

Soar to victory on silent Taylorcraft wings
TG-6 Glider training at Echeverria Field, Wickenburg Arizona
By Dave Trojan, Aviation Archaeologist



**Taylorcraft TG-6 Glider over the desert near Wickenburg Arizona,
photo courtesy Roger Admundson**

The American military training glider program started when the Air Corps Commanding General H.R. Arnold issued orders for the development of troop gliders and the procurement of suitable training gliders on February 25, 1941. Early Army purchases of training gliders (TGs), which began in April, 1941, were off-the-shelf commercial sailplanes and the first new trainers designed specifically for the services were also sailplanes. The initial orders to three established glider manufacturers, Frankfort, Schweizer, and Laister-Kauffman, were supplemented by the purchase of practically all the privately-owned sailplanes in the country to get the new glider training program rolling. Unfortunately, there just were not enough gliders to meet demands for the massive number of trainees in the program. The Army Air Corps also wanted a glider that adequately simulated the flying characteristics of combat gliders. It was decided that the quickest solution was to modify existing civilian light aircraft designs to serve as gliders. The Army Air Forces wanted a simplified training glider for beginning instruction of pilots who would go on to fly troop gliders in combat. The Piper, Aeronca, and Taylorcraft companies each modified one of their designs for Army use.

The Taylorcraft offering was designated as TG-6 and was modified from the company's L-2 Grasshopper. Modifications included a redesigned nose that replaced the engine with a seat for an instructor, slightly enlarged tail, and redesigned landing gear with a skid under the nose; wing spoilers were fitted and the fin area increased. Wing span was 35 feet 5 inches and the length was 25 feet 2 inches. With a gross weight of 1260 pounds, the training glider dropped at about the same speed as the cargo gliders. The maximum towing speed was 140 mph. The modifications for the prototype were done in only nine days. The Taylorcraft model number designation for this glider aircraft was ST-100. The ST stood for Stanton-Taylorcraft. This was in recognition of the help Charlie Stanton and the CAA engineers had provided. The U.S. Army ordered 250 of them, serial numbers 42-58561 through 58810.



TG-6 Glider photo courtesy taylorcraft.org



TG-6 Glider photo courtesy taylorcraft.org

The Army's original policy for glider pilot training requested that the pilots would be existing powered aircraft pilots. However, the shortage of such personnel at the time called for a drastic revision of the policy. Offers were made to enlisted men with no flying experience at all, with the promise that they would graduate as staff sergeants. To attract more recruits into the glider pilot program, the Air Corps launched a media blitz with slogans such as: "*You too can soar to victory on silent wings!*" For some, the draw was the extra pay, for others it was a chance to avoid being stuck on the ground. Those with previous flying experience were also sought, and this policy brought in a lot of washouts from powered aircraft pilot training.

An early decision was made to have the future glider pilots trained under contract to civilian schools. The Arizona Gliding Academy (AGA) was established at Echeverria Field, about 15 miles west of Wickenburg Arizona along highway 80, about 50 miles northwest of Phoenix in mid July 1942. The Fifth Army Air Force Glider Training Detachment was assigned to the school and by September 1942 dozens of students were arriving each week. The site was chosen because it had lots of open desert and an abundance of thermals. By being able to soar, gain altitude on rising air currents and therefore stay up longer on a given flight, the student would conceivably receive more instruction per flight. The earliest flights in gliders at Wickenburg started with TG-2 Sweizer sailplanes, but soon shifted to TG-5 Aeronnca and TG-6 Taylorcraft gliders. One pilot at Wickenburg reported that the TG-5 needed to enter the landing at about 1300 feet and came down like a rock. While the TG-6 had a much better glide ratio and could enter safely at 800 feet.

The AGA school used two different aircraft as tow planes. The 285 horsepower, Vultee L-1A Vigilant, originally designated O-49, the military version of the civilian Stinson Model 74, and the 450 horsepower Vultee BT-13 and BT-15 Valiant. Each was able to tow up to three small training gliders. Walter Craig Davidson, an instructor at the Wickenburg Arizona Flight Academy, recalls, "We had five flights of students there, and we had two Taylorcrafts and three Laister-Kauffman sailplanes." Lyle Maxey recalls, "The Taylorcraft was the most beautiful slow-rolling machine I ever flew, before or since. But it was entirely unsuitable for ground-- launched tow methods. It needed higher takeoff speeds, so we had to get towplanes-L1-As and BT-13s-with which we could use double, sometimes triple, tows."



Stinson L-1 Vigilant, photo courtesy aerofiles.com



Vultee BT-13 Valiant, photo courtesy militaryfactory.com

Each training school was a combination of a civilian and military organization. Bill Horn, editor of Silent Wings, the newsletter for the WW II Glider Pilots Association, was stationed at the Wickenburg, Arizona Flight Academy. He recalls, "Those of us who went through our basic glider training there got a taste of the 'country club' atmosphere, for the school was operated in that manner. All the staff and instructors were civilians, and we were released from the barracks life, as the quarters were well planned and comfortable. It was a bright spot." A canteen and lounge opened at Echeverria Field seven months after the school open and served drinks and food. During their time off the glider pilots could play chess, checkers, pinball, ping-pong, read, or listen to music. However they had little time for recreation after they started flying. One problem they had was the lack of enough women to go around from the local town. When they had a dance, they had to send trucks all the way to Phoenix to get enough women. The Commander of the school commented that they never had it so good and that the war seemed far away.



Wickenburg, Arizona Glider Basic Training, photo courtesy of Mary Martin and Troy Wynne from Donald D. Martin's collection
pointvista.com/WW2GliderPilots/glider

Student pilots spent up to 4 hours a day in ground school studying aerodynamics, meteorology, soaring techniques, towing, theory of instrument flight, aircraft construction and maintenance. The USAAF Pilot's Flight Operating Instructions for the TG-6 glider, T.O. 09-35AA-1 was only approximately 15 pages long. Students also practiced simulated instrument flight training in the Link trainer. The students flew five days per week and flew the gliders for up to six flights per day. Students started flying at between 5-7 thousand feet above the ground which allowed for a slow descent and lots of practice with basic flight maneuvers. Glider flights lasted about 30 minutes between take off and landing, but some lasted up to two hours. Most glider pilots also received the equivalent of Infantry Officer training. There were special ground hazards around the field, scorpions were everywhere and rattlesnakes. Pilots learned to turn over their shoes and shake them before putting them on. To deal with the intense summer heat some pilots took a sheet into the shower and wet it thoroughly before sleeping in it.

At Echeverria, the glider departure point was located about half way down the glider runway and gliders would land far short of this. The tow planes landed on a very close parallel dirt runway. For safety the airspace was partitioned into four zones, and members of each triplet of one tow plane and its two gliders were required to stay in their zone until given a special light signal to initiate their landing approach. Glider pilots practiced approaching the landing field, entering the pattern, and touching down precisely.

Several instructors had their students practice very low altitude high speed tows. The tows usually took place over highway 80 west of town, but sometimes over the town itself. Normally, these were double tows using TG-6s. At first the student pilots were very tense, but in time some of the students practiced extraordinary maneuvers during these extremely low flights. Some TG-6 pilots would sometimes take turns flying

over the highway at only 15 feet above the ground and touch down at about one hundred miles per hour. It was not uncommon during these flights to see cars pull off the road and their passengers jump out and run into the desert.

Night training created a different set of challenges. Walter Davidson recalls one night in the desert near the training school at Wickenburg, Arizona, "I was giving a ride to a Phoenix publisher. We were about three hundred feet high when the towrope broke. He was scared to death. I landed in front of a car on the road using its headlights. They had to get the flight surgeon to pry the publisher's hands off the cockpit supports. They had to take him to the hospital and give him shots to calm him down."

"None of us liked night training," recalls Donald Sipe. "On one flight, I drifted a little on the runway, and the instructor grabbed the wheel and said, 'I ought to wash you out, but I think you'd make a good officer.'"

Many of the tow pilots were civilians whom the trainees called "legal draft dodgers." The training flights often involved towing two gliders by one tow plane using two towlines—one 250 feet long and the other 325 feet long—to avoid collisions. The shorter line glider pilot had to hold continuous left rudder, and the longer-line glider had to hold continuous right rudder to avoid the tow plane's slipstream. It was possible, with coordination on the part of the two glider pilots, to "steer" the tow plane if both gliders worked together and moved to one side of the tow plane's wake. Naturally, the tow pilots did not appreciate that. One night, on a training flight, a tow pilot got even with a pair of conspiring glider pilots by releasing them far out over the Arizona desert after the two had tried to steer him away from the mountains. One of the glider pilots, James "Pete" Campbell, while searching for a safe landing area, spotted car lights moving down a road a couple of miles away. Using the lights as a guide, he landed his glider in front of the car and completely frightened the driver and his wife, who thought the landing was part of a Japanese invasion until the young glider pilot reassured them that he was on their side.

There were a number of accidents involving Taylorcraft TG-6 Gliders and their tow planes. Some of the accidents were humorous and others were tragic. Landing the tow planes at Echeverria Field was dangerous because the visibility over the nose was not very good and on occasion it caused the pilots to land on the gliders runway instead of their designated parallel runway. One tow plane dragged his tow rope at sixty miles per hour down the centerline of four waiting unoccupied gliders wrecking them all.

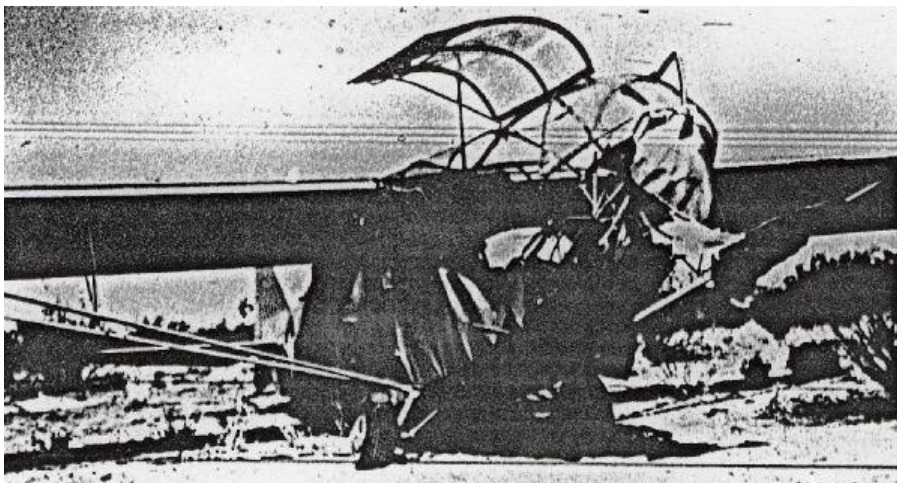
On July 19, 1942, L-1A serial number 41-18918 received major damage while taking off from Echeverria Field with two gliders in tow at night when it hit and killed a cow that had wandered onto the runway. Neither the pilot, civilian R.J. Stieler, nor the passenger, 2nd Lt. R.E. Kuenstler were injured. It was reported that the gliders in tow were splattered by cow guts and that the Army received a \$1500.00 bill for the cow.

While conducting a dual-towing mission near Wickenburg, Arizona on October 31, 1942, a BT-13 glider tow aircraft released two TG-6 gliders, serial numbers 42-

58633 and 42-58634 at an altitude of about 1000 feet over “unsuitable landing terrain” (sagebrush and 15-to-20 foot saguaro cactuses) when he became alarmed after his aircraft lost about 200 feet of altitude in a down draft. Thinking he was about to lose control, he cut both gliders loose. They were tied together by the tow rope and the glider pilots were unable to release the tow cable due to an improperly designed release hook (since the cable was dragging aft it would not release off the front of the hook). The gliders had to land in formation in the desert as they were connected together by the tow line. The dragging tow rope on the second glider, 42-58634, caught on a small tree causing the glider to skew 180 degrees and make a crash landing which badly bent and twisted the airframe and injured the student pilot, Sgt. John C. Euchner. The cable tore off the first glider, 42-58633, allowing that plane to land safely with only moderate damage and no injuries to the pilot. The tow pilot was blamed 100% for using poor judgment in prematurely releasing the gliders and leaving them to their own demise. The AGA civilian tow pilot had just 64 hours in the BT-13.



TG-6, 42-58634 after crash landing, photo courtesy arizonawrecks.com



TG-6, 42-58634 after crash landing, photo courtesy arizonawrecks.com

A special club membership was awarded to glider pilots who missed the field and landed in the desert. The Cactus Club membership certificate read in part "in recognition of his display of fortitude, courage, in stupidity, and fool's luck, all essentials in landing a glider in the cactus wastes of the great golden West."

On November 12, 1942, a collision occurred at Echeverria Field when an L-1A tow-ship struck the left wing of a TG-6 Glider during take off. The airfield was very dusty at the time and it was still dark at 7:17 in the morning, making visibility poor. TG-6 Glider, serial number 42-58594, piloted by Pvt. James D. Block landed without any navigation lights due to a dead battery. A jeep was sent down the runway to pull the glider off the field, but failed to find the glider because of the dust, darkness and lack of lights on the glider. When the light gun operator saw the jeep return to the staging area, he assumed the glider was in tow. Thinking the field was clear, he gave the tow-ship piloted by civilian William J. Wingfield the green takeoff signal. Halfway down the runway the L-1A tow-ship struck the glider. Luckily no one was injured. However, the TG-6 was extensively damaged. The left wing was torn off, struts to the left wing were completely damaged and the left landing gear was bent. According to the accident report, at the time of the accident, the TG-6 glider had a total of 166:48 hours on it since it was accepted only about one month before on 17 October 1942. A major cause of the accident was the dead glider battery. It was reported that the glider batteries went dead in one hour and it was recommended that bigger batteries should be installed in all gliders, if and when obtained.

November 19, 1942 was an especially bad date for TG-6 gliders in Arizona. A strong storm moved into the area more quickly than anticipated. Strong wind shifts necessitated the repositioning the kerosene flare pot runway markers in the evening. During the movement of the pots the gliders started coming in for landing. One bewildered student pilot, Stephen E Brooks, flying TG-6, 42-58593, looked down during the chaotic pot change and saw pots all over the desert. He picked the wrong place to land and instead of a clear runway he landed too close to a row of parked TG-6s. He felt a series of heavy bumps and heard what sounded like a burst of machine gun fire. The morning light revealed a row of TG-6s, serial numbers, 42-58585, 42-58609, 42-58610, 42-58625, 42-58647, and 42-58650 with their tails all twisted over at about 30 degrees. Also on that same date, TG-6 serial number 42-58608 crashed 2 ½ miles west of Aguila Field when Pvt. Frank Supine bailed out after he was towed into a cloud by the tow plane. The last TG-6 glider accident of the year happened on December 12, 1942 when TG-6, 42-58703, piloted Cecil C. Kellam, received moderate damage during a landing accident at Echeverria Field.

During the last day of operations at the AGA a final tragic accident occurred. On February 21, 1943, two gliders were being towed when a gust of wind tossed one of the gliders into the other, fouling the tow rope in its rudder, which tore the rudder from the glider. Mr. Harry J. Peters, a civilian instructor pilot, who arrived at the AGA only three days before the accident, ordered the student pilot, TSgt. Martin to parachute to safety. Mr. Peters was unable to free himself in time and was killed when the glider crashed from 3000 feet about ten miles northeast of the field.

Glider training at Echeverria Field ended February 22, 1943 and a primary flight training school began operation for powered aircraft operated by the Claiborne Flight Academy. Luke Field took over the responsibility of caring for the runways and other

flying facilities at Echeverria Field on 21 April, 1944 when it was operated for a short time as an auxiliary field. Military use of the airfield ended in 1950.

Approximately 6000 individuals were trained as glider pilots in World War Two and earned their wings. Glider pilot training at Echeverria Field, Wickenburg was a part of a brief, unique episode of history. The glider pilots are proud of their silver wings with the large letter "G" which they note really stands for GUTS. It took guts to fly a glider beyond enemy lines on a one-way mission.

Amazingly, 67 years after glider training at Echeverria Field, during a visit to the long abandoned airfield, I happen to find two original aircraft data plates resting in the desert sands. The first was for TG-6, serial number 42-58594, Order Number: W535AC-29841, Date Accepted 9-25-42. The same glider mentioned above involved in a takeoff accident that occurred on November 12, 1942. The second data plate was Taylorcraft Aviation Corporation, Serial Number: 6033, Model: ST-100, Date Mfg: 9-15-42, A.T.C.: 11, M.A.A. Plate No. 33280. Furthermore, several other small parts were found in the same area that may belong to Taylorcraft gliders including an access panel, wing tip lens fragments, instrument part and small pieces of aluminum all located at a WWII dump site near the hanger. I wonder what else is out there in the desert waiting to be discovered.

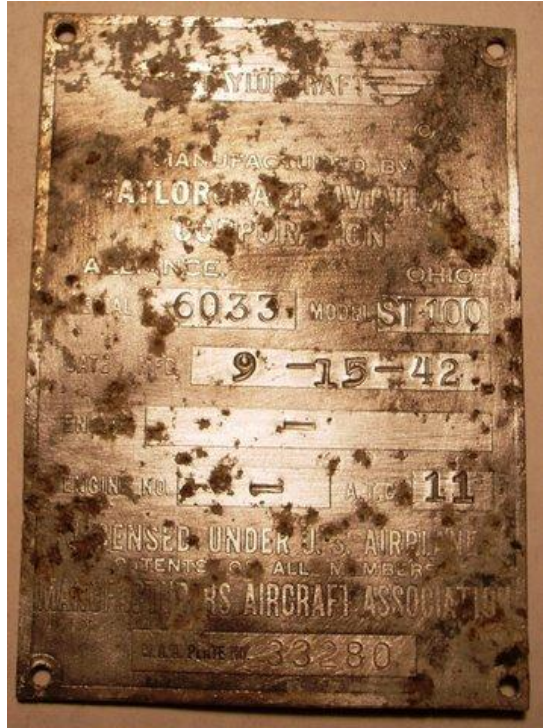
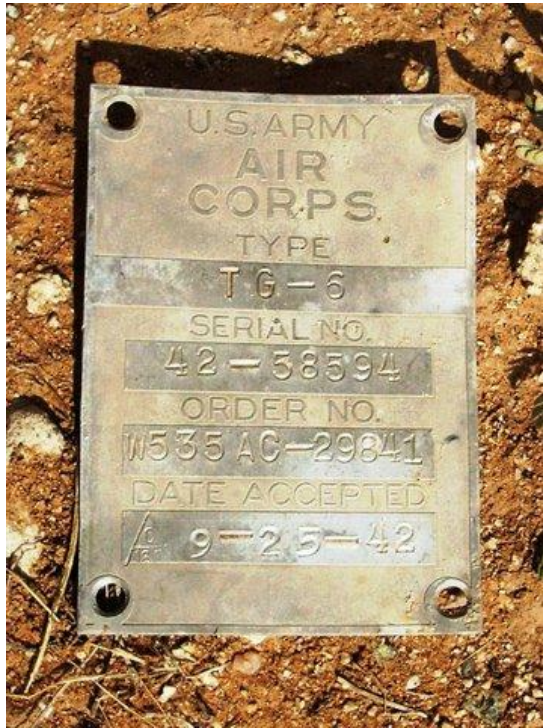
I would like to thank and give special acknowledgement to the following sources for providing information for this story including:

To Fly the Gentle Giants: The Training of U.S. WW II Glider Pilots, by J Norman Grim
Just follow the rope: WWII glider pilots remember, Flight Journal article, Feb 2002 by Scott M. Fisher

Chris Baird of arizonawrecks.com for providing accident information
Craig Fuller of Aviation Archaeological Investigation and Research



Abandoned hanger at Echeverria Field, photo by Dave Trojan



Data plates found on the abandoned glider field, photos by Dave Trojan