

## **Air and Space this Week**

### **Item of the Week**

## **CHUCK YEAGER**

### **BREAKER OF BARRIERS**

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Ridley Bell X-1

*What put Chuck Yeager at the “right stuff” pinnacle of piloting respect? A unique combination of incredible eyesight, mechanical aptitude and experience, a strong sense of ethics and excellence, outstanding associates, fortunate opportunities, and a LOT of hard work!*

*We would have been 100 years old on February 13, 2023.*

### **INTRODUCTION**

Charles Elwood Yeager was born on a hardscrabble farm on the bank of the Mud River near Myra, West Virginia, on February 13, 1923. His family had been “in the hollers” for several generations, and were very old-school, and tough as nails. His father brewed his own beer, and Chuck’s first exposure to things mechanical was working the bottle capper for his Dad. Before young Chuck reached school age, his father was able to land a job drilling gas wells in the region, and the family moved to the big city, Hamlin, population ~400. [I feel some kinship with him on this; my grandfather was a roughneck/roustabout in the same gas fields (they still are producing a little bit today) about that same time. My family would be there still if he hadn’t been one of the very few from that region to pass the civil service exam and get a Federal job.]

Chuck grew up quickly, providing squirrels and rabbits for the dinner table with a .22 by the time he was six. This in spite of Roy, his older brother, killing his baby sister with a tragic shotgun accident two years previous. His dad sat the two boys down, and explained how the family firearms operated safely, and laid down exceedingly strict rules about their use. Roy would be haunted by his sister’s death the rest of his life.

Chuck was well-acclimated to his outdoor country life. He wore shoes and got a bath one day a week (during the summer), and he and his brother had many, many chores. His ability to hunt game went from excellent to almost unbelievable. He had the steadiest of hands and his vision would test at 20/10. His father was glad to take him on hunting trips with the neighbor men, and Chuck’s ability to see game where others couldn’t was a source of fatherly pride. Any deer within 500 yards was soon venison. Chuck caught many a fish for the dinner table, too.

Running a farm and a drill rig made Chuck's father an expert in practical mechanics. Self-sufficiency was the order of the day. The tools that were there had to work, or be made to work with the materials at hand, or nobody got any money. Of course, both boys helped out, and Chuck in particular showed great aptitude with the maintenance of anything with moving parts.

One other thing Chuck got early on from his father (and mother) permeated the rest of his life. Albert Yeager's word was his bond. He lived in a black-and-white world, with very few shades of gray. There was right, and there was wrong – no middle ground. He was brusque, but he was very straightforward; no nonsense.

Chuck's life became a bit more town-oriented as he reached high school age. He played both basketball and football, in addition to all his chores. He was enamored with the first airplane he saw close-up (when he was 15). In the two summers preceding his graduation, he went to the Citizens Military Training Camp at Ft. Benjamin Harrison, near Indianapolis. [Oddly, no mention is made of this in his autobiography.] CMTCs were organized after WWI to allow young men to get basic military training without a military obligation. BTW: There were other CMTC veterans you may have heard of: Harry Truman, Ronald Reagan, and for you Cornell grads out there, [Willard D. Staight](#). Chuck graduated from high school in June, 1941.

Chuck summed up his childhood thusly, "(T)he guy who broke the sound barrier was the kid who swam in the Mud River with a swiped watermelon, or shot the head off a squirrel before school."

## MILITARY LIFE

Employment opportunities in rural West Virginia were scarce in 1941. Chuck knew there was no long-term future in following his father's footsteps, or chasing girls and hustling pool, either (he was adept at both). WWII had already begun of course, and although America was out of it, war clouds clearly loomed. When an Army Air Corps recruiter came to town, Chuck was an easy sell. He enlisted as a private on September 12, 1941.

Chuck's mechanical aptitude impressed his trainers, and they knew he'd make a great aircraft mechanic. Life as a private was tough, but Chuck was tougher, except when he took a ride with his boss in an aircraft he had serviced and puked all over the place. Just as well, he might have thought, since he'd been told at recruitment that his lack of college education would preclude his being trained as a pilot. But Chuck really hated K.P. duty, the lot of many a private.

After Pearl Harbor, the AAC reconsidered its education requirement for pilot training, and created a class of non-officer pilots called "Flying Sergeants." His stomach's misgivings were trumped by his distaste for K.P., and he signed up. Off he went to Luke Field in Arizona for flight training.

Many of the other trainees were older and better educated than Chuck, but nobody there, cadet or instructor, had a greater innate feel for an airplane. He graduated from flight school on March 10, 1942, and became a non-commissioned flight officer (the rules had just changed),

with wings of blue, not gold. He was assigned to the 357<sup>th</sup> Fighter Group, based at Tonopah, Nevada, then a bustling silver town starting on its decline. They would fly the Bell P-39 Airacobra, a plane the Brits refused (but the Russians loved).

The next “six months of squadron training were the happiest” time Chuck ever had.

### **A “HELL-RAISING FIGHTER JOCK”**

“Now that I was a fighter pilot, I couldn’t imagine being anything else,” Chuck wrote in his autobiography. His father had instilled with in him a very strong work ethic, but also said to do the work you love, and Chuck liked flying, especially the unsupervised rat-racing he and his colleagues enjoyed. Tonopah might have been fading, but it still had a lot of gambling and Miss Taxine’s place. When the girls there became familiar, they tried a similar establishment up the road in Mina. The sheriff ran them back to Tonopah; the next day the Mina water tower acquired a few .50 caliber holes (at least they didn’t use their 37 mm cannons).

Some of Chuck’s fellow pilots were country boys, too, and they spent a chunk of their time off from flying by hiking, hunting, and fishing in the mountains outside of Tonopah. They’d scout out the best likely spots while flying and then go visit them by jeep when they could. One time they were scouting at low level when they spooked a rancher’s herd of cattle. When they drove by a few days later, heading for one of the spots they’d seen, they drove by the ranch and the rancher was there. Trouble! No. The rancher waved them over, had a good laugh with them, and became their friend. He loved it when they buzzed his place, and if he heard planes, he’d run out waving a bedsheet, the signal that he wanted a low pass. The pilots liked the rancher, and would from time-to-time air-drop him some .30 caliber ammo they had in quantity and he didn’t. He mentioned to the guys that there was a tree out by the dirt road to his place that he didn’t like. The next day Chuck topped it with his wingtip. He told his mechanic that he hit a bird. The mechanic noted that it must have been sitting in a helluva large nest at the time! Chuck was grounded for a week.

His group’s next stop was Santa Rosa, California, where they would train on coastal patrol operations. Miss Taxine and the girls gave them a nice send-off at the train station, and away they went.

But Chuck had a detour coming. His flying skill and mechanical aptitude had been noticed by his superiors. He was assigned temporary duty at Wright Field outside Dayton, Ohio, to assist with a test program for a new propeller for the P-39. Chuck had access to a number of planes, including the big P-47, and his folks’ place in West Virginia was not too far away, so Chuck began making visits on a semi-frequent basis. He couldn’t land, but he could beat up the place with an impromptu air show. And he did. Believe it or not, the good folks in Hamlin became used to a P-47 flying down main street full bore.

### **BREAKING BARRIERS PART 1**

I chose the title for this Item because Chuck Yeager's life story is one of breaking barriers. OK, the obvious one was the sound "barrier," but there were many others, too.

He came from a modest background, limited in terms of money and formal education. Becoming a pilot was a barrier to him, but he overcame it with innate ability and hard work. And he did it with a stylish swagger, circumstances that would not be permitted today.

Rat-racing, mock dogfighting, buzzing down main street on the deck, are rather frowned upon today, but back then, it was more tolerated because it led to pilots with confidence and skill, weeding out those who would not do well in combat.

For example, when Dick Bong flew his P-38 in a loop around the center span of the Golden Gate Bridge and flew below window level down San Francisco's Market Street, it did get him reprimanded, likely with a slap on the back to go with the slap on the wrist. Pappy Boyington's flying exploits, while exaggerated by Hollywood, were not strictly by-the-book. His Black Sheep, Tommy Blackburn and the [Jolly Rogers](#), and others were breaking barriers (the rules), but that helped make them the pilots they needed to be in order to excel in the combat to come.

## **GLAMOROUS GLEN AND THEN TO ENGLAND**

The work with the new P-39 prop was successful, and Chuck was sent to Santa Rosa to re-join his squadron. He no sooner got there than they were off to their next duty station, at Oroville not far away.

That very afternoon, Chuck and Mack, his country bestie, strolled over to the local USO to see if they could arrange a dance or other social event for their squadron. The woman Chuck encountered in charge there was but 18, quite pretty, and angry that the fly-boys thought she could whip up a party with 30 girls on short notice. Chuck looked her dead in the eye and said, "You only need to find 29, because I want to take you." Her name was Glennis Dickhouse. And Chuck was indeed smitten.

Somehow she pulled off the party, and although her dance card seemed awfully full, Chuck and Glen came to the realization they had a lot in common, particularly the love of the outdoor life. They spent as much time together as they could, given his busy flight schedule and her holding down three jobs. Chuck's stint at Oroville was only two months. Good thing, too. Right before the squadron was scheduled to move on, Chuck had buzzed the students at the basic training field in nearby Chico, and waxed the tails of everyone he encountered there, including the base CO, who went on a tirade. The next stop was Casper, Wyoming. Glen and Chuck exchanged photos and promised to write.

Wyoming was paradise for Chuck, at least at first. They were at the end of the supply line, and the pilots and enlisted guys on the flight line augmented their mess by hunting. Chuck had reconnoitered the area from the air and knew where the deer and antelope played. He gave the flight line chief a map that showed where they should go. Chuck hopped into his P-39, and flew as a beater, driving antelopes to the waiting shooters. He helped them out by shutting off all but one of his guns, setting it to fire single shots, and dropping a dozen or so right at their feet.

On Friday, October 12, 1943, Chuck and his squadron were flying high-speed mock attacks against a squadron of B-24s. Chuck's engine (remember, behind the pilot in a P-39) blew up, and he barely got out. His speed and the opening shock of his parachute knocked him unconscious, and that and his impact with the ground broke his back.

He had planned to fly to Oroville that afternoon to visit Glen, who was then working in Reno. She had taken a train ride to meet him, in the caboose, the only seat available, but Chuck was a no-show. She called around to find out where he was, but could get no info because she was not (then) related, but she finally did get through to one of Chuck's buddies, and they told her about his bail out and injury. Back to the caboose she went.

His squadron was getting ready to ship out for England. Glen managed to see him in Casper the night before the squadron shipped out. She, too, was smitten, by Chuck's strength and determination. They agreed to write, and Chuck had his pay sent to her in war bonds to hold for the Duration. His squadron shipped out for England on November 23, 1943.

## **BREAKING BARRIERS – PART 2**

Yeager was assigned to the 363<sup>rd</sup> Fighter Squadron, based out of RAF Leiston, flying the P-51B Mustang. He named his aircraft the "Glamorous Glen," and flew seven missions, scoring one air-to-air victory on March 4. His eighth mission was on March 5, 1944, an escort mission for bombers attacking a German aerodrome east of Bordeaux. An attacking FW-190 tore up Chuck's P-51 with 20 mm cannon fire, and Chuck barely got out of the wreck before it crashed. He'd been peppered with fragments large and small, and had a gash on his head, but was otherwise OK.

Chuck was in a tight spot. He had limited survival equipment, but that didn't concern him too much because he was confident he could live off the land, even in winter. But evading the Germans searching for him was another matter. He needed to somehow contact the Underground and make his way over the barrier posed by the Pyrenees into neutral Spain. What really bothered him was that, even if he could escape, he would be barred from flying in Europe again. The AAF had an iron-clad policy that any aircrewman who had escaped with help from the Underground could never become a POW again, so as to protect those brave freedom fighters from exposure should a returnee be captured and tortured to identify those who had helped him before.

I'll leave the details of his escape and return to his autobiography and other sources, but I will mention one thing. The Underground got Chuck and four other downed airmen to a place where they could begin their journey, gave them backpacks, and sent them on their way. They could travel together, or go separately. Chuck and a bomber navigator forged ahead, and when the others couldn't keep up, they went on their way.

The snow was deep and the air was thin as they climbed. After three arduous days, they holed up in a logger's cabin. The navigator hung his socks out to dry in a bush out front. A passing German patrol saw the socks and began firing into the cabin. Our guys jumped out the back,

and slid down a steep snowy hill to the creek below. Chuck got them across the creek and to a place where its difficult to see them from above. The navigator had been hit in the knee in the fusillade, and the bullet, likely a dum-dum, had blown it almost completely away; the lower leg was hanging by a thread. Chuck made a makeshift tourniquet, and tied it on tightly. Night soon fell. Chuck dragged the navigator up the long hill ahead, taking several hours to make it. From there, he could look down a long slope to a distant road. Spain!

Chuck gathered some pine boughs and fashioned a makeshift sled. He put the navigator on it, and pushed him down the hill. He slid almost out of sight. Chuck followed, using a branch as an ice-ax to regulate his speed and guided himself to the navigator. A few more short slides and they were by the road. They'd just come through the most dangerous part of the trip, because the Germans patrolled the road to prevent the escape just like theirs.

Chuck could do nothing more for the navigator. Getting the guy down the hill was one thing, but... Chuck set the navigator up by the road so that the first person to drive by would see them and could provide more help than Chuck could give. It worked. The navigator was found an hour later, and taken to get medical care. He was home stateside in six weeks. Chuck had broken the barrier posed by the Pyrenees and his own physical limitations.

Chuck was the first evade to successfully make it back to our lines, and he was awarded the Bronze Star for saving the navigator's life.

### **A STRONG SENSE OF EXCELLENCE AND PROFESSIONALISM**

Chuck returned to his squadron at Leiston. His buddies gave him a hard time, because he had gotten a great suntan and gained twenty pounds while evading the Germans; he looked like he'd been on a tropical vacation! Chuck wanted no part of a return to the U.S. His squadron buddies, Bud Anderson and Don Bochkay, were already aces. Chuck felt like he would be "slinking off" if he went home, and the thought of sitting out the war training pilots repulsed him. He also wanted to have a career in the AAF after the war, and was concerned that if he went home now, he would not be retained when the War was over. Most guys would have figured they had done their duty and would have been glad to return to the girl back home, regardless of their future career. But Chuck Yeager was not "most guys."

Chuck decided to fight the barrier of the "no return" policy. He knew there was only one person with the clout that could let him continue combat, General Eisenhower. He had to go through a phalanx of captains, majors, and colonels at HQ, but while they all told him his case was unwinnable, they were impressed enough by his fighting spirit to push the issue up one step.

D-Day was a fortunate day for Yeager. The Underground came out into the open in support of Allied operations, making the evadee policy less important. On June 11, he had a meeting with a two-star to discuss the policy. He was joined by Fred Glover, a bomber pilot who likewise wanted to continue in action. The general agreed to help, and set up an appointment with Ike the next day.

That night, the first V-1 attacks began hitting in and around London.

Ike had to get the authority to rescind the policy from Washington, and promised he'd try in his meeting with Yeager and Glover. True to his word, he did, and they did, and soon they'd be OK for combat. Another barrier bites the dust.

Before that approval came, Yeager was allowed to fly practice runs. He was aloft with three other planes when the tower called them to fly out to cover a rescue mission sent to a downed plane. While circling their life raft in the North Sea, Chuck's magnificent vision espied an approaching Ju-88. He turned toward, it turned away, and the chase was on, ending miles away with a Ju-88 burning on the beach and German anti-aircraft fire bursting around him.

His squadron operations officer was a friend from training days, but he was hopping mad. He gave the victory and combat time credit to two other pilots in the squadron; it was as if Chuck's victory never happened. Two days later word came that Ike had rescinded the evadee policy.

After D-Day, a lot of the fighter activity slowed down for Yeager's squadron.

He had gotten in trouble early on, and was even court martialed for a minor incident. That, and his lack of a college education impeded his advancement, but finally, a board of colonels finally agreed to make Chuck a commissioned officer. He was the most junior in his squadron, but rank meant nothing in combat, and Chuck began leading the squadron into combat, primarily because he could see so much better than everyone else. A few more senior guys complained, including one assigned to Chuck's flight. He lagged behind Chuck and the other three so badly that Chuck whipped around in a tight barrel role and came in from astern, of course not seen by the senior bozo. A burst of tracer fire over his canopy did, however, get his attention. Both were called on the carpet over the incident. The bozo was transferred and Chuck was commended and began leading the entire group into combat. Chuck tolerated no crap from any rank when it came to flight excellence! And the fact that the boss would select him to lead the entire group bespoke great respect for Chuck's skill.

Leading a group with more than 20 ace pilots was a big step for a guy with two combat victories and being shot down on his record. The first mission he led was on October 12, 1944, flying escort for a B-24 group bombing targets in Holland. He assigned two squadrons to fly close support, and led the third on a "distant cover" sweep, hoping to break up defensive groups before they could approach our bombers.

Nobody but him saw the cluster of twenty-two Me-109s circling ahead, licking their chops. He said nothing, and just kept his squadron approaching head-on, up Sun. The Germans either didn't see them or they thought they were friendlies forming up. In either case, Chuck got to within a thousand yards, coming in behind their formation as they circled away. Their tail-end Charlie finally saw Chuck in firing position on his six, and in a panic swerved directly into his wingman, causing both planes to crash. [NOTE: The swerve and mid-air collisions are stated in several resources, but the [after-action report by Yeager](#) has both bailing out in panic when they were bore-sighted by his guns.] Two planes down, no shots fired, score two for Yeager. He knocked down three others in this fight, for a total on the mission of five. This was the first

time anyone on our side had scored enough planes to be an ace on a single mission. The *Stars and Stripes* headline read, "Five Kills Vindicates Ike's Decision." Yeager got the Silver Star.

The amazing Me-262 jet interceptor began making its appearance about this time. It was the first jet aircraft to get into combat, and had Hitler not messed with its development and tasking, it would have given the Allies a very tough time. Its top end speed was 100+ MPH faster than any plane in our inventory! Properly flown and led, it would have caused serious harm to Allied bombing efforts. But it was too little, too late. Just the same, victories over it were few and far between. About the only time we could knock one down was if we caught it coming in for a landing. That's exactly what Chuck did on [November 6, 1944](#). He caught an Me-262 with its pants, er wheels, down coming in for a landing and braved intense ground fire to down it, one of the few times an Me-262 was shot down by a U.S. fighter plane. Chuck got the DFC for that one.

Yeager flew his last combat mission on January 14, 1945, a two-plane sweep (joy ride) with Bud Anderson, the only other pilot who could fly and see as well as Chuck. The squadron had a field day, while Chuck and Anderson went sight-seeing. But they had done their part, and Chuck and "Andy" were what I'll call "bookends of excellence" when it came to aerial combat.

Chuck Yeager was a double ace, with ~12 kills to his credit (there is some uncertainty in the crediting). And he was heading home to Glen. They were married on February 26, 1945.

## **FORTUNATE OPPORTUNITIES AND OUTSTANDING ASSOCIATES**

About the only advantage to being a returned evadee, apart from returning, was that Chuck could choose any duty-station he wanted for his next assignment. Glen was pregnant, and they realized that having the support of the Yeager clan would be a good idea for Chuck's next assignment, especially if he could get stationed nearby. The same choice was made now that was made during training: Wright Field in Dayton. Off they went, on their separate ways. Chuck reported for duty just a few weeks before Hiroshima.

Chuck had amassed over 1100 hours of flying time and was a whiz at maintenance. Wright was about to have a zillion aircraft requiring functional and post-repair flight test. A match made in Hog Heaven!

Even though he was an assistant maintenance officer, he was working side-by-side with some of the AAF's top test pilots. Ever a fighter, Chuck wanted to see how they measured up in simulated combat. He would take up a Mustang and challenge anyone ready for mock combat, and waxed every tail that showed up. The flight test guys knew Chuck knew combat, but they never thought he could fly the precise mission profiles flight test requires. Silly boys.

Regardless of who the best pilot was, nobody flew more hours at Wright or any other base in those days than Chuck Yeager. He flew every aircraft type we had, and even flew captured enemy fighter planes, including the FW-190, the type that shot him down early in the War. He also flew the P-59 jet, technically our first jet "fighter" but so underpowered it had difficulty



getting off the ground. It moved OK once it was up, though, and of course, Chuck Yeager flew it right down Hamlin's main street, right on the deck.

A star pilot is a star pilot, but a star pilot with an excellent supporting cast is really something. Chuck Yeager was really something. Keep that in mind.

### **Bob Hoover**

The second time that Yeager flew the P-59 was at Muroc (the original name of what would become Edwards AFB). He was flying along when a P-38 suddenly and expertly dived on him, offering mock combat. Chuck pulled up that sick cow of a jet into a short-lived vertical climb with the P-38 in hot pursuit. Of course, the P-59 stalled straight away, and Chuck slid down backwards as the P-38 flew by upward, missing each other by only a few yards. Chastened, they landed to meet their fellow "combatant." Chuck was face-to-face with Bob Hoover, one of the greatest pilots ever.

[I saw one of Hoover's post-war airshows. He flew a boxy plane called a Shrike Commander (it's now in [NASM's collection on prominent display](#)). He'd bring it in and perform an intricate set of aerobatic maneuvers, then make a pass and fly the same maneuvers with one engine feathered, zoom up, and come back the other way flying the same pattern with both engines off. A steep wingover and landing, first one wheel, then the other, back and forth, rolling to a stop without brakes up to a microphone, from which he addressed the crowd. The cheering was too loud for me to hear exactly what he said, but man, what an impressive performance! You can find him on-line; search on "Bob Hoover pours tea" and enjoy the show! I've hung out with a lot of pilots over the years, and the only three that get top billing in those discussions are Chuck, Hoover, and Tony LeVier. I'll have to do items about them, too!]

Chuck and Bob would fly air shows, starting in the fall of 1945.

### **Colonel Albert G. Boyd**

Col. Boyd was the Head of Flight Test at Wright when Yeager arrived. The P-80, America's first jet fighter worthy of the name "fighter," was just coming on line. It was a tricky aircraft to fly, and had already killed Dick Bong, America's highest-scoring ace. But it was the Future.

The early P-80s required a LOT of maintenance; its engine was good for only about five hours of flight. As maintenance officer, Chuck had to check out each one at Wright. He quickly became the most experienced jet pilot in the AAF, and loved flying as fast in level flight as his Mustang could muster in a power dive.

Boyd led a detachment of P-80s out to Muroc to conduct a variety of field tests, so of course the maintenance officer had to come along. The tests were difficult, but went well, although one of the aircraft would have to go back to Wright, and the rest to the factory, for service once the testing was completed. Col. Boyd had been deeply impressed with Chuck's knowledge of the P-80 and its complicated systems, how he handled the maintenance crew and duties, and how he piloted the aircraft. He chose Chuck to fly the one P-80 back to Wright, over the

strenuous objections of the Major in charge of the Muroc test section. Boyd stuck with Chuck, and Chuck flew the P-80 back home without a hitch.

Chuck's mechanical knowledge and repair skills were a major asset for the increasingly-popular airshows he and Bob Hoover were conducting. They began incorporating the P-80 into their program, but the plane's reliability was a problem. Hoover had a engine explosion on one trip to perform, and had to make an amazing dead-stick landing in heavy fog. Sometimes Chuck would have to fly out to an air show site, fix a disabled P-80, and fly it home.

Col. Boyd was deeply impressed, and asked Chuck to headline an air show with a P-80 at Wright Field in early November, 1945. Envy city; every test pilot wanted Chuck to fail. He was just a maintenance officer, and he was going to *headline* a show, *over their own air base no less*, with the hottest plane in the sky! Chuck started the performance with JATO units on each wing and water injection into the engine for more power, climbing straight up after leaving the runway. Then he beat up the field with aerobatics.

Col. Boyd was a LOT like Chuck (and Hoover, too). He was a top pilot, and a leader of men, a real hands-on guy when it came to flight test. All three developed a deep respect for one another.

### **Jack Ridley**

Jack was one of Chuck's squadron mates from early on, and one of the few whose flying skills impressed Chuck and Anderson. But even more important, he was an outstanding aeronautical engineer, and really was expert at flight analysis. He had excelled at graduate school at Cal Tech studying aeronautics under Theodor von Karman (them's credentials!). Colonel Boyd knew Jack could "spot a flaw in a flight profile or engineering design before anyone else." He told Chuck that Jack's judgement could always be trusted. Jack Ridley would play an important role in AAF flight test at Muroc after the War, as we will see.

## **FLIGHT TEST**

A few days after the air show at Muroc, Col. Boyd, still with memories of the impressiveness of Chuck's piloting of the P-80 and remembering with amusement how Chuck and Hoover were regularly whipping the test pilots in mock combat, sent for Chuck. He asked Chuck if he'd like to become a test pilot rather than a maintenance officer. Of course, Chuck was most interested, but expressed concern that his formal education level wasn't up to snuff. Boyd dismissed those concerns. For the next six months, Chuck and Bob spent in the test pilot school set up at Wright, and practiced the precise maneuvers required for flight test. Surprise, surprise! Both students could fly the prescribed maneuvers better than their instructors! They graduated without difficulty.

Aeronautical engineering had made great strides late in the War and the decade after. One of the most pressing problems was the speed shock waves travel in the atmosphere, the speed of sound. Late model P-38s and P-47s could attain near-sonic speeds in a power dive, and when they first tried, bad things happened. The shock waves generated at extreme speeds could, and

did many times, tear a plane apart. A lot of work went into creating control surfaces that would prevent a fighter from getting into the speed danger zone, and attachments like a modified Fowler flap did just that.

Post-War jets could cruise in level flight at speeds that only fast-diving WWII fighters could attain. Engine improvements would soon be developed that could produce enough power to drive airplanes much faster than the speed of sound. Yet how to do so safely? This was a job for flight test, and one that needed solution pronto. That hot potato was handed to Colonel Boyd.

The Bell Aircraft Company had a design for an aircraft shaped like a .50 caliber bullet, a shape well-known to be stable at supersonic speeds. Called the *X-1*, it had straight wings and a four-chamber rocket engine. Bell's test pilot for the project was "Slick" Goodlin, who fit the image of the devil-may-care fighter pilot of old. The devil might not have cared, but Slick did, about money, and he was charging huge amounts of money to fly the *X-1* on its initial flights.

Enormous pressure was on Boyd to produce.

Slick's slow-and-steady approach to flight test, and the money he required to risk his life in the *X-1*, didn't sit well with Col. Boyd. He held a meeting with the test pilots at Wright in May, 1947, and asked the assembled talent if anyone would like to take on the *X-1* flight program. Chuck, Bob, and Jack Ridley were among the eight or so that raised their hands. Surprised?

Colonel Boyd interviewed the candidates in detail. Chuck Yeager was selected as lead test pilot for the *X-1*, with Bob Hoover as back up. Jack Ridley would be a key member of the engineering team, led by Dick Frost.

Many experts were opposed to the *X-1* program, thinking the aircraft, and the objective, were deathtraps. Chuck turned to Jack for advice, because Jack "was the only person on Earth who could have kept me from flying the *X-1*."

Off our heroes went to Muroc, on TDY from Wright (the TDY status was bad news, because it denied the families of those from Wright from base housing or privileges).

The subsequent events have been well-documented in a variety of places. It was a Golden Age at Muroc (soon to be re-named for test pilot Glen Edwards). The hottest planes and there; that and Pancho Barnes and her Happy Bottom Riding Club made this the pinnacle of test piloting in the late 1940s! A number of successful sub-sonic flights of the *X-1* were made and there were a few scares along the way, as the flight program built up to the point where they were ready go for supersonic speed.

After an intense period of flying, it was time for a break. Chuck had made eight powered *X-1* flights since August 29. He wanted to take Glen off base for dinner, but she wasn't feeling well that Friday night (October 9). Chuck figured the next flight, where they would go for supersonic speed, was still a week or more away, so on Sunday, when Glen was feeling better, they went over to Pancho's place instead of taking a long drive to Auburn, the nearest town of note. After dinner, Chuck suggested they take a nighttime horse ride and Glen, an avid rider, was glad to accept. As they came galloping back, the lack of moonlight concealed the fact that the corral

gate was closed, and Chuck ran directly into it and was thrown, breaking a few ribs and getting generally banged up.

The next flight was slated for Tuesday, October 14, sooner than Chuck was expecting. He confided to Jack Ridley what had happened and how hurt he was, and Jack helped him figure out how to use part of an old broomstick to close the X-1's hatch before getting dropped that morning.

The rest is history. Chuck made it into the aircraft, made the flight, and became the first person to "break the Sound Barrier." The X-1 and the planes that followed it made numerous flights soon thereafter, but Chuck's trip in the X-1 was the first (and of course, he had "Glamorous Glennis" painted prominently across its nose).

Colonel Boyd's confidence had been completely and spectacularly vindicated!

Chuck went on to have many other adventures, including flying with Jackie Cochran and almost dying in a crash of an F-104 Starfighter (10 December 1963), but he'll always be remembered as having the Right Stuff at the right time to break the Barrier!

Ask a random person on the street today if they could name two pilots, and I'll bet many can't, but those that can will likely say "Chuck Yeager and [Captain Sully!](#)"

## SUMMARY

Chuck Yeager received many accolades and awards, as you might imagine from his illustrious career. Notable among them are: the Bronze Star (for saving the fellow evadee in the Pyrenees), the Silver Star (for the "Ace in a Day"), the DFC (one for his Me-262 kill and one for breaking the Sound Barrier), the Purple Heart, and the Presidential Medal of Freedom. Charleston, West Virginia's airport is named for him.

He deservedly won a passel of professional awards, too, in addition to the above accolades. He won the very prestigious Collier and McKay Trophies in 1948, for his breaking the sound barrier, and the equally-prestigious Harmon International Trophy in 1954.

[Smithsonian Magazine](#) ranked him as the 5<sup>th</sup> greatest pilots of all time in 2003, after Jimmy Doolittle ([here](#)), Noel Wien (famous Alaskan bush pilot), Bob Hoover, and Charles Lindbergh. Scott Crossfield ([here](#)), Erich Hartmann (352 aerial victories), Tony LeVier, Jean Mermoz, and Jacqueline Auriol rounded out the list.

Chuck and Glen had four children: Susan, Don, Mickey, and Sharon. Glamorous Glennis passed away in 1990, and Mickey died in 2011. General Charles Yeager passed away on December 7, 2020, at age 97.

## REFERENCES

### BOOKS

If you want to understand Chuck Yeager and the magnitude of his accomplishments, you need to read his autobiography. Normally, I shy away from “as told to” books, but his co-author was Leo Janos, a prize-winning writer for the *New York Times* and a *Time Magazine* correspondent. They incorporated input from Glennis, Col. Boyd, Bud Anderson, and other principals in Chuck’s life, for an outstanding read.

Yeager, Chuck and Leo Janos, 1985, *Yeager*, New York: Bantam Books, ISBN 0-553-05093-1

If you want to get a good feel for Yeager, the flight test at Edwards, and the manned Space Program, there is no better place (IMHO) than Tom Wolfe’s amazing book:

Wolfe, Tom, 1979, *The Right Stuff*, ISBN 0-374-25032-4 (ISBN 978-0-553-25674-1) The book and movie focused a lot on Project Mercury in the early 1960s. Yeager and other top test pilots ridiculed the astronauts, who admittedly did little to actually “fly” their capsules, as “Spam in the can” or “HAM’s little brother.” But the test pilots did not fully appreciate the public need for heroic figures to fight the Cold War of symbolism. Tom Wolfe fixed that situation for Yeager, but few would recognize anyone else from flight test at Edwards in the 1950s.

A movie version of *The Right Stuff* came out in 1983, starring Sam Shepard as Chuck, see: <https://www.imdb.com/title/tt0086197>.

Anderson, Clarence E. (“Bud”), 1990, *To Fly and to Fight* (with a Forward by Chuck Yeager), New York: Bantam Books, ISBN 0-553-29240-4

Yeager, Chuck, Bob Cardenas, Bob Hoover, Jack Russell, and James Young, 1997, *The Quest for Mach One: A First-Person Account of Breaking the Sound Barrier* New York: Penguin Studio, ISBN 0-670-87460-4

## **OTHER SOURCES**

Previous Items of the Week:

The Amazing “Pancho” Barnes (including the Happy Bottom Riding Club), [here](#).

Animals and Flight Test: [here](#).

June 8: Anniversary Day in Flight Test: [here](#)

Chuck Yeager’s Official Website: [here](#).

“Ace in a Day” with Action Report: [here](#).

International Space Hall of Fame (Alamogordo): [here](#).

International Air & Space Hall of Fame (San Diego): [here](#).

Chuck’s comrade Bud Anderson is in there, too: [here](#).

The 456<sup>th</sup> Fighter Interceptor Squadron: [here](#).

Chuck Yeager’s F-104 Crash: [here](#).

“Yeager’s Encore” in *Air Force Magazine*: [here](#).

AVweb: [here](#).

Wikipedia: [https://en.wikipedia.org/wiki/Chuck\\_Yeager](https://en.wikipedia.org/wiki/Chuck_Yeager)

There are YouTube videos out there of Chuck's crash in the Starfighter, and his appearance on David Letterman's show!

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