct jamming signal could not always be found.

Another RCM was the throwing of "chaff" from dispensers in the bomber while over the flak area. Chaff was small pieces of aluminum strips which were cut to certain signal wavelengths, usually less than a foot long. The enemy would receive a jumbled mass of signals from the chaff trail as well as from the trail of the bombers and would be unable to discriminate between the two. On some heavily defended targets, P-38 aircraft were sent in advance of the bombers to drop chaff to disrupt the flak radars. It was difficult to convince the bomber crews that RCM was an effective measure against flak.

The flak guns used against the Group were generally 88mm. Some targets, especially in Germany and Austria, had 105mm guns. The fuses in the projectiles were set to explode at the bomber altitude or upon impact. The sky would become smoke-filled over heavily defended targets. The shrapnel from the exploded projectiles punctured holes in the aircraft causing some damage but seldom knocked it from the sky. Although the airplanes returned, some had fuel and hydraulic leaks, flat tires and even loss of an engine. Some pilots used parachutes from the waist gun positions to provide braking action with the loss of the hydraulic system. Some flak injuries were severe enough to cause loss of life. A direct hit, however, was catastrophic.



What the Well-Dressed Crew Member Wore



Our cold weather flying gear was sheepskin sheared jacket, pants, hat and boots which fit over street shoes. These were especially needed at the waist gunners position for protection against sub-zero weather, sometimes reaching 45°F below zero. Goggles were required at some positions and dog tags were a "must." Flak vests and steel helmets were also worn but they were burdensome and not always used by those who had to move around or fit into tight quarters. There were three types of parachutes. The pilots used the seat pack, the back pack was for those who needed only limited movement at his position and the chest pack which snapped onto a harness when needed in an emergency. The harness was worn at all times during flight by those who needed to move about the airplane during flight. Electrically heated flying suits were available, including gloves and boots. They were of poor design and often shorted out at the most inopportune time, and some crew members suffered burns. They were a bright blue color and if one got shot down, they were totally unsatisfactory for escape and evasion or wearing in a prison camp for the duration. Each crew member was given an escape kit that contained a map printed on silk cloth, compass, first aid kit, a sum of $50.00 in gold certificates, canned food, candy and biscuits we called "K" rations.

The navigators carried their maps and navigation equipment. The bombardiers carried maps and photographs of the target and a 45 Colt automatic pistol with a few rounds of ammunition. The pistol was carried in a holster attached to a web belt. They were instructed to use the pistol to shoot critical parts of the Norden bombsight to damage it just prior to bailing out of a crippled airplane. This would deny its use to the Germans if it remained intact in the downed aircraft. Some of the other crew members donned a 45 Colt pistol. By this time, the crew members' weight increased as much as 50 pounds and their bulk up to 30%. Nevertheless, they did manage to function and bail out of a crippled airplane and survive.

Ready for Combat

The Group was fortunate to have Colonel Kenneth Cool, a veteran of combat, directing the training of the crews for combat. He not only had combat experience in B-24's but was a seasoned pilot with over 16 years of flying experience. His combat experience was over Germany and German-held territory from England with the 8th Air Force and supported the defeat of German General Rommel's forces in Africa by leading bombing missions from North Africa and the Libyan Desert. His home was Ohio and he had a midwest "cornball" sense of humor. He had his own private name for many things: pancakes were a "stack of gaskets;" shaving was "scraping his dial;" his hat was a "skimmer;" if he agreed with a recommendation it was "best-we-do;" he affectionately nicknamed our fine weather officer, David W. Wolf, "Stormy" and, when he expressed surprise it was "Well, I'll be dipped in gravy." A replacement B-24 was selected as a Group Headquarter's airplane and it was named "BESTWEDO." One of his trademarks was a long-stemmed pipe which was with him everywhere he went. He was the pilot in the lead airplane on many of the tougher missions. Everyone in the Group knew that if the "Old Man" was leading the formation with the Group navigator, James Moeller, and the Group bombardier, Jack Horner, in the nose section of his airplane, the mission would be a success unless the target was obscured and could not be seen. When it was announced during a mission briefing that Colonel Cool would lead the formation into combat, whispers of acceptance could be heard from the combat crews and their faces would light up and show their respect and confidence in him. Those of us who flew with him will attest to his piloting and leadership capabilities.

The Group was fortunate to have many more experienced pilots in command positions and group and squadron operations. The Group Headquarters and squadron navigators and bombardiers were also outstanding. Most had been instructors before joining the Group and they provided excellent training and leadership for the combat crews. They would score high in leading actual combat bombing missions. Also fortunate was having a core of experienced and dedicated noncommissioned officers training the men and providing outstanding leadership for supporting the total combat effort.

The Group was ready to start flying combat missions, the culmination of training and what every man in the Group from the commander through all ranks had trained for during the past nine months. The crews were required to fly 50 sorties before qualifying to return to the U.S. Some missions over heavily defended targets counted as two sorties. These were well-known by everyone, e.g., targets in Germany, Austria, Budapest and Ploesti. This gave the crews at least a 50% chance of survival. Colonel Cool made certain the Group would get a good start through his personal attention to mission planning and leading the Group on the early missions to insure their success. This did not fail.

Logistics Support

The amount of logistical support required to fly one mission is notewor-

thy. Just the amount of fuel, bombs and ammunition for one 36 airplane mission included 96,000 gallons of 100 octane gasoline, 360 five hundred pound bombs and 187,000 rounds of 50 caliber ammunition. This was needed again and again as the missions were flown, sometimes several days running. In addition, the logistics needed to house, feed, clothe, and transport 2,400 men further taxed the support systems. Where the logistics system could not provide a need, "Yankee ingenuity" would take over.

