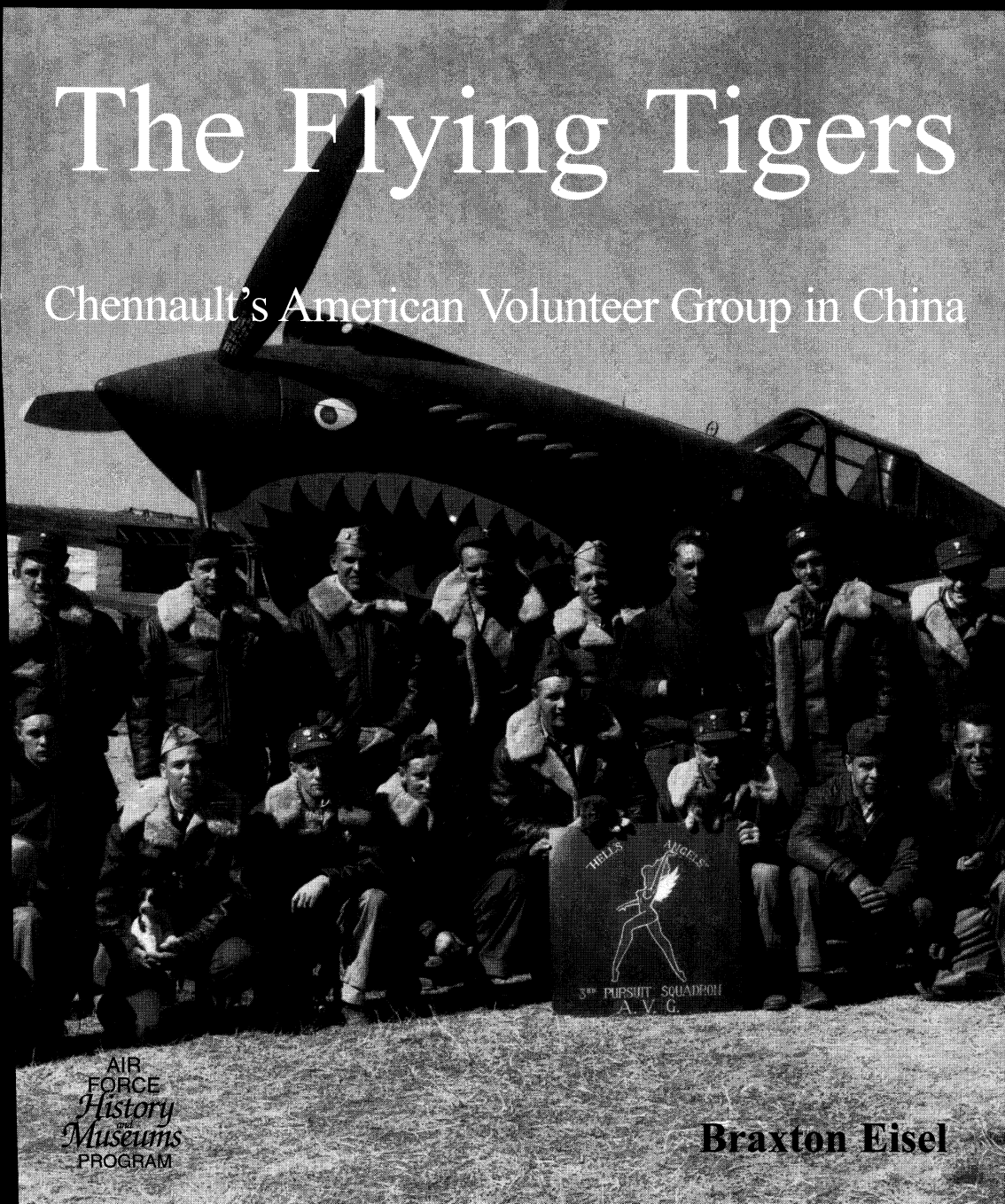


# Air Force Sixtieth Anniversary

Commemorative Edition

## The Flying Tigers

Chennault's American Volunteer Group in China



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## **The Flying Tigers**

### **Chennault's American Volunteer Group in China**

They volunteered. For a variety of reasons—patriotic, altruistic, mercenary, or just “for the hell of it”—nearly three hundred U.S. servicemen and a couple of female nurses volunteered to fight a war in a place they knew little about.

Recruited at military bases around the country, the members of the American Volunteer Group (AVG) set off for the unknown in the summer and fall of 1941. While U.S. support for the Allied cause was growing at a steady pace, most Americans still felt distanced from the conflict enveloping Europe and Asia and did not want to go to war. At the highest levels of the government, however, entering the war appeared inevitable. The AVG was one way of gaining experience in this vicious war, while increasing support for the nations fighting the Axis powers.

Despite incredible odds against them from numerically superior Japanese forces and a near complete lack of supply and replacement parts, they took the first successful fight to the Japanese during a time of Japan's unrelenting successes. It was not pretty, and their legend has eclipsed the reality, but the reality of the AVG is still an amazing story. Led by Claire Lee Chennault, they made history.

#### **The Captain from Louisiana**

Claire Chennault was a proud man with strong convictions. From his childhood in the bayous of Louisiana to his rise as the leader of the air force of China, he battled his superiors and the enemy alike with tough aggressive tactics. He was successful against the enemy, not so much with his superiors, but he never gave up. His pilots absorbed this lesson and never forgot it, especially when the chips were down.

The details of his birth are inconsistent. In his memoirs, he claimed to have been born in 1890, the date he gave when he entered the Army. On another occasion, he used 1892. His passport, however, had September 6, 1893, and census records from 1900 show his parents had one son, aged six. Graduating from the equivalent of high school when he was thirteen, he entered Louisiana State University at fourteen. It was at LSU that he had his first taste of military life as a cadet in the student body. He found that he liked military life, although the discipline sometimes irked him.

After receiving a teaching certificate in 1910, Chennault's first job and leadership challenge was as the teacher in a one-room schoolhouse in Athens, Louisiana. His predecessors at the school had rarely lasted more than one term because of the antics and physical assaults of the strapping backwoods school kids. Still legally a minor, Chennault's discussions behind the schoolhouse with unruly farm boys got the school firmly under his rein. He proved that he was in charge, then channelled their aggressiveness into sports.

Chennault married in 1911 and soon had the first of his ten children, eight with Nell Chennault and, later, two with Chen Xiangmei "Anna" Chennault. The need for a larger paycheck had him searching for better jobs; and by 1916, he was making automobile tires in a factory in Akron, Ohio. It was there in 1917, after the United States entered World War I, that he first applied for military flight training.

Rejected for flight training due to his age and four dependents, Chennault accepted a commission as a first lieutenant in the infantry and an assignment to the 90th Division, headquartered at San Antonio, Texas. He managed a transfer across town to Kelly Field, where his duty consisted of providing basic military instruction to the aviation cadets hoping to win their wings in the Army.

Formally rejected for flight training three more times, Chennault nonetheless learned to fly in the Curtiss JN-4 "Jenny" trainer. Befriending some Kelly flying instructors, the resourceful lieutenant gained enough experience to solo unofficially. He logged more time in idle JN-4s after transferring to a satellite field as the engineering efficiency officer, where his duties consisted of checking the planes in and out and overseeing their refueling.

There were no regulations regarding nonaviators flying government-owned aircraft, and Chennault racked up more than eighty hours by the time of his transfer to Mitchel Field, New York, as adjutant of the 46th Pursuit Squadron. The squadron received orders to ship overseas in the fall of 1918, but a change in the orders kept the squadron from sailing. Even though Chennault desperately wanted to join the fighting, this reprieve probably was a blessing in disguise. If the 46th had shipped out, he would have either been in transit or just arriving in France when the war ended. In either case, he likely would never have become a military pilot.

Transferred to Langley Field, Virginia, he had a near-death bout with influenza. While recovering, he received orders to report to Kelly Field again, but this time as a student flyer. His previous haphazard flying training, as well as his short temper for those in positions of authority, nearly grounded him for good. Irritated at the way an instructor failed to explain a student's errors and instead just snatched the controls away, often banging the stick against the student's thighs for emphasis, Chennault warned the instructor that he would not tolerate such treatment and would refuse to take the controls back.

Soon enough, Chennault made an error. The instructor banged the stick against the fiery Louisianan's legs and waited for him to take control again. Chennault did not, and the trainer dove for the ground. At the last second, the instructor realized that Chennault meant what he had said. Regaining control, he landed and immediately recommended Chennault for washout. A recheck by a



more tolerant instructor reversed this judgement, and Chennault graduated in the spring of 1919 as a pursuit pilot.

Caught in the force reductions following World War I, he was discharged within a year, but the National Defense Act of 1920 reorganized the Army's flying component. The Air Service was made a combat branch of the Army, and the number of pilots was greatly increased. Chennault received a Regular commission in September 1920 as one of fifteen hundred officers assigned to the Air Service.

Throughout the 1920s, Chennault flew in several pursuit squadrons with flyers now famous in U.S. military aviation history. Frank "Monk" Hunter, a future Eighth Air Force commander, was his first squadron commander. Chennault practiced dog-fighting with Joe Cannon, later Twelfth Air Force commander, and with Don Stace, an eventual commander of Seventh Air Force. Flying with them as they practiced interceptions, he witnessed the latter two collide.

Stace, flying a French-built Spad, fell out at the top of a half-loop in a descending spiral. Cannon, pursuing in a British Se-5, could not avoid Stace and the two hit. Stace managed to recover his damaged Spad and landed safely. Cannon was not so fortunate and rode his mangled biplane into the ground. Unbelievably, he survived the crash and went on to a distinguished career.

Chennault assumed command of the 19th Pursuit Squadron in Hawaii in 1923. While there, he began to develop his theories of pursuit interception and the use of a ground-warning network. Frustrated by the unrealistic rules during maneuvers, he ignored the restrictions that allowed attacks against bomber formations only after they were in the target area and attacks against ships only when they were off the coastline and simulating gun fire against shore positions. He achieved a little warning by stationing men atop the base water tower to signal when they saw approaching bombers or ships. The time gained allowed his pursuits to intercept the bombers much farther out than before. Similarly, the Navy found itself under mock strafing attacks miles out to sea. Although his methods worked, he was chastised for not sticking to the rules.

In 1930, Chennault attended the Army Air Corps Tactical School at Langley Field, Virginia. One of the senior instructors at the school, Capt. Clayton Bissell, was an ace from World War I and taught tactics in the pursuit course using his experiences in the Great War. Chennault believed that these tactics were wasteful of both time and resources. The odds against two opposing forces meeting in the empty sky without some sort of intelligence or early warning apparatus gave the attacker the advantage. Following graduation, because of his commitment to pursuits, Chennault was named an instructor in the pursuit course at the school and moved with it in the summer of 1931 to Maxwell Field, Alabama.

Bomber advocates were beginning to become dominant in the Air Corps, and war games conducted in 1931 seemed to prove the bomber proponents correct. However, the maneuvers did not include an advance warning network, and no pursuit pilots had been involved in the planning. To Chennault, it was a foregone conclusion that the bomber would win in that scenario.

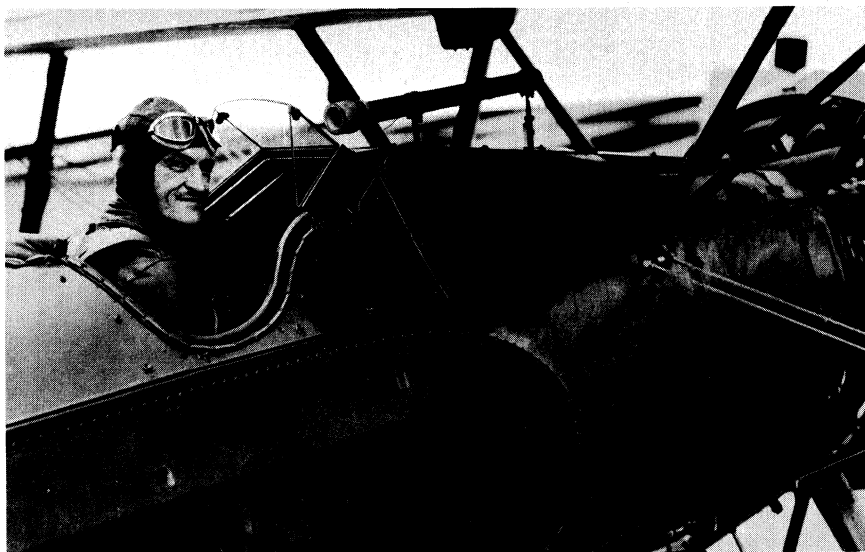
The introduction of the Martin B-10 bomber in 1933 strengthened the position of the bomber advocates. The standard pursuit aircraft of the day, the Boeing P-26,

could not catch the B-10 and had only two machineguns compared to the bomber's five. Against the doctrine that "the bomber would always get through," Chennault's counterbelief—that fighters, with adequate armament and protection and given adequate warning, could, in fact, stop a bomber force—caused heated arguments at the school.

Chennault managed to be included in the war games of 1933, in which bombers flying from Wright Field, Ohio, advanced towards opposing forces, including pursuits, in the area around Ft. Knox, Kentucky. He placed observers with field radios between Wright Field and Ft. Knox, and the pursuits subsequently intercepted every bomber flying from Wright Field. This tactic, combined with the study of British and German warning systems, led to Chennault's writing *The Role of Defensive Pursuit*, which showed how defending pursuits could intercept bomber formations. Further, for the bombers to achieve their mission, it outlined the need for any bomber formation to have accompanying fighters to provide protection against the intercepting pursuits.

He also stressed the need for coordinated maneuvering of pursuits when attacking or defending. His writing and demonstrations in the air painted a vivid picture of how the effectiveness of any one aircraft could be negated when met by a pair of opposing fighters. This type of close teamwork was also anathema to the tactics from World War I where many of the air battles were one-versus-one jousts.

Chennault got an opportunity to test his combat flying techniques. In 1932, a Navy aerobatic team impressed the Tactical School's commandant, Lt. Col. John Curry, who asked Chennault to form such a team for the Air Corps. Chennault selected his teammates with a flying audition using the Boeing P-12E, a biplane pursuit. His criterion was simple: stay on my wing and you make the team. Three



Captain Claire Chennault in a Boeing P-12 at Maxwell Field, Alabama, in 1932.

pilots at Maxwell made it: Lt. Haywood "Possum" Hansell and two flying sergeants, John "Luke" Williamson and Billy MacDonald. MacDonald served as the spare team pilot until Hansell left the team after the first year.

During the team's existence (1932 to 1936), it developed an international reputation for coordinated team aerobatics. The pilots flew so smoothly that, from the ground, the three airplanes seemed as though they were controlled by one stick. Dubbed the "Three Men on a Flying Trapeze" following their inaugural performance, they were so effective in executing their complicated maneuvers—loops, spins, chandelles, and Immelmans—that Chennault felt it proved pursuits could stay together in the rigorous maneuvers required in combat.

The team disbanded in 1936 due to fiscal constraints after its last performance at a December 1935 air show. In the audience was Gen. Mow Pang Tsu of the Chinese Air Force, who made a note of the display team's leader for future reference.

With his health failing, and permanently grounded due to low blood pressure, chronic bronchitis, and deafness brought on by his many years of open cockpit flying, Chennault began planning to retire with twenty years of service in 1937. During the winter of 1936, Chennault was frequently in the hospital in Hot Springs, Arkansas. In February 1937, a medical board recommended medical retirement.

Since he had made many influential Air Corps enemies during the bomber versus pursuit debate, Chennault knew that his career was finished and that he had no chance of ever flying a U.S. military airplane again. He submitted his retirement papers, effective April 30, 1937, and retired with the permanent rank of captain, Army Air Corps.

He had been negotiating with the Chinese for months and finally accepted a two-year contract from the Nationalist Chinese Air Force (CAF), including a three-month trial to conduct a complete and thorough review of the CAF. With a salary of one thousand dollars a month and, just as important, the right to fly any aircraft in the Chinese inventory, Chennault had started his journey to China.

## **China in Crisis**

In the early 1930s, China was in the midst of a civil war between the Nationalist forces of Generalissimo Chiang Kai-shek and Communist forces led by Zhou Enlai and Mao Zedong, but was further divided internally by regional warlords. In 1931, the Japanese Imperial Army invaded Manchuria, a vast area in northeast China. Torn by internal politics and powerless to repulse the Japanese invasion, Chinese forces under Chiang were forced farther and farther to the South.

In 1932, a U.S. military mission established the first flying training school in China. Led by Col. Jack Jouett, this mission used Air Corps reserve officers to teach Chinese students the basics of flying and military aviation. Unfortunately, like all things related to China at the time, internal politics reared its head and led to the demise of the mission. A local rebellion entrenched itself in a heavily fortified, walled coastal position opposite Formosa, and the Chinese asked Jouett to use his

U.S. pilots to bomb the fortifications so that government ground forces could storm the position. Jouett refused, as involvement in internal Chinese matters was outside his orders. Instead, General Mow flew the mission in training aircraft and successfully breached the wall. This allowed the government to retake the fortress and quell the rebellion, but the credibility of Jouett and the military mission was damaged. Fascist Italy, under dictator Benito Mussolini, offered to train the Chinese and sell them all the Italian aircraft they could afford. The Chinese accepted the offer and told the United States to leave, even though the mission had turned out some very capable aviators for two years.

The Italians operated their training facilities on an "everybody graduates" philosophy, a philosophy in keeping with the importance the Chinese placed on face. Usually, only the sons of very prominent or wealthy families were accepted for pilot training, and the failure of any reflected badly on the family and ultimately on Generalissimo Chiang. The Italians were happy to pass everyone who applied for training, no matter their actual piloting skill, with inevitable results. The accident rate was high during training and almost as bad in the line squadrons where the pilots were posted after graduation. Likewise, the Italian Fiat fighters and Savoia-Marchetti bombers, obsolete even by 1930s standards, rarely were in commission due to high accident rates, even though Chinese squadrons reported all aircraft on the field as being combat-ready regardless of their true condition. With such deceit covering up actual capability, the Chinese military cooperation with Italy could not continue, especially considering Italy's growing alliance with Japan.

It was during this time of crisis and chaos in 1937 that Chennault arrived in China, hired by the Generalissimo's wife, Madame Chiang, head of China's aviation commission and a 1917 graduate of Wellesley College in Massachusetts. Chennault undertook the task of inspecting the CAF from top to bottom, from the training of aircrews and support personnel to the construction of dozens of airfields throughout the country. Additionally, he inspected the condition and "suitability for a given mission" of the many types of Chinese aircraft. Chennault found that of the five hundred aircraft listed on the inventory when he began his inspection, only ninety-one were actually in flying condition. His honest accounting was the final straw that broke the Italian monopoly on Chinese military aviation.

China was in a precarious position in 1937. Japanese forces occupied most of China's eastern coastline, including all of the port cities. All military and civil imports and supplies had to be brought overland via the ancient Silk Road through the Soviet Union or over the Burma Road from Rangoon, Burma. Chinese ground forces, while numerically superior to the Japanese, suffered from a lack of training, modern weapons, and logistic support, as did the CAF.

In July 1937, a skirmish between Japanese and Chinese forces occurred near the capital at Peking,\* the so-called "Marco Polo Bridge Incident." This was the beginning of full-scale war between China and Japan and has been considered by

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\*All Chinese place names are those of the era vice the modern spelling or pronunciation, e.g., the World War II-era Chungking instead of today's Chongqing and Peking for modern Beijing.



Chennault with Chinese head of state Chiang Kai-shek and Madame Chiang.

some as the beginning of World War II in the Pacific. Chennault offered his services in whatever capacity needed, an offer quickly accepted; and Chiang gave him the job of directing the combat training of China's fighter pilots at Nanchang.

The few older pilots, mainly graduates of Jouett's regime or from Western training schools elsewhere, were competent pilots. They were capable of flying the few effective fighters available, like the Curtiss Hawk biplanes or Boeing P-26 monoplanes, and could even turn in a credible performance with the Fiat biplanes. Unfortunately, the majority of the pilots had been trained by the Italians, and even takeoffs and landings resulted in crashes and destroyed equipment, not to mention casualties.

Chennault reported to Chiang the state of China's combat air force without the niceties of etiquette. While a terrible breach of protocol, such a report demonstrated to Chiang that Chennault would tell the unvarnished truth. Such a man was a valuable asset to Chiang.

Chennault became the de facto Chinese Air Force commander, advising the Generalissimo and his wife, as well as the CAF leadership, on how to best employ the air assets available. True to his history of practicing what he preached, Chennault probably flew combat missions during this time. Observation is the term he used, but surviving the antiaircraft fire and Japanese fighters he faced required more than just observing.

In addition to training the combat pilots, Chennault instituted a low-tech, but effective, early warning network. Relying on telephones and radios, he soon had a web of observation and reporting posts that relayed their reports back to the centralized headquarters. Tracked on a map that had the location of each post marked, only a few reports were needed to determine the course and approximate speed of attacking Japanese aircraft, and Chennault could quickly get his fighter pilots in position to intercept.

Superior Japanese numbers eventually wore the Chinese down; and by October 1937, China had too few fighters to make a difference in any air battle. It was at this juncture that Soviet aid came to China. Responding to a Chinese appeal for international aid, Russia sent several squadrons of Polikarpov I-15 biplane and I-16 monoplane fighters. The two had complimentary attributes: the I-15 was very maneuverable while the I-16 was very fast for the time.

For nearly two years, squadrons equipped with Soviet, but Chinese-flown, fighters tangled with Japanese army and navy pilots. In the air, many times the battles came to a draw, but the Japanese ground forces relentlessly pushed into China. Soviet support was withdrawn after Germany invaded the Soviet Union in the summer of 1941, and China was once again left nearly defenseless in the air. China needed help, needed it soon; and supporters in the United States worked hard to get that help.

### **Birth of the AVG**

In the fall of 1938, China hired a collection of Western volunteer mercenary pilots called the International Squadron. While composed mostly of adventurers in Asia at the time, it did have a few good pilots. One, Jim Allison from the United States, had fought against the Germans and Italians in the Spanish Civil War. Others had served in the air forces of various nations.

However, some were not so competent. In his memoirs, Chennault tells of a twenty-year-old claiming twelve thousand flying hours under his belt. Since Chennault had just less than ten thousand hours logged after more than twenty years of flying, he knew the youngster was at least stretching the truth, if not outright lying. Chennault told his old Flying Trapeze friend, Billy MacDonald, now working for Chennault as an instructor, to take the young man up to see what he could do. The braggart admitted to MacDonald that he had never flown a plane before, but was motivated by the high salaries offered by the Chinese.

The actions of the International Squadron on the ground caused its demise. Drunken boasting about an upcoming mission led to a Japanese bombing raid on the squadron's flightline that destroyed all of their aircraft.

After this experience with mercenaries, Chennault was in no hurry to experiment again. However, the Generalissimo and his wife, in October 1940, directed Chennault to go back to the United States to acquire U.S. aircraft, pilots, and ground crews. Since the United States remained a neutral country in the war at the time, Chennault thought his task was hopeless, but followed his instructions.

In Washington, D.C., Chennault met with Dr. T.V. Soong, the brother of Madame Chiang and a man well connected with powerful people in Washington. Soong had Chennault draw up the requirements for two hundred fighters and one hundred bombers, along with the logistics and personnel necessary for such a force in China. Chennault spent the fall and winter of 1940 preparing lists of needed supplies, while working with Soong to gain the ear of policy makers who could help acquire the airplanes and supplies. Soong, meanwhile, used his contacts with

Secretary of the Navy Frank Knox and Secretary of the Treasury Henry Morgenthau to plant the idea with President Franklin Roosevelt.

In response, Roosevelt sent his administrative assistant, Dr. Lauchlin Currie, to China to assess the situation. Currie's subsequent report, pointing out the dire state of Chinese defenses and the impact should Japan knock China out of the war, gave new urgency for aid to the Chinese.

Initially, the plan included three groups: the First American Volunteer Group of one hundred fighter airplanes and associated air and ground crews; the Second, of one hundred bombers and their crews; and the Third, another of fighter aircraft and crew members. By using Chinese funds to buy the aircraft and supplies and pay the salaries of the proposed crews, the U.S. government could retain a façade of neutrality, while helping China against the Japanese. Because Pearl Harbor ended formation of the second and third groups, the volunteers became simply the American Volunteer Group.

The aircraft chosen for the AVG was the result of a compromise. Even though the aviation industry had increased its production for the needs of both the United States and other countries, nothing was available for the Chinese. Instead, Dr. Soong and Secretary Morgenthau worked out a deal with the British to give up the last one hundred of an order of Curtiss P-40s in exchange for an order of a much improved P-40 model soon to start production. The British agreed, and Chennault and China had their first one hundred fighters.

Chennault was less than impressed with the P-40. With only a single-stage supercharger, it could not fly above twenty thousand feet; and the Chinese would receive just the basic airframe without radios, bomb racks, fittings for external fuel tanks, or even gunsights. While maneuverability at high speeds was better, it could not turn at low speeds with the Japanese fighters the AVG would go up against. Still, the P-40 possessed a number of positive qualities, including high speed in a dive, powerful armament, and the ability to absorb an immense amount of damage. Most important, the P-40 was available.

To ensure the legality of the plan, a commercial company, Chinese Aircraft Manufacturing Company (CAMCO), was used to buy the equipment and to hire and pay the personnel. CAMCO was run by William Pawley, a long-time Curtiss salesman in the Far East who had political connections in the United States. Further, the board of directors of China Defense Supplies, Inc., a subsidiary of CAMCO based in the United States, included both Franklin Delano, the President's uncle, and Washington lawyer Thomas Corcoran, a close friend and special advisor to President Roosevelt.

CAMCO also got the contract to service and maintain the aircraft at its factory at Loiwing, China, after they arrived in that country. Since the United States was selling the equipment to a civilian company and the recruited members would be listed as employees of CAMCO, neutrality issues were considered resolved as far as the U.S. government was concerned.

Early models of the P-40s contained a mixed armament of two nose-mounted .50-caliber machineguns and four smaller guns in the wings (later variants would have six wing-mounted Browning .50-caliber machineguns). Curtiss installed the

nose guns at the factory, but not the wing guns. Chennault, through CAMCO, was forced to scrounge and improvise to equip his force. He managed to convince the British to give him enough .303-caliber machineguns to equip fifty aircraft and then bought enough Colt 7.92-mm machineguns that were in common use throughout Asia to equip the remaining fighters. This mixture of different caliber guns and munitions later caused logistic headaches.

Equipment, however, was only one facet of the plan. Equally important were the men needed to fly and fix the P-40s. Chennault envisioned recruiting 100 experienced military fighter pilots, as well as 150 ground technicians he would need to service and repair the P-40s. The Army and the Navy, however, both trying to expand their aviation programs for the impending war, were reluctant to release men.

Chennault finally received letters from the War and Navy Departments that instructed the services to give his recruiters access to military bases and simplify the process of separating the men from active service. Retired Army aviators traveled to Army airfields at Bolling, Selfridge, MacDill, March, Mitchel, Langley, Eglin, Maxwell, Barksdale, and Randolph to interview pilots and maintenance technicians. Similarly, former naval aviators went to Norfolk, San Diego, Pensacola, and Jacksonville Naval Air Stations, as well as to Marine Corps Air Base Quantico, to talk to interested personnel.

Prospects were offered monthly contracts ranging from \$300 for crew chiefs and other specialists to \$600 for officer pilots. These figures were far in excess of what they earned on active duty, making the money a powerful incentive. For example, a staff sergeant in the Air Corps earning \$72 a month had his pay quadrupled. Most of the pilots recruited were ensigns or second lieutenants, and their pay more than doubled. The three flight leaders selected due to their extensive fighter experience—Greg Boyington from the Marine Corps and James Howard and John Newkirk from the Navy—were offered \$650 a month.

Additionally, each person recruited received travel documents, a train ticket to the port of departure in California, per diem while awaiting transportation, one hundred dollars for incidentals, a ticket for passage by ship to Burma with onward passage provided to China, and five hundred dollars in cash in lieu of tickets for return transportation from China. In the event of disability or death, CAMCO would pay an amount equivalent to six months salary to the employee's beneficiary. In return, each employee agreed to perform the duties the employer directed. Each contract also included clauses dealing with early termination by the employer for due cause, such as insubordination, drug or alcohol abuse, or for disabilities incurred outside the line of duty as a result of the employee's misconduct. Not written, but implied by the recruiters, was a bounty of five hundred dollars for every Japanese aircraft destroyed.

Eventually, ninety-nine pilots (fifty-nine naval aviators, seven marines, and thirty-three Army flyers) took passage to Asia. Although a comparable-sized Air Corps fighter unit called for nearly one thousand maintenance and support troops, the AVG hired 184. These line chiefs, crew chiefs, engine and airframe mechanics, armorers, radiomen, propeller specialists, parachute riggers, photographers, weath-



## AVG Curtiss P-40

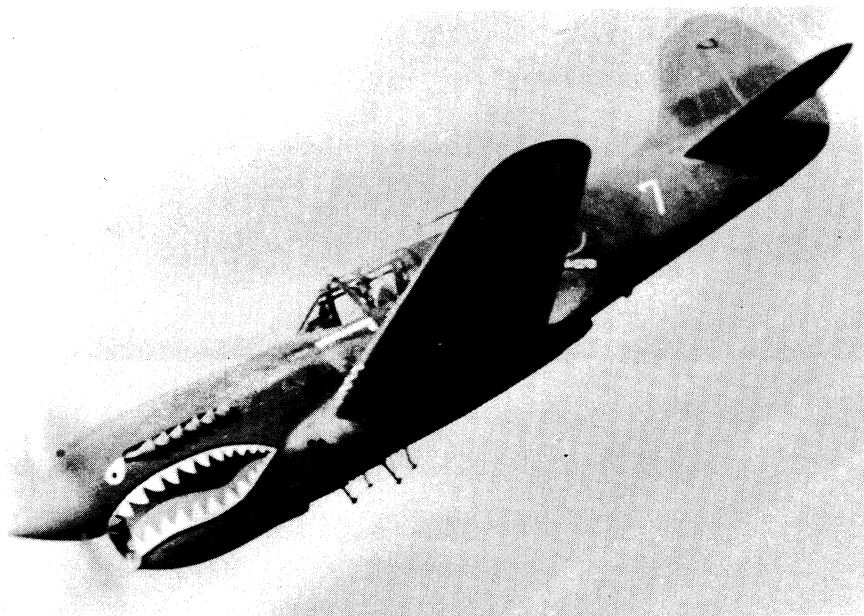
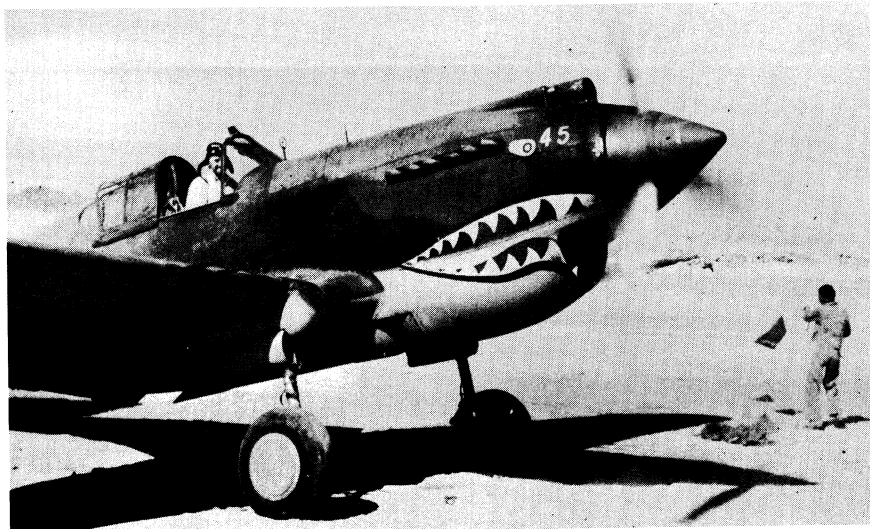
Not the sleekest fighter of the era, the P-40 stands as one of the unsung workhorses of the Allied war effort in the air. Curtiss replaced the drag inducing radial engine of the P-36 with the slim liquid-cooled V-12 Allison engine that produced 1,040 horsepower. The P-40 was designed for combat below twenty thousand feet, putting it at a distinct disadvantage when dealing with more modern counterparts later in the war. However, at lower altitudes, the P-40 was fast, particularly in a dive.

At speeds above 240 knots, the P-40s could outturn such nimble Japanese fighters as the Oscar and Zero. At those speeds, the lighter built Japanese fighters could not achieve the same roll rates as the P-40s, and their ailerons did not work as well. Enormously rugged, the P-40 absorbed punishment that would have downed a Japanese fighter. If a pilot found an adversary on his tail and firing, the heavy armor plate in the back of his cockpit seat often saved his life, but turning with the Japanese only gave the enemy a way to negate the advantages of the armor. The attack maneuver Chennault taught—a high-speed dive and a climb back to altitude to set up another diving pass—was the most effective tactic for P-40 pilots.

The initial variant of the P-40 the AVG acquired was similar to the Tomahawk that British Commonwealth pilots flew. By the spring of 1942, the P-40s remaining to the AVG were badly battered from constant combat, improvised maintenance, and lack of spare parts. Chennault's desperate appeals for replacement aircraft were grudgingly met with a trickle of improved P-40s that were faster and had better armament.

The famous shark mouths of the Flying Tigers came about, like much of the AVG, somewhat casually. A pilot saw a photograph with the grinning, saw-toothed artwork that became associated with the AVG on a Tomahawk of RAF No. 112 Squadron. It, in turn, had been copied from German Messerschmitt Bf 110 twin-engine fighters used in earlier attacks on Britain. In keeping with Chinese traditions, each AVG P-40 also had a pair of eyes drawn on its nose above the shark mouth for the plane's personal devil to see. Said pilot R. T. Smith of the result, "It looked mean as hell."

It was only later that the AVG became the Flying Tigers. Back in the United States, the Washington Squadron, as the group with Thomas Corcoran and Dr. T.V. Soong was known, believed that publicity was a crucial component to the success of the AVG operation. They approached the Walt Disney Company about designing an insignia, not aware of the new shark artwork on the AVG's fighters. Disney produced the now famous logo of a winged Bengal Tiger jumping through a stylized V for Victory symbol. The press picked up the story, and the first published account using the term Flying Tigers appeared on December 27 in the year's last edition of *Time* magazine, a week after the AVG's first combat on December 20, 1941.



Distinctive shark-mouthed P-40s. The P-40E (bottom) had more armament and a more powerful engine with a larger nose air intake.

ermen, clerks, and orderlies proved to be the backbone of the group throughout its brief existence.

The AVG volunteers had many reasons to set sail for the unknown in the fall of 1941. Some, like Navy weathermen Allen Fritzke, Donald Whelpley, and Randall Richardson, volunteered to escape the boredom of a peacetime routine. Yeoman

Tom Trumble had done a previous tour in Shanghai aboard the cruiser USS *Augusta* and left a Russian girlfriend behind. He joined the AVG to try to find her again.

For the officers, the motives ranged from boredom or a chance to prove themselves in combat, to escaping from a bad assignment, or to improving bad financial situations. Greg Boyington was in the latter category. Having gone through a painful divorce and responsible for an ex-wife and several small children, he had ruined his credit and incurred substantial debts, and the Marine Corps had ordered him to submit a monthly report to his commander on how he accounted for his pay in settling those debts.

Another Marine, Chuck Older, wanted to find out how good a fighter pilot he was in combat. Recruited from Quantico, Older had read avidly of Americans serving in the Royal Air Force during the Battle of Britain. He wanted to see for himself what combat was like and felt that the United States might never enter the conflict. David L. "Tex" Hill, a Navy dive bomber pilot who had served on the aircraft carriers USS *Saratoga* and USS *Ranger*, wanted to fly fighters. The AVG offered him an opportunity to do just that, while adding a dose of adventure and almost tripling his ensign's pay. Hill said that he could not resist the temptation. Air Corps pilot Charles Bond had the boring job of ferrying bombers fresh from the factories up to Canadian bases. He volunteered because of the lure of adventure in a foreign country, a chance to satisfy his dream to get into fighters, and an opportunity to earn money to buy his parents a home. The rest of the AVG members' motives ran the gamut from a spirit of adventure in the mysterious Far East to simple financial gain.

### **Training a Fighter Group for Combat**

Chennault had expected the aircraft, supplies, and personnel to be in place by the spring of 1941, but the first group of AVG volunteers did not sail from San Francisco until June 1941. This group got to Rangoon in August, while the last contingent of personnel arrived in November. Chennault originally had planned to base them at Kunming, deep in the interior of China and safe from Japanese reconnaissance flights and bombing attacks. However, because of the delays in putting the AVG together, the first group arrived at the height of the monsoon season, and the dirt strip at Kunming was a river of mud. Chennault managed to convince the British Royal Air Force to let him use the Kyedaw auxiliary field, 175 miles north of Rangoon, as his training base while the Chinese ground rock and paved the Kunming runway by hand.

Kyedaw, just north of Toungoo, Burma, featured a rare asphalt runway, one that was four thousand feet long, but that was about its only positive attribute. The living quarters were several miles away from the flight line and consisted of open bay barracks with large sloping roofs and the top third of each wall open for air circulation. Unfortunately, the openings were not screened, giving native creatures access to the barracks. The men slept under mosquito netting and were sometimes awakened by rats falling from the overhead beams onto the netting or by someone shooting a cobra that had entered the barracks.



Flag with Disney-developed Flying Tiger emblem.

Assembling the P-40s also presented problems. Curtiss packed each aircraft in two enormous crates, one for the fuselage and another for the wings. The fuselage contained the fighter's engine, which was ready to turn over after all the fuel, oil, and coolant lines were connected and the propeller was installed. The wings came as a complete unit, except for the wingtips. The crates weighed over two tons and were thirty-five feet long, ten feet high, and six feet wide. A special trailer had to be built to carry the crates from the harbor at Rangoon some eleven miles to the Mingadalon airport, where the pieces were joined together. Although one hundred P-40s were shipped, one crate containing wings was dropped into the water. By the time it was salvaged, corrosion had set in and the wings were not safe. The last fuselage was set aside and provided parts for the other aircraft.

Initially, CAMCO assembled the planes outside with an A-frame hoist. Laborers skidded the crates from the trailer to the ground by hand, then rolled the crates to the assembly area on four-inch steel pipes. The wings were hand carried to a stand, the fuselage winched down onto the wings, and the forty-four bolts mating the wings to the fuselage installed. After the various fluid-carrying lines were connected, the landing gear was lowered. The newly assembled P-40 was then rolled to another spot where the instruments and wingtips were installed and the controls checked for proper operation.

To protect the aircraft, laborers made use of the shell of a brick warehouse with no roof. They built a roof with trusses capable of holding a suspended P-40 fuselage, and proceeded, out of the weather, with the process of mating wings and bod-

ies. At first, assembly went very slowly, with the language barrier between an English-speaking management and a mainly Chinese workforce contributing to the slow pace. The few words each side knew of the other's language did not always suffice for the complex ideas and technical jargon necessary in aviation. Once the concepts were understood, however, assembly speeded up, as the Chinese workers proved efficient and industrious.

After the complete assembly of each airframe, the P-40 was tested and any remaining faults adjusted. Once signed off, the AVG sent a pilot down from Kyedaw to ferry the fighter back. The pilots were told to look for the railroad and follow it north. They dubbed this style of navigation as IFR, "I follow railroads."

In the meantime, the harsh conditions and the probability of actually fighting caused nearly a dozen AVG employees to rethink their situation. Eight pilots and several ground crew members went to Chennault and resigned. He signed their termination papers, calling them dishonorable discharges, stating that he would rather be short-handed with men who wanted to fight and do their job than to keep malcontents around to spread their morale-sapping complaints.

Of the ones who did stay, Chennault had a mixed bag of talent. He had wanted men in their mid-20s with a minimum of several hundred hours in pursuit aircraft, but he had only a few of those. The experience ranged from just out of flying school to Navy patrol plane pilots with thousands of hours in lumbering flying boats that had only the element of flight in common with the P-40.

The youngest pilot, Henry Gilbert, was fresh from earning his naval aviator wings at Pensacola when he arrived in Burma in October 1941. The oldest of Chennault's combat pilots was Louis Hoffman, who got his Navy wings in 1929 and had almost as many flying hours as Chennault. With such a broad mix of experience, Chennault revised his plans for introducing the AVG to combat.

If they had been all experienced fighter pilots, he would have started directly with combat training. Instead, he had to conduct classes on how to fly in formation and how to fight in the P-40. He told them of the P-40's ability to dive and the heavy punch of the two nose-mounted .50-caliber machineguns and compared its strengths against the Japanese aircraft they would face.

The Japanese fighters were much more maneuverable than the P-40s, particularly at slow speeds, but their maneuverability came at the price of structural weakness, a lack of armor for the pilot and engine, and unprotected fuel tanks. Chennault endlessly repeated his emphasis not to turn with the enemy, but rather to dive at high speed, open fire at long range with the .50-caliber guns, then add in the lighter weight wing guns as the range closed. After diving, the pilots were instructed to zoom past the target if it had not been destroyed, then pull up sharply, and climb to repeat the attack.

Chennault pointed out the vulnerable areas of the Japanese bombers most likely to be encountered. Like most Japanese aircraft of the time, their range and bomb capacity were achieved by no protection for the crew or the fuel tanks. Consequently, when attacked, they caught fire easily.

The early experiences of the AVG drove Chennault almost to despair, despite the classroom education of his pilots. They started slowly with cockpit checks, then

to familiarization flights—critical for learning both the P-40 and the local area as seen from above—to aerobatics and mock combat.

To give the AVG practice attacks against bombers, the RAF occasionally sent up one of their few Bristol Blenheim light bombers based at Mingadalon. The AVG would practice high-speed attacks, seeking to find the best approach to kill a Japanese bomber while avoiding the return fire from its defensive guns.

For fighter-versus-fighter practice, they used each other. Going up in a flight of two, the opposing pilots would fly to their respective corners and commence a full-throttle, head-on attack to experience the time compression so common in combat reports that describe how quickly events seem to happen. It was during one of these mock attacks that the AVG suffered its first casualty.

Gil Bright, a former Navy dive bomber pilot, flew against another Navy pilot, John Armstrong. Each held his course until a mid-air collision seemed inevitable, the premise being that, in combat, the thumb-size bullets of the P-40's .50s would destroy the light-weight Japanese adversary long before the aircraft closed. Bright rolled right, expecting Armstrong to also roll right, and the planes should have passed belly to belly. Armstrong, however, did not roll right. He held his ground and his left wing chopped off Bright's left wing. Bright was thrown clear of the spinning wreckage of his fighter, but Armstrong was not. The AVG recovered the body from the cockpit and buried Armstrong with honors in the local British cemetery.

Two more pilots were killed in quick succession, but due to inexperience flying the P-40 and not mock combat. One man got himself into an inverted flat spin and could not recover, while the other pilot overstressed the aircraft during a post-maintenance test flight and pulled the tail off his Curtiss fighter. Too low to bail out, he perished, and both men were buried alongside their comrade.

Besides the loss of P-40s due to Chennault's realistic training regime, the AVG had a series of blunders and mishaps committed by both pilots and ground crews. In early November 1941, a former Navy Catalina flying boat pilot named Edwin Conant tried landing the much smaller Curtiss fighter from the same altitude he normally did in the Catalina, about twenty feet too high. The plane stalled, then dropped from about twenty-five feet. It bounced once, the main landing gear collapsed, and the fighter spun around to stop in a cloud of dust.

Two days later, November 3, 1941, Conant did the same thing, popping a tire from the extreme drop. He ground-looped this time and wound up off the end of the runway. The day became known as "Circus Day" by the AVG, since Conant's mishap was just the first of an incredible run of accidents. Following Conant's landing, another Catalina driver landed too high, collapsed the landing gear, and wound up off the runway with the belly, wing, and propeller severely damaged. Sandy Sandell, an experienced P-40 pilot, then ground-looped on his landing.

Chennault had seen enough and called a halt to flying for the day, ordering the remaining planes dispersed to avoid having them all parked together and vulnerable to a Japanese bombing raid. However, the chaos continued. A crew chief taxied his aircraft into a second P-40, chewing up that machine's right aileron. Another crew chief did the same, except the damage consisted of two damaged propellers and a shock-damaged engine. A third man built up too much speed while taxiing and



CAMCO repair facility at Loiwing, China.

stood the fighter on its nose when he applied the brakes, damaging another propeller and engine. In the final accident of this day, a mechanic on a bicycle, watching one of the previous mishaps instead of where he was going, crashed into the wing of yet another P-40, breaking its aileron. Two days later, Conant nearly destroyed a third P-40 and received a good deal of kidding about becoming a Japanese ace if he continued wrecking aircraft.

Organizationally, Chennault formed the group into a headquarters section and three squadrons. Each squadron leader picked the men in his squadron, almost like forming teams for a sand-lot baseball game. The 1st AVG Pursuit Squadron, led by Robert "Sandy" Sandell, a former Air Corps pilot recruited from Maxwell Field, consisted of a mixed group of Army and Navy pilots. The 1st Pursuit became the Adam and Eve squadron, after mankind's first pursuit, and carried a green apple on the side of the fuselage. They originally painted a red apple, but Chennault said it looked too much like the Japanese Rising Sun symbol and could lead to confusion in combat.

Former Navy fighter pilot Jack Newkirk led the 2d AVG Pursuit Squadron and picked all Navy pilots. They named their squadron the Panda Bears in deference to their employer's native wildlife and painted the black and white animal's likeness on each of their P-40s.

The 3d AVG Pursuit Squadron, with all Army pilots, was under the command of Arvid Olson, a P-40 pilot recruited from Mitchel Field. The squadron became the Hell's Angels, after the World War I movie of the same name, using a stylized red outline of the female form with a halo and angel's wings.

Maj. Gen. Henry "Hap" Arnold, chief of the Air Corps, had flatly refused to give up any of his experienced staff officers, knowing that the Air Corps would need

them desperately as it began the buildup prior to the war. Chennault asked for six, pleaded for three, and finally, nearly begged for just one. Arnold rebuffed him at every turn.

Chennault at first served as his own staff, planning everything from logistics to operations to gathering and disseminating intelligence. He acquired a few strays from around Asia, including reserve naval officer and newspaper columnist Joseph Alsop. Alsop served as Chennault's supply officer for nearly five months, but was caught in Hong Kong scrounging supplies when the Japanese occupied it.

The poorly trained AVG staff put a tremendous burden on Chennault. Not only did he have to command the flyers, he also had to plan each attack, constantly badger the U.S. government for promised supplies and reinforcements, and maintain communication and cooperation with the Chinese government and the British forces in Burma. Inevitably, many items fell through the cracks, and much of the standard planning common to other U.S. forces lacked the detail others thought necessary for success. Chennault gave most of his orders verbally, and the AVG almost always translated them into successful action.

After the monsoon season ended in late November, the base at Kunming was ready to handle aircraft. The pilots prepared their aircraft to fly the six hundred miles from Burma to Kunming, while the ground staff planned to follow with all the parts and equipment in truck convoys up the Burma Road. The events of the first weekend in December, however, changed all these plans.

## **Flying Tigers at War**

On December 7, 1941, the American Volunteer Group had nearly eighty pilots and sixty-two combat-ready P-40s, with the rest of the initial one hundred aircraft either written off in accidents or still waiting on installation of machineguns or radios. Twenty pilots still were not checked out in either the P-40 or Chennault's tactics, and Chennault refused to let a man fly until he was satisfied the new pilot could handle both the Curtiss fighter and combat. This discipline probably saved lives since the AVG suffered relatively few combat losses.

Much like today's RED FLAG exercises held at the vast training ranges near Nellis Air Force Base, Nevada, Chennault's intense training meant combat was not such a shock, and his small force was more effective from the first combat mission. It also meant his pilots had a better chance of surviving to fight another day.

Chennault found out about the Japanese attack on Pearl Harbor nearly seven hours after it happened. He took immediate steps to put the AVG on a war footing, placing one squadron on ready status with the pilots prepared for an immediate scramble. He readied a second squadron for support of the first and dispersed the final squadron to an outlying airfield as his reserve.

In addition to the devastating Pearl Harbor attack, Japanese forces also struck the Philippines, destroying most of the U.S. air forces there and hit hard at British facilities in Malaya and Singapore. Most important for the AVG, the Japanese struck targets in Thailand and Burma.



Goods headed for China over the Burma Road came through the port of Rangoon; and the Chinese, the British, and Chennault all knew that the port was vitally important to keeping China supplied. As torturous as the Burma Road was, it was the only overland route available for war material to keep China fighting. Thus, the loss of Rangoon could have meant the loss of China as well. Thailand surrendered on December 10, and the Japanese immediately assembled their forces for an assault on Burma.

Coordinating with the RAF, Chennault sent the Hell's Angels to Mingadalon airdrome, not far from Rangoon, to bolster the RAF's single squadron of Brewster Buffalo fighters. Simultaneously, he ordered the two other squadrons to fly to Kunming.

The AVG's first offensive action was a reconnaissance mission. Chennault borrowed an aerial camera from the RAF and mounted it in a compartment behind a P-40's cockpit. He had a hole cut in the belly and stripped the plane of armament and armor, creating an instant photo reconnaissance aircraft that Erik Shilling flew over Bangkok, Thailand. The photographs showed both docks and airfields covered with Japanese equipment and personnel.

The first combat action soon followed. On December 20, Japanese bombers attacked the AVG base at Kunming. Receiving advance notice of the raid from the Chinese warning net, Chennault launched both squadrons, sending Jack Newkirk's Panda Bears to the expected interception point and Sandell's Adam and Eves to a supporting area west of the expected combat airspace.

According to Chennault in his post-war memoirs:

This was the decisive moment I had been awaiting for more than four years—American pilots in American fighter planes aided by a Chinese ground warning net about to tackle a formation of the Imperial Japanese Air Force, which was then sweeping the Pacific skies victorious everywhere. I felt that the fate of China was riding in the P-40 cockpits through the wintry sky of Yunnan [the Chinese province in which Kunming was located]. I yearned heartily to be ten years younger and crouched in a cockpit instead of a dugout, tasting the stale rubber of an oxygen mask and peering ahead into limitless space through the cherry-red rings of a gunsight.

He was disappointed in this first combat encounter by the AVG. After a few brief radio transmissions by the Panda Bears, he heard no more and in frustration, ordered Sandell's squadron to head to the bombers' probable return route. After some tense minutes, the pacing Chennault and the Chinese heard gunfire some distance away and the heavier explosions of bombs.

Shortly thereafter, Newkirk returned with his squadron. They had sighted the formation of ten twin-engine bombers thirty miles southeast of Kunming. The bombers also sighted the fighters, then jettisoned their payloads and turned tail, diving to pick up speed. Uncertain and hesitating, the fighters lost precious seconds in

## RAF

As formidable as the Flying Tigers were in fighting the Japanese, they did not operate in a vacuum. Particularly in their epic, but ultimately doomed, defense of Rangoon and Burma, the AVG received extensive support from Britain's Royal Air Force. The AVG was heavily dependent on the RAF, from the use of their first airfield at Kyedaw, to aviation gas and oil for the fighters, and to food and drink.

Once war came to Burma, the AVG and RAF operated together to defend the area around Rangoon, but not always successfully. The RAF at first did not even tell the AVG that a Japanese air raid was inbound, and the first indication the Flying Tigers had of such a raid was the British scrambling their Brewster Buffalo fighters. After a few such divided missions, combat losses and a shared sense of danger led to a close working relationship between the men on the field, if not between the RAF leadership and Chennault.

The courage of the British must be acknowledged. Flying outdated Buffalos time after time against far more nimble Japanese fighters called for a large measure of courage on their part. Likewise, the few RAF Bristol Blenheim light bombers pressed home their attacks in the face of overwhelming ground fire.

One minor, but telling, tale of the RAF's support of the Flying Tigers involves Aircraftman 2d Class Wilfred Jepson. Jepson, an RAF radio mechanic, was lent to the AVG to help with the P-40s' radios. These civilian radios, intended for benign point-to-point flights, were not designed for combat stresses and constantly broke down, leaving many an airborne Tiger deaf to what was going on or even where the enemy was. Thus, Jepson's help was invaluable.

During the haphazard retreat from Rangoon, Jepson found himself a military orphan as he returned to his barracks one evening to find that his unit, No. 113 Squadron, had left without him. He went back to the AVG, which was preparing its last ground convoy out of Rangoon, and threw his lot in with the Flying Tigers.

Jepson stayed with the Tigers until their disbandment and subsequently served with the China Air Task Force under U.S. command. He finally rejoined RAF forces in India in August 1943. Said his "commanding officer," 2d Lt. Joe Lussier, a former Flying Tiger, on Jepson's leaving for India:

It is with a great feeling of loss that we find Jepson about to leave the organization. Through him in his dealings and work in both the American Volunteer Group and the United States Army, the strong ties that bind the English and American people as one have been considerably strengthened and the deep respect we have for the technical ability, self-sacrifice and attention to duty of the English military man has been wonderfully illustrated through Aircraftman 2d Jepson.

identifying the bombers as the enemy. The fleeing Japanese put those seconds to good use and outdistanced the P-40s.

Sandell's squadron also reacted badly. The sight of the escaping prey made the AVG pilots forget all their training. Instead of a disciplined, diving attack with an intact leader and wingman element, the excited pilots flew individually into the melee. They tried near-impossible shots and agreed later that only luck had kept them from either colliding with each other or shooting each other down. However, they downed three of the bombers and damaged others, some crashing as they returned home. Ed Rector chased the Japanese too long before turning back and ran out of gas. He belly-landed in a rice paddy, but was uninjured.

Immediately after the last P-40 landed, Chennault gathered all the pilots together to debrief the action. Blaming the lack of results, particularly by Sandell's squadron, on excitement, he once again stressed the need for flight discipline, taking advantage of the P-40's speed advantage from a dive, and the need to set up for another attack.

This attack was the last action in China for some time, but the Flying Tigers were about to join the RAF in the fight for Rangoon in Burma. At Mingadalon, the Brewster Buffaloes of the RAF's 67 Squadron parked at the northern end of the airfield's north-south runway, while the AVG used the eastern end of the intersecting east-west runway. At first, the two units did not share much in the way of operational intelligence or communications. Pleas by Chennault for the British radio frequencies went unanswered, and the RAF ignored the frequencies the AVG used. Likewise, any limited advance warning provided by the British radio direction finding equipment generally was not relayed to the AVG.

The dust raised by the Buffaloes taking off usually was the AVG's first indication of an incoming raid. The AVG would then start their engines and take off, somehow avoiding the RAF fighters flying from the other runway.

This was the situation on December 23, 1941. Seeing the British launch, Olson's squadron followed suit, finally receiving a nondescriptive radio call that the "enemy is approaching from the east." In fact, the bombers and escorts completed their bomb run on Rangoon's docks before the AVG pilots sighted them. The AVG pilots flew into the Japanese formation, downing six, but losing two planes and pilots, while the RAF failed to make contact.

This first raid on Rangoon turned the city into bedlam. Refugees attempting to get out of Rangoon poured into the streets. The native Burmese population, never happy with their colonial masters, the British, rioted. Massive fires, looting, and killing followed. The AVG cooks fled, forcing the 3d Squadron to live on a diet of stale bread and canned beer for several days.

Two days later, for a Christmas present, the Japanese sent flights of bombers and fighters to finish off Rangoon. Launching from tropical temperatures and high humidity, the pilots soon found themselves shivering from the rapidly chilling sweat on their skin. Achieving a height advantage, the AVG finally put into practice Chennault's tactic of diving, firing their heavy .50-caliber guns as they attacked. Olson radioed Chennault the news that they had downed fifteen of the bombers and nine fighters, losing only two aircraft in the exchange (both AVG pilots survived



Pilots of the AVG 2d Squadron Panda Bears in front of a P-40.

and were soon back in action). The RAF put up sixteen Buffaloes, claimed seven Japanese, but lost nine aircraft and six pilots. Following this fight, however, the Hell's Angels could only muster eleven serviceable P-40s. Olson requested reinforcements, and Chennault obliged by sending the Panda Bears to relieve him.

The RAF's cooperation increased dramatically after this fight. Frequencies were shared, rations provided, and a means of announcing a scramble by ringing a salvaged ship's bell made the RAF and AVG partners in the defense of Rangoon. The Allied air commander in the theater, RAF Group Captain Manning, compared the results of the first two Japanese raids to the defense of Great Britain in the autumn of 1940.

Despite their losses in the air, Japanese ground forces crossed into Burma from Thailand and advanced on Rangoon, ultimately dooming the city. While the pilots fought like tigers in the air, all the other men worked on the docks to salvage everything they could that would help the unit stay in the fight. The AVG stood its ground, sending up increasingly battered P-40s against Japanese formations that eventually contained a ratio of three escorts for each bomber.

### **A Long Slugging Match**

With the arrival of the 2d squadron at Rangoon, the Tigers went on the offensive. On January 3, 1942, four P-40s took off for the Japanese-occupied Thailand base of Tak, nearly 170 miles from Rangoon. Bert Christman turned back with engine trouble, but Jack Newkirk, James Howard, and Tex Hill continued on. They circled past the target area to have the sun behind them and make the Japanese anti-aircraft gunners' job more difficult. The field was crammed with nearly a dozen



Ground crew of the AVG 3d Squadron Hells Angels in front of a P-40.

fighters, some with propellers turning over in preparation for a mission of their own. In fact, three fighters had already taken off and were orbiting over the field.

Hill, intent on the massed group on the ground and preoccupied with seeing the enemy planes on the ground, did not look for enemy fighters and followed Howard into his strafing run. Newkirk saw the airborne enemy fighters and turned into them, shooting one down

Howard also was so focused on his strafing run that he was unaware that he had a Japanese fighter on his tail. Hill saw it and pulled around as quickly as he could, firing as he went. He did not aim, but used the tracers like a garden hose, spraying as he turned.

Howard completed his strafing run, which produced a large explosion, then made another run. Pulling up, his engine caught a burst of fire from the ground and quit. He turned to belly land on the strip he had just finished strafing, but his engine caught again and he climbed slowly away. Newkirk and Hill had already departed the area due to the heavy ground fire, leaving Howard with a lonely flight home. Hill and Newkirk were credited with aerial victories and Howard with destroying four fighters on the ground.

This surprise raid had been successful, but the Japanese retaliated the next day, sending a dawn attack against the dispersal fields used by the RAF and the AVG. Instead of keeping the fighters on Mingadalon, the AVG flew all of them each night to several auxiliary fields that had been hastily constructed after the war began. The Japanese attack did little damage, but the AVG was unable to reach a position to attack and the bombers escaped unscathed.

At noon, the story was different. The AVG and RAF had resettled for the day's alert duty at Mingadalon, when the Japanese attacked again. Fourteen planes of the 2d squadron got off the ground, but they were overwhelmed by the Japanese. Three P-40s were shot down, with the pilots all suffering various degrees of injury, but alive, while only one Japanese fighter was claimed. This was the only encounter

between the AVG and the Japanese in which the Japanese shot down more aircraft than they lost.

That night, the Japanese returned. Although they were poor night fighters, three P-40s took off to intercept the raid. Their pilots, with no controller to guide them and only visual means of locating the Japanese, achieved poor results, to no one's surprise. The AVG was fortunate to safely land all three fighters without damage.

Two nights later, pilot Pete Wright would not be so lucky. Taking off at 3:30 a.m., he failed to locate the Japanese bombers even after opening his canopy to listen. He finally tried to return to base guided by the lights of vehicles lining the runway. When he lowered his landing gear, he was sprayed with hydraulic fluid. He stuck his head out the side of his cockpit to avoid the oil and hit the ground in a left skid. The landing gear buckled under the side load and collapsed, the P-40 skidding to a stop against a Chevrolet sedan parked to the side of the runway, slamming Wright's face into the windshield. Although bloody and battered, Wright was more fortunate than pilot Ken Merritt, who was in the Chevrolet. Merritt was killed instantly in the impact and joined the others laid to rest in the British cemetery.

So it went for most of January 1942. The Japanese launched raid after raid, slowly and methodically reducing the port capacity of Rangoon. Time after time, the diminishing number of P-40s and RAF Buffaloes tackled the seemingly limitless number of Japanese fighters and bombers.

What the AVG did not know was that their unexpected defense of Rangoon had seriously disrupted the Japanese timetable for conquering Burma and invading India. The Japanese were not able to knock out Rangoon, and a trickle of supplies continued into China. Japanese aviation losses forced a halt to bombing operations for nearly two weeks in January until those losses were made good. The replacements had been destined for Japanese offensives in China and India; without that air support, the Japanese had to slow their advances on the ground.

At Kunming, almost a backwater compared to Rangoon, the pilots grew increasingly bored and frustrated at the lack of action. Eleven pilots resigned, and the unwavering Chennault gave them dishonorable discharges from the organization. Finally, on January 24, 1942, the 1st squadron was ordered to relieve the valiant, but depleted, 2d squadron at Rangoon.

For the next month, the grim slugging match between the AVG pilots and the Japanese continued. In the air, the ragged P-40s continued attacking bomber and fighter formations, but the scarcity of supplies and replacement parts reduced the number of sorties that could be flown. Tires wore completely bald and often blew on landing. Battery plates grew so thin that they would not hold a charge for more than a few hours. The crew chiefs and support technicians performed miracles of improvisation in getting the fighters ready to fly, but if any of the 1st squadron planes had been on U.S. military bases, they would have been deemed unflyable.

In the middle of February, five Pan Am Airlines flying boats landed at Calcutta, India, with the first shipment of parts and supplies the AVG had received in its eight months of existence. Tires, batteries, propellers, gun switch solenoids, oxygen bottles, and ammunition all arrived just in time to keep the Tigers' claws sharp for a little longer.

By the end of February, the Japanese ground advance was only twenty miles from Rangoon, where all social order had ceased, making the vital supply scrounging trips to the dock area dangerous endeavors. At the end the month, the British ordered an evacuation. Their few remaining Buffaloes flew north to near the old Tigers' base at Kyedaw. The AVG 1st squadron also left Rangoon, settling in at a field near Magwe, Burma.

Meanwhile, the two squadrons at Kunming had suffered a loss of five aircraft on a single flight. Following a formal dinner and presentation of awards from Generalissimo Chiang and his wife, P-40s were assigned as escorts for the return flight of the dignitaries in their Douglas DC-2 transport. Former Marine Greg Boyington led the escort flight for nearly two hours into steadily worsening headwinds and clouds. Eventually, his flight became separated from the DC-2, which was providing navigation.

Boyington turned his fighters around to head back to Kunming, but got lost. With gas gauges on empty, the flight descended into the clouds, hoping not to fly into a mountain. Breaking out just above the peaks, they spotted a cemetery, the only relatively flat piece of ground within reach. All five pilots made belly landings and escaped unharmed, but the same could not be said of their aircraft. Returning on foot the two hundred miles back to Kunming took nearly a week. Chennault, needless to say, was upset at the loss of a significant portion of his inventory.

Boyington made good at least part of the loss. Taking a few mechanics back to the site of the crashes, he managed to repair two of the P-40s well enough for flight and took everything, except the skins, off the totally wrecked P-40s that could be used to repair aircraft back at Kunming. To lighten the flyable aircraft, they stripped them of their armament, armor plating, and anything not required for basic flight. Boyington loaded each fighter with only thirty gallons of gas and had the ground crew hold the tail up in a horizontal position. He held the brakes while he ran the engine to full throttle, then signaled the crew to let go. In both takeoffs, he raced toward the sheer drop at the edge of the cemetery. In a masterful display of flying, he dropped down the side of the mountain, using the dive to build up speed, then flew to a better field where the P-40 could be filled with enough gas to get back to Kunming.

Back in Burma, the situation went from bad to worse. The field at Magwe had no early warning ability, no facilities, and no protection for the crews or planes. Furthermore, the Japanese had modified their tactics. Instead of sending bomber formations surrounded by a large number of fighters and trying to slug it out with the Flying Tigers, they sent high altitude reconnaissance planes to determine when the AVG was on the ground.

Chennault knew that one surprise raid on Magwe would finish his fighters there, so he also changed tactics. He directed the squadron to send two and three plane patrols to raid the advance Japanese fields, including their new possession at Mingadalon, to thwart enemy aircraft buildup and to lessen the chance of a surprise attack on the AVG. Meanwhile, he sent the 3d squadron to replace the 1st squadron, which had been facing combat for nearly three months without respite.

On March 19, 1942, two pilots from the 3d squadron flew more than 250 miles from Magwe to the enemy base at Moulmein, far beyond what the Japanese thought

the P-40s could reach. The two pilots, Bill Reed and Ken Jurgenstedt, made several strafing runs and destroyed fifteen of the twenty fighters parked there. Adding to the damage, a small British force of fighters and Blenheim light bombers struck Mingadalon the next day and destroyed twenty-eight Japanese aircraft.

Two days later, the Japanese, humiliated by the strikes, launched an attack on Magwe. Over the next twenty-six hours, they flew a total of 226 bombing sorties against the base. After this unprecedented scale of bombing, Magwe ceased to function, and Chennault ordered the remaining four P-40s to Loiwing, the airfield where CAMCO repair facilities were located. The weary ground echelon once again formed a convoy and followed. The RAF, with only six fighters left, also moved to China.

Chennault established a ground-warning network with eighteen posts between Loiwing and the Burmese border. Once again, the AVG got a vital few minutes notice before an attack. They also received their first replacement aircraft at Loiwing. The improved P-40s had heavier armament in six wing-mounted .50-caliber machineguns and more powerful Allison engines.

### **Power Politics**

In late January 1942, U.S. Army Lt. Gen. Joseph Stilwell was appointed the Allied commander for all forces operating in the China-Burma-India Theater. Stilwell had earlier served in China and knew the Mandarin dialect, but by his own admission, did not think much of aviation except as an extension of his artillery and observation assets. To Chennault, such a view was extremely short-sighted, as well as ill-suited to the realities of the current war. Chennault's old nemesis from the Air Corps Tactical School, Clayton Bissell, who had disagreed with Chennault on fighter tactics and the effectiveness of a ground-warning network, became Stilwell's theater commander for air.



AVG P-40s at a field at Kweilin, China.



Stilwell at first attempted to stem the advancing Japanese in Burma. Brutally repulsed, Stilwell retreated with his forces, leading a grueling forced march of 120 miles through unmapped, thick jungle into India. For a young man, this was an impressive task. For a man of 60, Stilwell's effort was incredible.

Stilwell wanted the AVG to fly low-level reconnaissance missions over the fighting, and Generalissimo Chiang wanted it to fly ground-attack missions against the Japanese. Trained and organized as a fighter interceptor unit and not in close air support, the pilots still undertook these missions. However, in a near-mutiny within the AVG, the weary pilots presented a petition to Chennault threatening to resign en masse if he continued ordering these missions. Chennault quelled the mutiny, but at the expense of relations with Stilwell, who thought that Chennault should simply order his civilian pilots to comply with their orders.

In April, Chennault agreed to be recalled into the Army as a colonel. One week later, he was promoted to brigadier general, but Bissell was promoted a day sooner to keep him senior to Chennault. Earlier, before the war started, Chennault had offered to return to active duty, but had been rebuffed by Gen. George C. Marshall, Army Chief of Staff, and General Arnold. Now, however, the situation was different.

The Army Air Forces thought it could get a combat-proven fighter group in place by absorbing the AVG and its equipment, but the pilots objected. Although they had been released from their respective services and taken up a contract with a foreign government, they believed they had been guaranteed reentry back to their original service. Moreover, China had bought and paid for the airplanes and equipment as well as the salaries of the AVG.

Chennault, when finally notified of the plan, explained to Washington that the men would not allow themselves to be arbitrarily drafted into the Army Air Forces. First, most of the pilots came from the Navy or Marine Corps and, if forced, preferred to return to duty wearing their original uniforms. Second, disrupting the working of the AVG—no matter how slipshod it might seem seven thousand miles away in Washington, D.C.—would destroy the effort of the Tigers.

Bissell flew into the AVG's main base at Loiwing and told the gathered men that, effective at the end of May, they would all be brought into the service of the Army. They could join as volunteers and remain in place or they would be met with a draft notice the moment of their return to the United States and be drafted into the infantry as privates. The threat backfired; it may even have changed the minds of some of the men who had considered staying. Many of the former Navy and Marine Corps pilots wanted to return to their former services, not join the Army, while others just wanted a break from the constant combat, poor food, and chronic fatigue built up during their AVG time.

Although the Army wanted the AVG, Generals Marshall and Arnold were determined to keep Chennault from gaining command of the Chinese theater. So, while directing his forces against far larger Japanese forces and winning every encounter thus far, Chennault was forced to maneuver politically simply to keep his force intact. Fortunately, Chennault carried political clout with his direct access to the White House. The President had asked the crusty Louisianan to write him direct-

ly when necessary, and Chennault took the President up on his offer. As long as President Roosevelt lived, Chennault had the ultimate in political backing. He finally arranged a compromise. The AVG would merge into the Army Air Forces, effective July 4, 1942, if he could remain in tactical command of the air forces in China. Further, he would seek to convince the remaining AVG members to accept the transfer. He knew his appeal to his men would carry far more weight than Bissell's threats.

### Swan Song

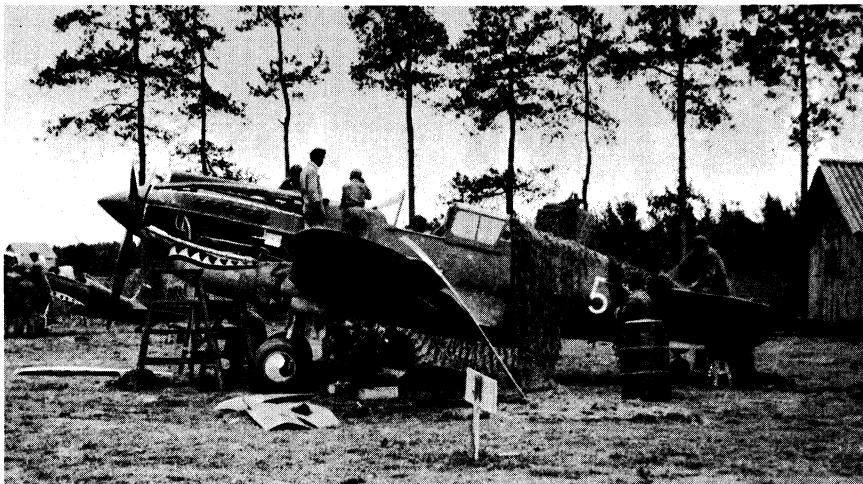
On April 18, 1942, in a surprise attack against the Japanese home islands, Lt. Col. James "Jimmy" Doolittle led sixteen North American B-25 medium bombers from the deck of the USS *Hornet*. The strategic ramifications of the raid echoed far into China, even though the raid caused only minor damage and the aircraft did not survive: fifteen crashed in China and one landed in Russia, with that crew interned.

The Army had not informed Chennault beforehand of the raid on Tokyo, and he was livid. He believed he could have put into place another warning and recovery system that would have saved the planes and crews. He also believed the system would have helped the Chinese avoid the massive retaliation of the Japanese, who already occupied the coastal areas. After Doolittle's attack, they pushed far inland to seize any airfields that could possibly be used for future missions against Japan. Along the way, they tortured and executed thousands of Chinese citizens for their efforts in aiding the Doolittle Raiders. Chennault believed to his last day that he could have prevented most of those casualties had he been brought into the planning process for the raid. However, Clayton Bissell, who had coordinated Doolittle's flight, did not think Chennault needed to know about the raid.

Chennault also rued the loss of the B-25s, which were supposed to form his bombing force. With just a squadron of such bombers, Chennault believed he could have thwarted Japanese drives in several areas in the theater. Instead, he had to press his increasingly tired pilots and P-40s into the dive-bomber role.

By the first of May, Japanese ground forces had completed the conquest of Burma. Approaching the northern tip of the country, they were in a position to turn east and invade Southern China or turn west and enter India, both deemed perilous to the Allies. For the AVG in particular, the continued Japanese advance meant that they once again had to abandon their base under pressure from the enemy, this time Loiwing on May 1. Unfortunately, many precious supplies were destroyed to keep them from the Japanese, including twenty-two damaged and under repair P-40s.

The problem was more than the loss of Burma. If the Japanese were able to turn east and enter China from Burma, the last remaining overland supply route to China was gone. Sooner, rather than later, the Chinese would run out of the means to wage war and would have to capitulate to the Japanese. The Japanese forces employed in defeating China could then turn to other areas, such as Australia or India. If either of these had occurred, significant Allied resources from other theaters would have been required to halt the Japanese.



Primitive maintenance was the rule for the American Volunteer Group.

The only significant geographic obstacle the Japanese faced was the mile-deep Salween River gorge between China and the tip of northern Burma. Once across the gorge, Japan's mobility would have been unlimited. British forces had managed to blow up the only bridge across the river, but the Japanese brought up pontoon bridging equipment to replace the destroyed span. Bob Neale, on a reconnaissance mission, saw thousands of Japanese troops and hundreds of vehicles snaking along the narrow road that hugged the Burmese side of the gorge. While Japanese Army engineers worked feverishly to throw a bridge across the river, the nearly twenty-mile-long column was vulnerable to attack, with no place to take cover.

On May 7, 1942, former Navy dive bomber pilots Tex Hill, Tom Jones, Ed Rector, and Frank Lawlor attacked the Japanese troops gathered in the gorge. They flew four of the new P-40s, armed with Russian-made 570-pound bombs, while four older P-40s flew protective cover above them. They destroyed the pontoon segments of the bridge and brought down sections of the rock walls, trapping the Japanese between the river and the rubble. They then strafed the Japanese column, killing and wounding hundreds of troops and setting many vehicles on fire. Even the circling cover flight joined the action, adding to the carnage on the ground.

For the next four days, Chennault sent every airplane in China within reach of the gorge against the Japanese column. AVG P-40s, Chinese Air Force Curtiss Hawks—biplanes that had one gun and carried a single bomb—and several old Russian Tupolev SB twin-engine bombers flew mission after mission against the exposed Japanese. The attacks stopped the Japanese cold. It would take over two years of hard fighting to dislodge the Japanese from Burma and reopen the Burma Road, but the Japanese never again threatened either China from the west or India from the east.

Despite the victory at the Salween River Gorge, Chennault still faced aircraft flying from Burma, Indochina, and China. The Japanese had moved planes onto

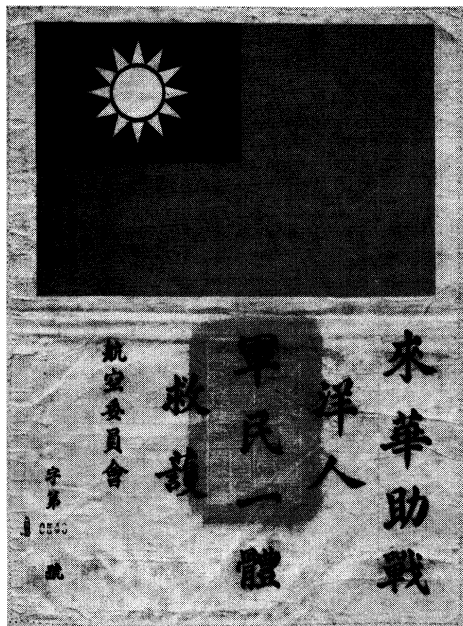
## Blood Chits

The AVG pilots carried a useful item with them when flying over China. Whether in combat or not, being forced down in the rugged, isolated countryside offered a downed airman the very real possibility of being killed as a foreigner. Add in a language barrier, and the odds were stacked against any unfortunate aviator. The blood chit was an item that helped save the pilots.

The Flying Tigers carried a silk sheet issued by the Aviation Committee that carried the Nationalist flag of China and a message in Chinese. The message said that this foreigner had come to China to help in the war and that all soldiers and civilians should save and protect him. Many of the AVG flyers had the sheet permanently sewn to the backs of their flying jackets so that they would always have it.

The U.S. military went on to use blood chits in most theaters of World War II. Written in the languages of each area, they promised a reward to the person providing safe passage and aid to the downed airman. Chits were used in succeeding conflicts as well.

Keeping the promise to reward the aid provider is illustrated in a story from the Korean War. On July 12, 1950, a USAF Boeing B-29 bomber was shot down while conducting a mission over North Korea. Most of the crew bailed out and survived, and they were found by a Korean civilian, Mr. Yu Ho Chun. Discovering a blood chit in the pocket of one of the air-



men, he provided medical aid to the battered crew. He then put them on a junk and sailed more than one hundred miles down the coast of Korea to take the men to safety. Two weeks later, the North Korean army found Chun, then tortured and killed him. In 1993, the United States government paid Yu Song Dan, Mr. Chun's son, over one hundred thousand dollars for the aid and rescue performed by his father.

Many of the AVG and their successors in the area used the chits and came home because of the simple piece of silk. Today, original AVG blood chits are prized collector's items.

fields in Burma to the west and Indochina to the south; and following the conquests made after the Doolittle Raid, they set up forward operating fields in China to the east. In response, Chennault operated the Flying Tigers like a fire brigade. He constantly rotated his minuscule forces to poorly prepared airstrips in each threatened area. Pilots landed close to the target in the late evening before a raid and refueled their planes. They spent an uncomfortable night in the cockpit or under the wing, then set out at first light to hit the enemy before it could attack the AVG.

A strike against Hanoi, more than four hundred miles from Kunming, is a good example of this phase of operations. On May 12, six Tigers flew to a former Chinese training field located only one hundred miles from the Gia Lam airbase at Hanoi and nearly the same distance inside Japanese-occupied territory. They landed after a dangerous late afternoon flight from Kunming, flying around billowing thunderstorms and grasping mountain tops. The planes carried fragmentation bombs under the wings, a high-explosive bomb under the belly, and armor-piercing and incendiary rounds for the machineguns. The pilots refueled their planes and took off again, hoping to catch the Japanese unaware by attacking near dusk. When they arrived, they found an unprepared enemy with aircraft lined up neatly alongside the runway, not ready to defend against the unexpected attack. A Japanese transport alongside the runway, carrying high ranking officers attending a planning conference, was the first target to be strafed. It went up in flames and smoke in a satisfying explosion.

The AVG lost one P-40 and its pilot; but, in addition to the transport, they destroyed ten more Japanese planes, damaged an estimated fifteen, and cratered the runway. Just as important, they demonstrated to the Japanese that no place was too far away for the AVG to strike.

This constant shuttling made the AVG's numbers seem larger than they were. After the war, the Japanese admitted they thought Chennault had several hundred fighter planes at his disposal, instead of the several dozen that in fact existed.

## **End of the AVG**

As the Chinese spring turned into summer, the days of the AVG counted down. Washington and China reached an agreement for the Flying Tigers to be integrated into the regular Army Air Forces as the 23d Fighter Group. On paper, this looked like an efficient way for the Army to gain an experienced fighter group capable of carrying the fight immediately to the enemy. China, on the other hand, received promises of increased amounts of military aid as well as the open support of the United States.

The actual transfer, however, was far different. The official date for the AVG's assimilation into the AAF was set for July 4, 1942; but by then, most of the men had decided not to enter the Army. They left China singly and in small groups to make their way back to the United States. Once home, most rejoined their former military services, some joined another service, while a few went to work in the rapidly expanding aviation industry. Chennault's personal appeal convinced only a handful of Flying Tigers to join the 23d.

Near the end of June, some brand new second lieutenants arrived to become the nucleus of the 23d Fighter Group. Fresh out of flight school, these eager, but inexperienced, pilots were likely to be easy targets for the experienced Japanese combat pilots. Another appeal from Chennault resulted in nineteen AVG pilots and thirty-six ground crewmen staying an extra two weeks to help with the new unit.

On July 4, 1942, Bob Neale led a flight of four P-40s against a group of fighters strafing a field near Hengyang. Attacking the twelve Japanese and facing low, for the Flying Tigers, odds of only three to one, the AVG flew its last combat mission, downing six of the enemy, with no losses.

Chennault spent his last day as AVG commander doing paperwork in his office, now located near the Chinese capital of Chungking. He had moved there a few days earlier to assume his new role as commander of the China Air Task Force (CATF), a motley collection of U.S. and Chinese aviation assets. He remained subordinate to Brigadier General Bissell, who was headquartered in New Delhi, India.

Chiang Kai-Shek and his wife had planned an elaborate barbeque dinner to honor the American Volunteer Group's effort. The dinner was held in Chungking, where most of the remaining AVG crewmen ended up. A torrential downpour caused most to reconsider attending, and they celebrated with a few beers at the airfield. Chennault did go, and he listened to Madame Chiang praise the Flying Tigers for their efforts on behalf of China and her people. As the Chinese had experienced before the mixture of the AVG and alcohol, they served only nonalcoholic punch at their soiree. It was over by eleven p.m., and the AVG quietly passed away.

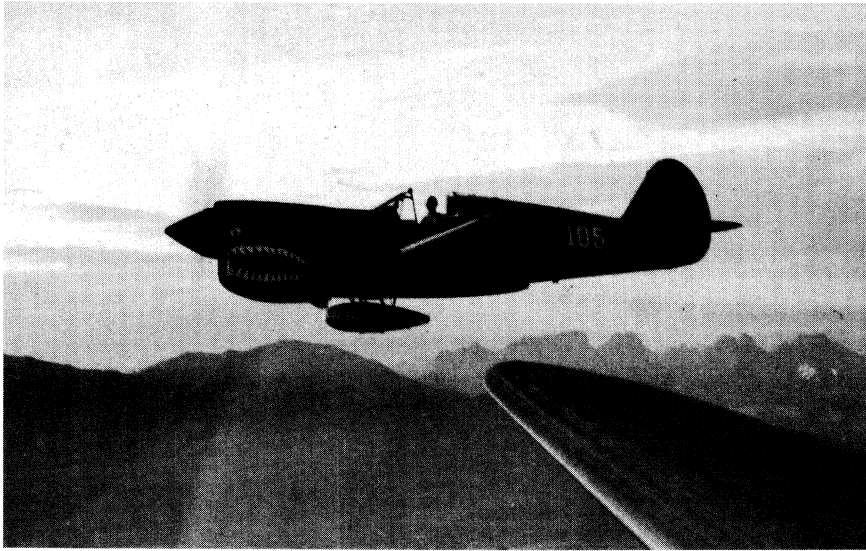
Five pilots agreed to join the AAF and remain in place: Tex Hill, Ed Rector, Charlie Sawyer, Frank Schiel, and Gil Bright. Hill, the former Navy ensign, became an Army Air Forces major and the squadron commander for the 75th Fighter Squadron, leading his green pilots on missions that, except for the different insignia on the P-40s, were remarkably like those of the AVG.

In October 1942, Hill flew as the mission commander for nine P-40s escorting twelve bombers on a raid against Japanese-occupied Hong Kong. Encountering twenty-four Japanese fighters, Hill downed one and repeatedly attacked the others. Following the mission, all of the bombers returned safely.

Hill later received the Distinguished Service Cross for that action, just one example of the many medals for valor that former Flying Tigers earned as part of the regular military. Two received the Medal of Honor: Jim Howard, flying the North American P-51 Mustang in Europe, and Greg Boyington, flying the Chance-Vought F4U Corsair for the USMC as the leader of VMF-214—the legendary Black Sheep Squadron. Hill, Howard, and several other AVG pilots went on to end their careers as general officers.

Chennault continued serving as the air commander in China for nearly three years. He was head of the CATF until March 10, 1943, then as a major general, he was in charge of the Fourteenth Air Force. He headed the smallest combat air force of the war, but always managed to achieve impressive combat results with the tiny forces at his disposal, as he had while commanding the Flying Tigers.

Chennault's association with President Roosevelt gave him some protection from military politics, but following Roosevelt's death in April 1945, Chennault



An AVG P-40 over the rugged mountains of northern China.

found himself squeezed out by General Arnold. In a letter that month to the overall China-Burma-India theater air commander, Lt. Gen. Albert Wedemeyer, Arnold wrote:

General Chennault has been in China for a long period of time fighting a defensive war with minimum resources. The meagerness of supplies and the resulting guerrilla type of warfare must change to a modern type of striking, offensive air power. I firmly believe that the quickest and most effective way to change air warfare in your Theater, employing modern offensive thought, tactics and techniques, is to change commanders. I would appreciate your concurrence in General Chennault's early withdrawal from the China Theater. He should take advantage of the retirement privileges now available to physically disqualified officers that make their pay not subject to income tax.

On July 8, 1945, Chennault requested retirement, a request quickly granted.

The legacy of the Flying Tigers has grown since those dark days of World War II, and accounts of Japanese aircraft the AVG destroyed vary greatly. Chennault, in his memoirs, says 299 Japanese aircraft were destroyed, with 153 more probably destroyed, while the AVG had 12 P-40s destroyed in combat, with 61 destroyed on the ground, including the 22 that were burned as the AVG left Loiwing. Daniel Ford, in *Flying Tigers: Claire Chennault and the American Volunteer Group*, gives 115 as the number of Japanese aircraft destroyed in aerial combat. However, bonuses were paid to AVG pilots for destroying aircraft, both in the air and on the ground, and Ford says that China "evidently paid bonuses for 294 planes." The

AVG lost twenty-three pilots: ten in action, three during enemy attacks on AVG facilities, and ten in flying accidents, against the unknown hundreds of the enemy killed in air battles and ground attacks. By any measure, the success of the AVG is remarkable.

For a time, the Flying Tigers were the only source of positive news for the Allies during the spectacular successes of the Japanese in late 1941 and early 1942. They fought the Japanese air forces to a bloody standstill, helped stop at least one strategic campaign, and tied up enemy resources far in excess of U.S. and Chinese lives and treasure expended. They had assistance from Britain's Royal Air Force, especially during the battles for Rangoon, but the Chinese workers were the real source of success for the AVG. The Chinese built, by hand, the many airfields used by the AVG; they operated, at great peril to themselves, a highly efficient early warning air raid network; they suffered uncountable casualties helping downed Tigers reach safety; and they endured years of Japanese occupation and atrocities, buying the time to set up the AVG's and, later, the U.S. Army's campaign against the Japanese.

Time has made the AVG's memory a collection of black and white photos, an old movie starring John Wayne, and a collection of books in the library. They were more than that. They were men and women who volunteered, for various reasons, to take the fight to an enemy that most Americans knew little about. When the 23d Fighter Group took on the few remaining Flying Tigers and their decrepit shark-mouthed P-40s, it also took on the legacy created by its forebears. Most of the Flying Tigers have now passed away, with time doing what an implacable enemy could not.

The history of the 23d did not end in World War II. During the War in Southeast Asia, it again flew combat over the skies of Asia in Republic F-105 Thunderchiefs. Affectionately known as "Thuds," these planes carried the brunt of the air war over North Vietnam for many years. The 23d answered the call to arms again during Operation Desert Storm. In the Fairchild A-10 Thunderbolt II ground attack jet, popularly called the "Warthog," its pilots flew more than twenty-seven hundred combat sorties and destroyed twenty-five hundred Iraqi military vehicles, including tanks. Taking on roles never imagined by the Air Force, they used innovative thinking that the original Flying Tigers would have appreciated. The 23d's A-10 pilots flew combat search and rescue missions, helping to save fellow Allied airmen. They took on Iraqi surface-to-air missiles in deadly duels where the odds were usually on the side of the enemy. They flew long-range missions to find and destroy the militarily impotent, but politically strategic, SCUD missiles of the Iraqi forces. Appearing deep inside areas the Iraqis considered safe from attack, the technological descendants of the P-40s strafed nearly five dozen sites, blowing up fifty-seven of the missiles.

The A-10s the 23d now flies are adorned with painted shark mouths. The two letter identifier on the tail of each aircraft is FT, for Flying Tiger, a fitting tribute from one group of warriors to another.



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## Sources

### Books

- AAF Historical Office. *The Fourteenth Air Force to 1 October 1943*. Washington: Headquarters Army Air Forces, 1945.
- Baldwin, R. E., and Thomas Wm. McGarry. *Last Hope, the Blood Chit Story*. Atglen, Pa.: Schiffer Publishing, 1997.
- Bond, Charles R., Jr., and Terry Anderson. *A Flying Tiger's Diary*. College Station, Tex.: Texas A&M University Press, 1984.
- Boyington, "Pappy" (Col. Gregory Boyington, USMC, Ret.). *Baa Baa Black Sheep*. New York: G. P. Putnam's Sons, 1958.
- Byrd, Martha. *Chennault: Giving Wings to the Tiger*. Tuscaloosa, Ala.: University of Alabama Press, 1987.
- Burt, William R. *Adventures with Warlords: Insight into Key Events of World War II*. New York: Vantage Press, 1994.
- Cornelius, Wanda, and Thayne Short. *Ding Hao: America's Air War in China, 1937-1945*. Gretna, La.: Pelican Publishing, 1980.
- Ennels, Jerome A., and Wesley Phillips Newton. *The Wisdom of Eagles: A History of Maxwell Air Force Base*. Montgomery, Ala.: Black Belt Press, 1997.
- Ford, Daniel. *Flying Tigers: Claire Chennault and His American Volunteers, 1941-1942*, rev. ed., New York: Smithsonian Books/Collins, 2007.
- Glines, Carroll V. *The Doolittle Raid: America's Daring First Strike Against Japan*. Atglen, Pa.: Schiffer Publishing, 1991.
- Hotz, Robert B., ed. *Way of a Fighter: The Memoirs of Claire Lee Chennault*. New York: G. P. Putnam's Sons, 1949.
- Hotz, Robert B., with George L. Paxton, Robert H. Neale, and Parker S. Dupouy. *With General Chennault: The Story of the Flying Tigers*. New York: Coward-McCann, 1943.
- Koenig, William J. *Over the Hump: Airlift to China*. New York: Ballantine Books, 1972.
- Losonsky, Frank S., and Terry M. Losonsky. *Flying Tiger: A Crew Chief's Story; The War Diary of a Flying Tiger American Group Crew Chief with the 3rd Pursuit Squadron*. Atglen, Pa.: Schiffer Publishing, 1996.
- Miller, Milt. *Tiger Tales*. Manhattan, Kans.: Sunflower University Press, 1984.

- Molesworth, Carl. *Sharks Over China: The 23rd Fighter Group in World War II*. Washington and London: Brassey's, 1994.
- Nalty, Bernard. *Tigers Over Asia*. New York: Elsevier-Dutton, 1978.
- Samson, Jack. *Chennault*. New York: Doubleday, 1987.
- Schultz, Duane. *The Maverick War: Chennault and the Flying Tigers*. New York: St. Martin's Press, 1987.
- Smith, William M. *Mercenary Eagles: American Pilots Serving in Foreign Air Forces Prior to United States Entry into the Second World War, 1936-1941*. Thesis, University of Arkansas, 1999. Ann Arbor, Mich: UMI, 2000.
- Toland, John. *The Flying Tigers*. New York: Random House, 1963.

## Articles

- Bergin, Bob. "Flying Tiger Ace Interview." *Military History Magazine* 17, no. 6 (February 2001): 34-40, 80.
- Boyne, Walter J. "Tex." *Air Force Magazine* 85, no. 7 (July 2002): 81-87.
- Correll, John T. "The Flying Tigers." *Air Force Magazine* 89, no 12 (December 2006): 36-42.
- Eisel, Braxton R. "Signal Aircraft Warning Battalions in the Southwest Pacific in World War II." *Air Power History* 51, no. 3 (Fall 2004): 14-23.
- Frisbee, John L. "Flying Tiger." *Air Force Magazine* 76, no. 4 (April 1993): 75.
- Guangqiu Xu. "Americans and Nationalist Chinese Military Aviation, 1929-1949." *American Aviation Historical Society Journal* 44, no. 1 (Spring 1999): 16-27.