

## 490 MISSILE SQUADRON



### MISSION

#### LINEAGE

490 Bombardment Squadron (Medium) constituted, 14 Aug 1942

Activated, 15 Sep 1942

Redesignated 490 Bombardment Squadron, Medium, 1 Aug 1943

Inactivated, 2 Nov 1945

Redesignated 490 Bombardment Squadron, Light, 11 Mar 1947

Activated in the Reserve, 4 Apr 1947

Inactivated, 27 Jun 1949

Redesignated 490 Bombardment Squadron, Medium, 7 Jun 1955

Activated, 1 Sep 1955

Discontinued and inactivated, 25 Jun 1961

Redesignated 490 Strategic Missile Squadron (ICBM-Minuteman) and activated, 18 Dec 1961

Organized, 1 May 1962

Redesignated 490 Missile Squadron, 1 Sep 1991

#### STATIONS

Camp Malir, Karachi, India, 15 Sep 1942

Moire Camp, Ondal, India, 5 Jan 1943 (operated from Chakulia, India, 20–25 May 1943)

Kurmitola, India, 25 May 1943

Dergaon, India, 26 Aug 1944

Moran, India, 20 Oct 1944

Warazup, Burma, 29 Nov 1944

Hanchung, China, 13 Apr–13 Sep 1945 (detachment operated from Hsian, China, 16 Apr–4 Aug 1945)

Camp Kilmer, NJ, 1–2 Nov 1945

Dow Field (later, AFB), ME, 4 Apr 1947–27 Jun 1949

Abilene (later, Dyess) AFB, TX, 1 Sep 1955–25 Jun 1961

Malmstrom AFB, MT, 1 May 1962

### **DEPLOYED STATIONS**

Andersen AFB, Guam, 9 Jan–3 Apr 1958

### **ASSIGNMENTS**

341 Bombardment Group, 15 Sep 1942

Tenth Air Force, 25 Oct 1943

341 Bombardment Group, 7 May–2 Nov 1945 (312 Fighter Wing for operational control, 7 May–25 Aug 1945)

341 Bombardment Group, 4 Apr 1947–27 Jun 1949

341 Bombardment Wing, 1 Sep 1955–25 Jun 1961

Strategic Air Command, 18 Dec 1961

341 Strategic Missile Wing, 1 May 1962

341 Operations Group, 1 Sep 1991

### **ATTACHMENTS**

341 Bombardment Group, 25 Oct 1943–c. 7 Jan 1944

### **WEAPON SYSTEMS**

B–25, 1942–1945

AT–6, 1947–1949

AT–11, 1947–1949

B–47, 1956–1961

Minuteman I, 1962–1969

Minuteman II, 1969

### **COMMANDERS**

Col W. A. Breeze

Lt Col Joseph Conti

Lt Col Patrick Baum

### **HONORS**

**Service Streamers**

**Campaign Streamers**

World War II  
India-Burma  
China Defensive  
Central Burma  
China Offensive

### **Armed Forces Expeditionary Streamers**

#### **Decorations**

Distinguished Unit Citation  
Central Burma, 1 Oct–31 Dec 1944

#### **Air Force Outstanding Unit Awards**

22 Oct 1962–31 Dec 1963  
1 Jul 1975–30 Jun 1976  
1 Jul 1976–30 Jun 1977  
1 Jul 1979–30 Jun 1981  
1 Jul 1988–30 Jun 1990  
1 Jul 1990–30 Jun 1991  
1 Sep 1991 –31 Aug 1993

#### **EMBLEM**



490 Bombardment Squadron, Medium

On a shield per fess nebuly azure and grey, a target issuing from dexter base of the first and or the bull's eye pierced by a sword point proper, hilt and pommel or, grip of the last, and gules (red), between two lightning bolts of the last, fimbriated argent in chief a semee of stars of the

last. **SIGNIFICANCE:** The sword piercing the center of the bull's eye is indicative of accuracy of mission and striking power; the thunderbolt elements as reimposed from the Strategic Air Command emblem suggest force and, as coupled with the sword, denote the power of force and accuracy assured by the squadron. The horizontal bisection of the shield contains the fortress crenelations of the US Air Force shield with a fortress-grey base below the star emblazoned blue of the Strategic Air Command banner. 1 Jul 1956

(1956 version): The sword piercing the center of the bull's eye is indicative of accuracy of mission and striking power; the thunderbolt elements as reimposed from the Strategic Air Command emblem suggest force and, as coupled with the sword, denote the power of force and accuracy assured by the squadron. The horizontal bisection of the shield contains the fortress crenelations of the US Air Force shield with a fortress-grey base below the star emblazoned blue of the Strategic Air Command banner.

(Original emblem approved, 11 Jul 1956, modified and reinstated, 2 Mar 1995; replaced emblem approved, 10 Sep 1985.)

This distinctive insignia was designed by Eugene Clay an artist, engineer and friend of Col. James A. Philpott, first commander of the 490. This "winged skull" adorned the nose of the Lockheed Hudson that Col. Philpott ferried to China after the attack on Pearl Harbor. When the initial cadre organized the 490 they need an insignia and the design seemed the natural choice. The emblem was approved for use by the 341st Bomb Group commander in late 1942 and adorned the forward fuselage of the Mitchells belonging to the Squadron during the time it saw action against the Japanese in India, Burma and China. It was never officially approved by the USAAF.

490 Strategic Missile Squadron (ICBM-Minuteman) On a shield per fess nebuly azure (light blue) and gray, a target issuing from dexter base of the first and or; the bull's eye pierced by a sword's point proper, hilt and pommel or, grip of the last and gules, between two lightning bolts of the last, fimbriated argent; in chief a semee of stars of the last. Significance: The sword piercing the center of the bull's eye is indicative of accuracy of mission and striking power; the thunderbolt elements as reimposed from the SAC emblem suggest force and as coupled with the sword, denote the power of force and accuracy assured by the squadron. The horizontal bisection of the shield contains the fortress crenelations of the USAF shield with a fortress-gray base below the star-emblazoned blue of the SAC banner. Approved: 11 July 1956.

490 SMS On a blue disc a yellow missile superimposed by a shield winged white detailed silver gray and blazoned: Per fess nebuly celeste and argent (silver gray), overall a sword argent hilt or between two flashes gules all converging at the center of a bull's eye issuing from dexter base or and argent (silver gray) and below five mullets argent; all within a narrow yellow border. Attached below the disc a blue scroll bordered yellow. Significance: The wings on the blue background refer to an historic insigne of the unit during World War II--the 490 "Burma Bridge

Busters." The missile symbolizes the squadron's current mission. The shield indicates the transition from an offensive mission to a defensive mission. The sword piercing the target signifies accuracy of striking power. The lightning bolts, from the SAC emblem, suggest speed and power and denote the quick and accurate employment capability of the squadron's weapon systems. The five stars represent the squadron's five flights of missiles. The gray crenelated area symbolizes the fortress like silos where the missiles are stored. Approved: 10 September 1985.

490 Missile Squadron emblem: Per fess nebuly Celeste and Silver Gray a target issuant from dexter base of the like ringed Or and from its center a sword imbedded Argent hilt of the third between also from target center a lightning bolt palewise and another fesswise Gules; all within a diminished border Azure.

## **MOTTO**

## **OPERATIONS**

Combat in Central Burma and India, 18 Feb 1943–20 May 1944 and 5 Jul 1944–4 Aug 1945; flew supplies from Chittagong, India to Imphal, India, 20 May–30 Jun 1944 and dropped leaflets for the US Office of War Information, Jan–Aug 1945. Strategic missile operations, 1962–. The squadron's emblem of "Skull and Wings" adorned the fuselages of the 490 MS B-25s. After the war, the 490 MS was reactivated at Dyess AFB, Texas, in 1955. In 1962, the squadron was redesignated as the 490 Strategic Missile Squadron, assigned to the 341st Strategic Missile Wing at Malmstrom AFB, Mont It is the only squadron that has been continually assigned to the 341st since activation.

The 490 Missile Squadron missile alert facilities are deployed at the farthest sites in Twentieth Air Force; squadron personnel are known as the "Farsiders" and take tremendous pride in being the furthest from the support base.

The 490 Bombardment Squadron (M) was constituted and authorized to be made active, pursuant to War Department letter dated 14 Aug 42. On 16 Sep 42, General Order No. 42, Headquarters, Tenth American Air Force, New Delhi, India activated the Squadron at Karachi, India. The 490 was assigned to the 341st Bombardment Group, along with the 11th, 22nd and 491st Squadrons. Prior to this point, the WW II history of the 490 is the history of the 11th Bombardment Squadron which was split in half to form the new squadron. The unit received personnel and equipment and trained with B-25Cs/Ds during Sep-Dec 1942.

Moving to Camp Moire; Ondal, India, 5 Jan 43, the squadron entered combat on 18 Feb 1943, striking targets in central Burma to delay the movement of supplies from southern Burma to the Japanese troops fighting in northern Burma. As well as Camp Moire, the Squadron operated from Chakulia (20-25 May 43) and moved to Kurmitola, India, 25 May 43. During this time they struck at bridges, locomotives, railroad yards, trackage and rolling stock in central Burma, in the

Monywa-Mandalay-Gokkteik region, and ranged as far north as Myitkyina and as far south as Thazi.

In Jan 1944 the 341st Group moved to China, leaving the 490 remaining under control of the Tenth Air Force. The Squadron's success in effectively 'glip' bombing bridges earned them the nickname of "Bridge Busters".

Between 20 May and 30 Jun 44, the Squadron carried supplies and ammunition from Chittagong, India to Allied units at Imphal, during the Japanese offensive into India. During the 1944 Allied summer offensive against the Japanese in Burma, the 490 assisted the ground troops by providing low-level air support. They strafed and bombed enemy troop concentrations; in particular striking at the bridges leading into Myitkyina which was being besieged by the Allies. The squadron moved and began operating from Dergaon, India, 26 Aug 44; from Moran, India, on 20 Oct 44; and from Warazup, Burma, on 29 Nov 44.

Beginning in Jan 1945, they dropped leaflets (nicknamed the "Burma Mail") for the U.S. Office of War Information. The 490 moved to Hanchung, China, 13 Apr 45 coming under the control of the 312th Fighter Wing, 14th Air Force. With detached operations from Hsian, China, 16 Apr - 4 Aug 45, they continued attacks against bridges and rail yards, while also continuing to drop propaganda leaflets on occupied portions of China until war's end.

With the 341st Group, the squadron returned to the U.S., Sep-Oct 1945 and was inactivated at Camp Kilmer, NJ, 1 - 2 Nov 45.

The 490 has a proud and distinguished history dating back to its beginning in India on 15 September 1942, when the 490 Bombardment Squadron (Medium) was activated. The first combat mission was flown on 18 February 1943 in B-25 Mitchell bombers bearing the now famous "Skull and Wings" insignia, an adaptation of the personal insignia of the commanding officer at that time, Major James A. Philpott. The squadron's aircraft bombed bridges, locomotives, railroad yards, and other targets to delay the movement of supplies to the Japanese troops fighting in northern Burma. Many bridge-bombing missions were initially unsuccessful. High-level, low-level, dive bombing, and skip-bombing all proved ineffective against these difficult targets.

The 490 changed all that on New Years Day, 1944, when Major Robert A. Erdin, squadron leader for the day, accidentally discovered a very effective method for destroying bridges. Once perfected, his hop-bombing technique became so successful that the 490 earned the nickname "Burma Bridge Busters" from the commanding general of the Tenth Air Force. In the words of one war correspondent, the 490 became "one of the most specialized bombardment squadrons in the world." After the war ended, the squadron came home to Camp Kilmer, New Jersey, where it was deactivated on 2 November 1945. During its three years of activities, the fighting

490 destroyed 191 major bridges in Burma, Thailand, and southwest China; received 1280 individual citations; and was awarded two Distinguished Unit Citations. These achievements cost the squadron 185 crew members killed in action. 4

It was a bright sweltering day on the Sind desert just outside of the seaport city of Karachi, India. A handful of officers and enlisted men were shifting uneasily under the beating rays off the sun. These men were newly arrived Air Corps personnel and as yet were not accustomed to the blistering tropical rays of the India sun. An officer standing before these men, reading from a weighty sheaf of papers, gave little indication, that this day in September of 1942 was an important day in the beginning of a new era in bombardment aviation. Today the activation orders for a new squadron were being read to a little group of tired men. The official creation of the 490 Bombardment Squadron, Medium, Army Air Forces. This unit, with the B-25 Billy Mitchell, was to record some remarkable achievements in flying and bombing during the coming months.

A few months later the newly-formed 490 moved to eastern India to take up combat operations against the Japanese. A famous man had just returned from Burma and his words were ringing in the ears of the men who comprised the Allied forces in India. He had said, "I claim we took a hell of a beating. We got runout of Burma and it's humiliating as hell. I think we ought to find out what caused it and go back and retake it." That was "Vinegar Joe" Stilwell, Commanding General of American forces in the China-Burma-India (CBI) Theater. The men of the 490 went to work with these words in their minds . . . "find out what caused it ... go back and retake it ... humiliating as hell."

Those first days of combat were humiliating. Humiliating because things were new, men were new, things had to be worked out-the hard way: thru bitter, heartbreaking experience. Those early days of 1943 were tough. There were problems; maintenance problems, food problems, heat and malaria, little mail, few supplies and plenty of headaches. To top it off, the dreaded monsoons were on the way. The story was: "You can't fly during the monsoons-it's darned near impossible, in fact it's suicide".

With the Japs moving toward us, Major James A. Philpott of Pomona, California, the Squadron Commanding Officer, had other ideas.

Those days were tough in other ways too. The squadron was given tough targets. The Japs were well entrenched in Burma. Their troop positions, supply lines, and newly built air fields were heavily fortified strongpoints. The Squadron, under the 341st Bombardment Group of the Tenth Air Force, was getting good results-nothing spectacular-but good. The 490 was young and inexperienced but feeling its way slowly. Slowly only in relation to more experienced squadrons but certainly not slowly in the number of hours worked and number of missions for its ships.

Then, just as things were beginning to improve, the monsoons struck.

The rains came in torrents and sheets. The stifling, tropical humidity was worse. Clothes and equipment molded in barracks bags and foot lockers. Food spoiled quickly and even cigarettes mildewed in their packages. Vital, precious aircraft parts rusted. The men in Tech Supply spent days and nights soaking every intricate engine part in rust preventative compound. When the rust compound ran out they used oil. These monsoons have "dumped" as high as 680 inches of rainfall on parts of India and Assam in four to five months time.

The Squadron had to be ready, monsoon or no monsoon, and it flew. The pilots learned how to handle their Mitchells in treacherous weather . . . how to bomb in overcasts . . . how to strafe in a rainstorm . . . how to hit a Jap ammo dump or air field when they were least expected. By this time the monsoons were over and with the nice weather following and experience received the operation began to smooth out. There was no doubt about it, by the autumn of 1943 the Squadron had grown "battlewise".

After spending months hitting railroad yards, enemy barracks, ammo dumps, supply depots, etc., the "Skull & Wings" had to change their tactics and turn to bombardment of bridges.

Large area targets were fairly easy to hit from medium or low altitude, except, of course, for the trouble caused by ack ack and fighter opposition. There had been plenty of large target areas, among them, the big Mimgaladon Airdrome, Malagon Railroad Yards in Rangoon, storage and communications areas at Prome and Henzada, supply dump and troop concentration at Lashio, Sagaing, Mandalay plus a score of others. Now word was received from the 341st that bridges were to be the prime target. These bridge assignments were tough, probably one of the toughest of targets designed by men. In fact the pilots and bombardiers began to dread the word "bridge" as it usually meant "mission failure" on the reports. This not only applied to the Skull & Wings pilots and crews but also to other airmen in the CBI as well.

The new CO who replaced Major Philpott some months before, Lt. Col. Robert D. MacCarten of Fargo, North Dakota, decided to tackle the new problem of bridges outright. So, for the remaining months of 1943 his crews concentrated on trying to find a method for knocking out bridges and knocking them out to stay.

All of the accepted methods of the day were tried: Medium altitude bombing with a bombsight, low level bombing, "on the deck" bombing at extreme low level (40' to 60' level), dive bombing, skip bombing and a dozen other variations of these and other methods. In Europe, bridges were destroyed by sending vast numbers of planes over and saturating the target area with hundreds of tons of bombs. In India there were neither the planes nor the the 'tons of bombs to do this. Despite every method tried, by the end of 1943, bridges had become the 490's jinx target.



This was all changed on New Year's day of 1944 when a curious thing happened.

On that day the Squadron was assigned as a target the important Mu River railroad bridge, which connected the Mandalay-Saigning district with the Chindwin River area. Capt. Robert A. Erdin of Patterson, New Jersey, Squadron Operations Officer, who was flying that day, decided to try a new approach to the objective. Instead of coming in on the target diagonally or at right angles as the other planes had done, he decided that he would make his run straight down the rail line and across the bridge lengthwise. Then an accident occurred which changed the course of Squadron history. While making his run on the bridge, Captain Erdin was forced to pull his ship up suddenly to avoid hitting a tree near the rail line, and by the time he had brought his ship down again it was time to release the bombs. Erdin quickly pushed the bomb release switch and trailed a neat string of 500 pounders along the length of the bridge. When Erdin looked around, the Mu River Bridge was lying in a twisted heap in the river.

As soon as Colonel MacCarten heard of this successful accident he realized that Erdin had stumbled on a new bombing technique. MacCarten wasted no time. He ordered an experimental bombing range built near the base and assigned Captain Erdin and Captain Harry A. Suthpen of Bement, Illinois, (later killed in action) the job of perfecting the new technique. After weeks of painstaking experiments with different types of bomb loads, fusings, approaches, speeds, altitudes and simulated targets, it was found that after a low level approach was made to the target, a slight dive before releasing the bombs would prevent them from skipping after they hit the bridge; which was one of the major problems of bridge-busting.

The new technique was taught to other pilots and became standard procedure in the "Skull and Wings" Squadron. Thus, in the early months of 1944 the death knell for enemy supply lines was sounded. After the destruction of the Mu River Bridge the Squadron's pilots began to knock out bridges one after another. The performance of the 490 was received with amazement and surprise. The 490 was doing something that no other squadron had ever done before, they were smashing bridges systematically and methodically, one by one. General Howard C. Davidson, Commanding General of the Tenth Air Force, sent a telegram to Colonel MacCarten: "To you, your Burma Bridge Busters and all the boys on the ground who keep 'em flying, on their successful accomplishments, my personal congratulations. Your devastating results have been received with glee."

By the middle of May, 1944, the 490 was known thruout the CBI as the "Burma Bridge Busters" and had piled up the impressive score of 36 bridges destroyed and 12 more damaged in five months. On the 11th of May the "Bridge Busters" had accounted for six bridges in one day. Among the bridges downed in the five month period were the Myittha, Meza, Budalin, Pyu, Daga, Myingatha, Natmauk, Shweli and Sittang bridges; all important links in the Japanese supply system in Burma.

But the newly-titled "Burma Bridge Busters" had no time to bask in the light of their fast growing reputation. For it was during those first months of success, on March 22, 1944, that the Japanese began their invasion of India.

The Japanese forces in Burma gathered up all their might and made a lightning thrust over the Naga Hills into the little state of Manipur and down onto the great Imphal plain. The Japs meant business. They had spent a year of moving in troops and creating a large stock-pile of supplies in Burma. The invasion of India was now on in earnest.

The Japanese forces succeeded in surrounding the large and important Allied garrison at Imphal. Immediately every available plane in India was mustered to fly supplies to the trapped Allied troops. "Skull & Wings" planes inaugurated a 24-hour, "round the clock" shuttle service to fly food and ammo into the besieged garrison. It was a tough assignment. Combat personnel soon became exhausted at the pace and ground men volunteered to fly in their places. The additional work of flying, added to the nearly impossible task of keeping the planes in combat condition, soon began to tell on the ground crews also. It was not uncommon for maintenance crews to work all day, do a double engine change during the night and work through the next day with no more than time off for a sandwich or tea.

Squadron armorers, not satisfied with the pay loads of the Mitchells, were striving to develop and install a bomb bay rack which would increase the B-25's cargo limit to 4,000 pounds plus. Soon the 490's Mitchells, equipped with this new rack, flew in one trip what they had formerly flown in three. It was this same armament section that began the practice of putting extra guns in the nose of the old B-25 "D" and that upped bomb loads to four 1,000 pound bombs or eight 500 pounders by the use of a new loading technique.

For weeks the Squadron's men and planes flew the "Imphal run" in the worst monsoon weather imaginable. Many times the Imphal air strip would be under enemy fire and Jap Zeros would lie in wait for ships flying alone or cargo planes without fighter escort. On one occasion, a small number of the Squadron's B-25s returning from Imphal were attacked by a large number of Zeros. "Skull & Wings" ships engaged the attacking force in a running air battle which lasted for more than an hour. More than one-half of the enemy planes were destroyed or damaged. The Squadron lost one aircraft.

From Kurmatola the Squadron moved to Dergaon, Moran, Jorhat. On the 15th of November, 1944 rumors had it that the next move would be up the "Road" into Burma. A little spot carved out of the jungle called Waregup. This would shorten the flying time and allow two or even three missions a day into Jap-held territory. In fact this brought the bombers to within 40 miles of the lines. By the last week of November these rumors were facts and by October the missions were being flown from this tiny strip with only 4,000 feet of runway for the overloaded planes. The 100th bridge had been destroyed on Nov. 8 and with stepped-up missions the morale was

very high.

Typical of the Squadron's activities during this period was the bombing of the Wuntho Bridge on the rail line from Rangoon to Myitkyina. The bridge was knocked out time and again. As soon as Jap engineers would rebuild the bridge, "Burma Bridge Busters" went in and knocked it down. The bridge finally became famous under the sobriquet "the bridge that won't stay up".

Besides setting records for precision low level bombing, the "Bridge Busters" set other records. In order to have a first class (bombing outfit, a first class maintenance section is necessary along with top-notch planes and men to fly them. Tech. Sgt. Harry Brisco, in charge of engine change and general maintenance, along with prop men, crew chief's and squadron supply were doing a wonderful job. Tech supply was having trouble at times keeping parts in stock and with each lengthening of the supply line maintenance became more of a problem. A large\* number of the planes are credited with reaching the hundred mission mark. "Old 61" known as the "Buzzin" Buzzard," was the first to hit the new mark, and another Mitchell "168" flew 100 consecutive combat missions without mechanical failure of any kind. These records and many more like them are a credit to 490 personnel who worked for many months in the early days without proper tools. Old No. 161, a "C" with 20 months in November off '44, still flying, 370, Charlie Baatz ship, 810, whose crew chief was Sergeant Baye of New Mexico with 600 hours on each engine and special permission from Air Force Headquarters in the U.S. to try for 700. On March 23, No. 810 had 176 missions and running fine. This grand ship was eventually shot down with full crew over the target area.

In December most of the missions were against supply and troop concentrations in and around the fortress cities of In-daw, Katha, Bhamo and Lashio. Close air support was given to hard fighting ground units like the "Mars Task Force." In December 20, the "Burma Bridge Busters" broke all previous records by destroying eight bridges with mine aircraft in a single day. By the end of the month, the "Bridge Busters" had given a Christmas gift to the retreating Japs-28 bridges demolished and several more damaged in one month. An all time record. Maintenance records on the Squadron's planes also outdid themselves. During this period the percentage of abortive sorties was .0432 per cent of all sorties flown.

When 1945 rolled around, the 490 had accomplished a lot. Since February of 1943 the Squadron had dropped a total of 8,257,000 pounds of bombs, had flown over 3,000 sorties against all types of targets and had destroyed 133 bridges and damaged 43 more. Its pilots and bombardiers and established records, received many citations and praises for their accomplishments.

The number of planes in the Squadron had been increasing steadily from 16 to the total of 24. Although this is 50 per cent more than normal, it increased mission size and certainly kept ground crews from wondering what to do after the evening meal. Aside from the regular

combat missions the 490 was also flying the "Burma Mail". Almost every day the "Mail" was dropped to Burmese people in Jap-occupied territory and propaganda for enemv. troops. This consisted of leaflets, newspapers, and gifts for the jungle villages.

In early spring of 1945 it was decided by the Tenth Air Force that the 490 had completed its mission in Burma. Arrangements were made for the Squadron to be transferred into General Chen-nault's Fourteenth Air Force where it would rejoin its old group, the 341st, which had moved to China many months before.

A few days before the Squadron was scheduled to move over "the hump" into China, General Davidson paid his last visit to the 490. With the entire Squadron gathered around him, General Davidson thanked the men of the "Skull and Wings" for their outstanding work during the India-Burma campaign and with tears in his eyes, said goodbye to his favorite squadron.

Upon arriving in the China Theater, the Squadron, part of the 341st Bombardment Group, joined Brig. Gen. Russell E. Randall's West China Raiders, a well-known Fourteenth Air Force fighter wing.

The actual move and the setting up of a new base presented many difficulties. Many of the unit's key personnel, both air and ground men, had been returned to the states. In addition to the breaking in of new men on their duties, the terrain over which the 490 was to operate was strange and unfamiliar. These problems and many others faced Captain Edward L. Tengler of Cleveland, Ohio, the new Commanding Officer. China's bridges were more heavily defended and they were usually larger, longer and more sturdily built.

The tension that had accompanied briefing and take-off on the day that the Squadron flew its first mission could be felt over the entire base. Every last man was waiting for the mission results to be radioed in. After weeks of preparation, this was the pay-off. Many in this unit, as in other units, wondered if the old "touch" had been left in Burma or had it accompanied the unit to China.

The radio station had received word from the first plane. The message was terse, leaving nothing to be doubted: "Mission-failure." But then from the next two ships over the target area the message came back: "Mission-successful." On the first mission two heavily-defended railroad bridges had been knocked out on the Tung Pu rail line, one of the most important Jap supply routes in China. Success continued until July 31, 1945, the; week during which this story was written, and if the war should continue it is hoped that this same success will follow this unit. To this date 36 more bridges have been destroyed and 10 damaged in the course of three months of combat operations in China. A citation received from the head official of the province which the unit is based in has also helped to create better feeling among the personnel toward the Chinese. Of the bridges which have been destroyed are the important Yellow River bridge,

Lohochai, Sincheng, Sinyang and Anyang bridges on the Peiping-Hankow railroad and the Taiku and Kih sien rail bridges on the Peiping-Tatunig-Punchow rail line.

An example of "Skull and Wings" versatility has been the continued destruction of the Chungmow rail bridge. The Chungmow Bridge is a 2,000-foot spanning the Yellow River. It is strategically one of the biggest and most important supply links in north China. The bridge has been knocked out by the action by the Squadron on four different occasions, once from medium altitude and three times from low level attack.

In 2 1/2 years of combat operations the 490 has hit every type of target under every conceivable condition-in monsoons, over mountains and jungle, thru ack ack and fighters in some of the wildest country in the world. In two years the Squadron has pushed its way up from an obscure organization to one of the distinguished bombardment units of World War II. In 19 months time it has accounted for 187 bridges knocked out and 53 more damaged and has cost the Japanese thousands off casualties, has blasted his supplies, his communications, his fortifications and his hopes of conquest in Southeast Asia.

During its operations in the India-Burma Theater the Squadron received 30 official commendations for outstanding performance in combat. Nine of these commendations came from General Davidson of the Tenth Air Force. Lt. Gen. Barney M. Giles, then Deputy Commander, U.S. Army Air Forces and Chief of Air Staff, wrote, "Your Burma Bridge Busters will soon run out of their favorite targets at the rate they are going . . . Please tell them that General Arnold and I are watching them with pride." Among other commendations received were letters from the War Department; Lt. Gen. William J. Slim, Commanding General of the British 14th Army; Admiral Lord Louis Mountbatten, Supreme Commander, Southeast Asia Command; and many others. Perhaps one of the finest tributes of its kind was General Davidson's farewell commendation to the Squadron. He said in part: "..... Your distinguished service as an organization while a member of my command for approximately 2 1/4 years has been truly outstanding. The men and officers of your command have never hesitated to try the untried, and through your conscientious efforts have produced many new and effective bombing techniques which wrought destruction upon the enemy. Your consistent, effective operational records, high moral standards, high standards of maintenance and morale has been a distinct demonstration of courage and leadership. It is with regret that we lose you. We wish you continued success and God-speed in your new assignment."

Exploits were many-humorous, tragic and sad. Many of these forgotten except in the minds of men who lived them.

There was the time when Lt. William E. Cook of Fullerton, California, on a daring night mission, destroyed two spans of the great Sittang Railroad Bridge in southern Burma. The Sittang has often been called the most important bridge in Asia. Cook, after dropping his bombs at low

level, hit a Burmese pagoda while trying to evade heavy ground fire, and sheared off four feet of his left wing. In spite of this, Cook succeeded in bringing his badly crippled Mitchell back to base.

Then there is the story of Sgt. Marvin Beckman of Inglewood, California. Sergeant Beckman was the only survivor of a crew of five who bailed out of a B-25 and who were strafed by Zeros while they dangled helplessly in their parachutes. Beckman, after many days in enemy-held jungle, finally reached a forward Allied base, wounded and delirious. Captain Bell of Indiana, who flew his ship and crew in to the target area, was shot down and returned after many days in the jungle. Part of his crew never returned, as happened many other times. On this flight the Captain had a new ship, number 111, which had been dubbed "The Three Aces" by the ground crew and considered a lucky number.

The story of Staff Sergeant Vernon Cook of Abner, Oklahoma, is well-known. Perhaps you've heard of Sergeant Cook. He was the gunner who, while his and several other ships were engaged in a running fight with Jap Zeros, removed a fellow gunner who was badly wounded from a blasted turret and took his station. When the turret was put out of action, Cook took up the fight from the waist guns, giving first aid to his wounded crewmates between attacks. His coolness and courage won him the Silver Star for gallantry in action.

Then there is the humorous side - Captain Boutsellis with his 7 1/2" mustache. Waxed and stiff as a Texas long-horn. Speaking of Texas, there was the time when Lt. William C. Gallimore of Abilene, Texas, who after returning with a bomb bay load of beer for the Squadron, "buzzed" the base, breaking the bomb bay rack and raining beer cans all over the Squadron's living quarters. On another occasion, Lt. John M. Schrader, navigator on a B-25 lost in a heavy overcast, led his plane to bomb an enemy airdrome which was unknown to Allied Military Intelligence. The field was named in his honor, "Schrader Field." Then there was Lt. Charles F. Powell of San Diego, who was forced to salvo his bombs before reaching his assigned target due to heavy flak. The next day reconnaissance photos revealed that Powell's bomb load had been dumped by accident squarely on top of a Jap Army Divisional Headquarters.

Other things which make up a combat squadron are days such as Oct. 24, 1944, when 612 crashed. Three men were seen to get clear of the ship before it went into the jungle but were too low for the chutes to open. Oct. 27 Number 882 made a run on the target too close to the preceding ship and was demolished by delayed action bombs required for low level type bombing. Oct. 31-Number 370 and Number 967 shot up and landed at an advanced base. Two men wounded- this by Zeros. Jan. 18, 1945-Lost Number 493 yesterday on Mail Run. None of crew heard from. Lost one plane today strafing Jap air base. Number 780 came in today with landing gear hit-landed, swerved and hit semi full of 100 octane gas. Blew up immediately but whole crew managed to escape with minor burns. Feb. 1 Number 403 down with full crew over target. Feb. 9 Number 788 went in too low, hit a tree, flipped over on its back and burned. Feb.

15-Number 977 went in low over the target and when last seen was still going away from the base low and fast, no radio contact. Feb. 10 Number 068 went in on target, dropped bombs, climbed, circled for return flight, then crashed with full crew. This is only to say, in summing up these losses, that when men you know and planes you have worked on fail to come back it has a certain way of forming a closer-knit, harder hitting outfit. We believe the 490 to be this type of "Bomb Squadron". -THE END

Various U.S. units in CBI acquired nicknames, in some cases indicating the type of work they were doing. One of these was the 490 Bomb Squadron of the Tenth Air Force, better known as the Burma Bridge Busters. A staff correspondent for YANK, The Army Weekly, told this story in the magazine's March 9, 1945, issue.

At a medium bomber base in Northern Burma. The B-25 with the skull and wings painted on its sides banked sharply to get around the last of the mountains and then roared toward its target, a thousand feet above a bell-shaped pagoda that glistened in the noonday sun. Directly ahead, sprawled across the green plain at an elbow of the blue ribbon that was the Irrawaddy River five miles away, were rows of city blocks and clusters of buildings.

"There's Mandalay," said someone over the interphone. Somehow the matter-of-fact way he said it didn't fit the fabulous city of Kipling's thumping song, the largest city in central Burma.

But this bomber's crew wasn't interested in cities, and Mandalay, for all its history and importance, wasn't the target today. The B-25 belonged to one of the most specialized bombardment squadrons in the world-the Burma Bridge Busters, who operate on the principle that destroying a bridge will do more to beat the Japs in Burma than bombing an enemy base. Today I was riding along with them to learn how they do it, and why.

The plane banked until the city was behind. Then it nosed into a flat, thundering 300-mile-per-hour power glide. The bomb-bay doors rumbled open. Suddenly twin banks of .50-caliber machine guns began to clatter along both sides of the fuselage, their tracers darting into the trees and the open ground below. Tripping the triggers of the nose gun, I added to the fire by spraying possible ack-ack positions. The whole ship shivered in response.

Then through a break in the foliage we spotted the target. It was a road bridge about 100 feet long, spanning a narrow river and mounted on two concrete piers. No sooner did we spot it than a puff of white flak blossomed dead ahead, almost directly over it. Crouched beside me in the nose, 2nd. Lt. L. P. Bloodworth of Ruidoso, N. Mex., the navigator yelled: "Hope that's the last burst in that spot. We'll be there in about 10 seconds."

The plane leveled out and we quit firing. From his cabin just behind the "greenhouse," 1st Lt. John T. Reynolds of Hendrysburg, Ohio, the pilot, kept his eye close to the machine-gun reflector

sight that he bombs with and made final adjustments of the plane's course. The bomber jolted slightly- the bombs were away.

Just as the plane raced over the target, we noticed a railroad bridge upstream-or what had been a railroad ibridge but was now nothing but a half-submerged mass of twisted steel. On the tracks near it were a dozen empty freight cars.

"We knocked out the railroad bridge eight days ago," Lt. Bloodworth shouted in my ear. "It's on the only rail line from Mandalay to the Japs in northern Burma."

The bomber flipped into a steep-climbing turn to get away from some ack-ack ahead as the bomb-bay doors rumbled shut. Almost simultaneously our delayed action bombs exploded below, kicking the ship a solid boot in the tail.

"Tail gunner to pilot, tail gunner to pilot," cracked the interphone. "Our bombs missed the bridge-they landed short and to the left-but it sure as hell looks like the Leaning Tower of Pisa now."

Banking away, we caught a glimpse of the next B-25 making its bomb run through the blue-gray smoke of our bursts. We passed another of the squadron's target-bound ships on our way home. By the time we landed, one of the bombers had radioed the field of a direct hit.

"That means," explained the squadron intelligence officer, "that we've cut the only railroad and the only good motor road to the Japs north of Mandalay. Of course they will float and hand carry supplies across the river to trucks on the other side until they build new bridges there. But that's a slow process-and as soon as they build a new bridge, we'll knock that out, too."

By doing the same kind of precision bombing week after week against enemy supply routes all over Burma, the Bridge Busters have destroyed 114 bridges and damaged 51 beyond use in less than a year-a record which is probably unequalled in the Army Air Force.

Strangely enough, what got the Bridge Busters started on this record-making rampage was a mission that failed. And stranger still, the type of bombing I had just seen, the type they have used in wiping out most of their bridges-hop-bombing-was hit upon purely by accident, although it has now become as standard a technique as dive- or skip-bombing.

Up until a year ago, the Bridge Busters were just another run-of-the-mill medium bombardment outfit, activated in December 1942 as the 490 Squadron of the Tenth Air Force in India. For 10 solid months they pulled the usual routine missions against such targets as Jap airfields, bases, supply dumps, ships and occasionally bridges. The crews had always dreaded bridge targets most of all, because they were hardest to hit. Whether the planes of the 490 bombed in



formation from 5,000 feet or attacked singly at tree-top level, they seldom could hit a bridge.

One day at briefing they were told their target was the Myittha River railroad bridge, over which the Japs were pouring supplies into southern Burma for a possible invasion of India. The intelligence officer warned them that the bridge was probably the most important target they had yet been given and that the brass hats had declared it must be destroyed. The B-25s of the 490 went out in full strength that day and literally saturated the target area with bombs, leaving the surrounding territory a mass of bomb craters. But when the smoke cleared away, much to their chagrin the bridge was still standing. Even direct hits had plummeted right through the trestles, then exploded harmlessly deep in the river. The mission had been a dismal failure.

When the crews of the 490 came back to their field that day, some of them were humiliated and some of them were fighting mad. And everybody thought they were going to catch hell when the CO, Lt. Col. Robert D. McCarten of Fargo, N. Dak., called the combat crews together for a meeting. Instead, he told them: "That's the last straw. We're going to learn how to knock out bridges if it's the last thing we do."

After that, for hours a day, the 490 practiced toy aiming dummy bombs at a target on a nearby rice paddy. Having read of the success of skip-bombing against Jap shipping in the Southwest Pacific, they tried it against bridges. But they found that a bomb's skip cannot be determined on ground as it can on open water, especially with trees and houses in its path. Nor is a bridge something solid that will stop a skipping bomb, like a ship. The bombs either ricocheted off their course, skipped clear over the bridge or slid under it to explode on the other side.

They tried dive-bombing but found that the B-25 isn't built for the necessary steep dive and quick pull-out. They tried attacking at tree-top level but found that big bombs didn't have time to turn before hitting the ground; they would either hit on their sides and skid off at an angle or enter the ground sideways and not go off at all. To make the bombs turn sooner after leaving the plane at low altitude and prevent them from skipping, they tried air brakes on the fins, then spikes in the noses, then parachutes on the bombs. These tricks helped, but they were too much trouble and far from fool-proof.

It was then, after all these weeks of experiments, that the 490 stumbled upon hop-bombing purely by accident.

The squadron's target on New Year's Day 1944 was the Mu River bridge, on "the important railroad line from Rangoon to central Burma. Roaring in for the attack at treetop level, Maj. Robert A. Erdin of Paterson, N.J., squadron operations officer and that day's squadron leader, saw a large tree looming in his course. He gunned his plane upward to avoid hitting it. When he got back to the pre-determined altitude, he was already on the target, so he dumped his bombs.

The plane was then nosed downward in a shallow dive. Cursing the tree that spoiled the bomb run, the crew looked back to see how far the bombs had missed. What they saw changed the whole course of the squadron's history-and eventually had an effect on the course of the war in northern Burma.

Two trestles of the 480-foot bridge lay toppled in the river in the smoke of the bomb explosions. "That's it!" yelled Maj. Erdin to his crew. "That's what we've been looking for. Bring on those bridges!"

Arriving back at the field, Maj. Erdin (who is now squadron CO) explained what had happened. The shallow dive just as the bombs were released at low altitude sent them earthward at an angle which prevented them from skipping or failing to go off on impact. The squadron soon added other refinements to bring hop-bombing to perfection. The pilots learned to sight during the shallow dive through the machine-gun reflector sight. They found that with their new technique, near misses would do more damage.

Two weeks after Maj. Erdin's discovery, the 490 got sweet revenge when Capt. Angelo J. Boutselis of Dracut, Mass., destroyed the Myittha River bridge-the target which the entire squadron had missed before-with only two bombs, using the new hop technique. Boutselis was so happy he conducted prayer-meeting hymns over the interphone and twirled his 10-inch mustache all the way back to the field.

Then the 490 started begging for bridge missions-and got them. The squadron's ships ripped apart the Meza railroad bridge, 800 feet long, over which had passed 90 per cent of supplies and reinforcements for the Jap front lines in northern Burma. Exactly a month after stumbling upon hop-bombing, six of its B-25s destroyed three bridges on a single mission. A few days later six other planes blasted out two more spans. Before the week was over, the squadron had accounted for eight bridges.

When the news reached Maj . Gen. Howard C. Davidson, commanding general of the Tenth Air Force, he sent this message to Lt. Col. McCarten: "To you, your Bridge Busters and all the boys on the ground who keep 'em flying on their successful accomplishments, my personal congratulations. Your devastating results have been received with glee."

Although that was the first time anyone had ever called the squadron Bridge Busters, the name stuck. From then on, even though the squadron kept its skull-and-wings insignia, it became officially known by the new name and has specialized in knocking out bridges ever since.

Within a few weeks, the Bridge Busters discovered that 1,000-pound bombs would do more damage with near misses than smaller ones, so they figured that putting more of these big

babies on each ship would reduce the number of ships needed to wipe out a bridge. What they did about this would have turned an airplane designer's hair white. They loaded one more 1,000-pound bomb on their B-25s than the plane is designed to carry. When the ships still flew okay with this load, Capt. Willfam C. McIntyre of Nashville, Tenn., squadron armament officer, decided to try still another.

"I'll bet you 150 rupees," declared a fellow officer, "that the B-25 can't get off the ground and go anywhere with that weight."

McIntyre took the bet, packed one more 1,000-pounder into each ship and won his 50 bucks hands down when the ships not only took off and flew, but five planes knocked out three bridges. The monthly average since then has been three to four planes to knock out one bridge.

Burma on a relief map looks like a huge strip of corduroy. It is just a series of mountains and valleys, mostly running north and south. In every valley are rivers: there are thousands of these rivers and streams. This means that any road must cross water at intervals along its length. This is why bridge busting became so valuable in hampering Jap supply.

The Bridge Busters' most spectacular mission was smashing the 11-span 1,800-foot Sittang River bridge—one of the biggest in Burma and vital link in the railroad connecting Rangoon with the only route to Bangkok, in Siam. To accomplish this, 1st Lt. William E. Cook of Fullerton, Calif., used the glistening rails as his guide in bright moonlight. His bombs toppled several hundred feet of the long span. But the mission nearly resulted in the loss of Lt. Cook's ship. Just as he banked sharply to evade ground fire after leaving the target, his left wing hit the spire of a Burmese pagoda, which ripped four feet of the wing tip away. He managed to nurse the lopsided ship 400 miles over the mountains back to the field. He was later killed in a crash.

Then there was S/Sgt. James D. Grain of Chattanooga, Tenn., who lowered himself into the open bomb bay over one target and kicked loose some bombs that had failed to release. There was T/Sgt. David N. George of Rifle, Colo., first crew chief to send a plane out on 100 consecutive missions without a mechanical turn-back. There was Cpl. Marvin Beckman of Inglewood, Calif., who bailed out of his ship when it was hit in a half-hour running battle with 25 Zeros, watched the Zeros strafe and kill everyone else in the crew as they parachuted down near him and then walked for five days in the jungle before staggering into an Allied outpost.

And there were those like Lt. Arthur C. Sanders of Coronado, Calif., who turned the controls over to his co-pilot above Rangoon so he could photograph another running fight with Zeros with his amateur movie camera. Later he was missing in action. And 1st. Sgt. Joseph W. Meier of Jersey City, N. J., who used to put up such bulletin-board notices as "Pay call 1300 hours. Crap games 1305 hours" and who, when he went up on just one mission to see how it was, got a Purple Heart as the only man on the mission wounded by ground fire.

When the battle for Myitkyina began last spring the Bridge Busters had knocked out 40 bridges- every important span in the area-to soften up the Jap base for the kill. During the summer monsoons, they carried out 65 missions in four months through thunderstorms and low ceilings. When good weather returned in October, they opened up in full blast again by destroying 13 bridges in 13 days.

The Bridge Busters have had to do other kinds of bombing jobs, too. They joined other outfits of the Tenth Air Force in sinking river steamers that used to ply the Irrawaddy laden with Jap supplies. Although they do most of their bombing in daylight, they send a few planes out on moonlight nights to spot and wreck anything that moves in Jap-held Burma-trains, trucks or small boats for the Japs do most of their moving at night. Every week planes pull missions against enemy bases or troop concentrations.

But the Jap engineers keep the Bridge Busters busiest in their specialty. The engineers either repair an important bridge that has been bombed out or build a by-pass bridge nearby as soon as possible after a bombing. While they are doing this work, the Bridge Busters just fly by occasionally to see how things are coming. As soon as they're sure a bridge is nearly rebuilt or bypassed, they pay another visit with "their 1,000-pounders and knock it out again. The squadron had to knock out the Bawgyo River bridge - the 100th bridge destroyed - twice in a few weeks.

Recently there have been two or three off-handed tributes to the Bridge Busters' work. One was the discovery in a village taken by Chinese forces of 150 emaciated Jap bodies, all showing signs of having starved to death for lack of supply lines. Another was an official statement that the Japs are retreating from Northern Burma, leaving only small delaying garrisons behind, partially because of their inability to get more supplies and troops up from Central Burma

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