

NSM

Historical Journal

Winter 2018



National Soaring Museum Historical Journal

Winter 2018

Table of Contents

pages 3-7 Cloyd Artman

pages 8-18 Norman Bruce

Front Cover:

Cloyd Artman launching from Steamboat Rock near Coulee Dam

Back Cover:

Norman Bruce flies his primary glider over Calgary in 1934

Cloyd L. Artman 1913-1937 - Early Soaring Pioneer

Much has been written about Cloyd Artman, and rightfully so, because he has become a soaring legend in early endurance and altitude flights in the primary glider. Thanks to the research of Barry George of the Okanogan County Historical Society, we present here, not just another re-telling of Cloyd Artman's story, but narratives of his early flight experiences told in his own words as extracted from local Washington State newspaper coverage.

The Oroville Gazette - July 29, 1932 (Friday)

GLIDES FROM MOUNTAIN TOP

Cloyd Artman Makes A Successful Landing on Baseball Field

Wednesday morning a little after eight o'clock, Oroville residents were seen gazing toward Ellemeham Mountain to the southwest of town as word had gone around that Cloyd Artman was to take off from the high slope of the mountain in his glider and try for a landing in the baseball field at the north side of town. Cloyd, who graduated from the Oroville high school last spring, together with a number of his friends, have been experimenting with gliders for the past year or more. This flight was to be his premier attempt, and not a little anxiety was felt as to his ability to perform the stunt.

Sunday, with the aid of his sister, Audrey, Kenneth Collins, and Billy Steele, Cloyd took the glider up the mountain to the south side of the ridge which faces the valley. After arriving at the place where he expected to take off, on the Elmer Stucker place just north of Gordon Jackson's, several people living nearby turned out to help him get off the ground. A stiff breeze was blowing steadily so it was decided to try and fly the glider over the top of the mountain by making use of the wind going up the slope. The glider was then taken off with a saddle horse furnished by Mr. Jackson with several fellows helping the horse. It took off and was gaining altitude rapidly when the rope was released below without Cloyd's knowledge. The glider stalled and mushed down a hundred feet before he knew what was wrong. He nosed down to flying speed and formed a right turn landing with considerable force among the sage brush, breaking the rudder bar, rudder horn and one latching wire. The other three landing wires were stretched so much that they had to be undone at one end and taken up. After making these repairs a second attempt was made which went a little better than the first. A car was used this time, with Billy Steele driving it. The glider climbed but the tow line slipped off the hook before it had climbed very much. Cloyd noticed it drop off and nosed down in time to prevent a stall, then made a right turn but was forced to land going downwind and up the slope giving him a pretty good speed. He slid quite a ways through the sage brush with enough speed to break another landing wire.



Horse hauls Artman glider up Ellemeham Mountain

After fixing this, it was decided to take the glider to the top of the mountain without any more attempts at soaring. This is where the work began. The glider was taken as far as possible up the mountain with the car and trailer and then carried over almost a mile. This was extremely hard going as the machine had to be kept headed into the wind and at the same time carried up the steep slopes over sage brush and rocks. Fred Gronlund and Elmer Woods also helped those already mentioned in carrying the glider to the mountain top. Credit for this Wednesday flight goes mostly to this crew as they did most of the hard work. The top was not reached until after five o'clock Sunday evening. A steady gale was blowing on top, so the glider was tied down and left until Wednesday.

Wednesday morning at 6:30 a.m., Cloyd, accompanied by Marvin Sanger and Melvin Fisher, hiked up the face of the mountain toward town while Bill Steele and Sherman Buckingham went up the road around in Cloyd's car. They reached the top at about eight o'clock and brought the glider to the takeoff point. A couple of trees and brush had to be cut away to clear the runway for the takeoff a little after nine.

Two fifty-foot strands of rope were stretched from the glider in a 'V' and two men at the end of each rope. When the right moment came, Artman said, "let her go" and the four started running down the slope.

The glider took off in a twenty-foot space and let the ground crew go sprawling a few feet down the slope.

The takeoff was perfect and the glider was brought up into a flat glide. It gained altitude until several hundred feet from the slope. About this time Cloyd looked back and waved at the crew on the mountain. He was soon above the valley and floating evenly along without even a sound. Deciding to have a little music he pulled out his harmonica and started playing the strains of the "Utah Trail".

When he reached town, Cloyd says he saw a group in front of Mitchell's Garage. He waved and made a short dive toward them. A small turn to the left was made out over the houses in the northwest side of town. Another bit of music was played which those watching through glasses could see but not hear. Putting the harmonica away, the young pilot devoted his attention to hitting the landing field. He saw that he had a little too much altitude so he dove to the ground at the north end of the field in order to lose altitude quickly. He leveled off a few feet above the ground and held it there until landing speed was reached. The landing was quite fast due to the fact that he landed downwind, but it was otherwise perfect as neither the glider or pilot were injured in the least. Immediately upon hitting the field, cars from all directions began flocking to the field to congratulate the young man on his successful flight.

His time in the air from the time of the takeoff was five and one half minutes. The takeoff point was at about 1500 feet altitude and the distance traveled between three and four miles.

The Oroville Gazette - August 19, 1932 (Friday)

GLIDER MAKES SECOND TRIP

In Air Eight Minutes On Flight From
Mountain West of Town

Taking off at 6:43 pm Monday, Cloyd Artman made a perfect flight in his home made glider and, after starting at an elevation of about 1500 feet in about seven minutes, came to an easy landing on the baseball diamond north of Oroville. The starting point on Ellemeham Mountain was the same one from which he took off several weeks ago. Wind conditions were very good, and with the nonchalance of a veteran pilot, the young man gave instructions to his ground towing crew of four, who had the job of getting him off the ground. A short tow into the wind and the glider left the ground, quickly gaining elevation until about 75 feet above the starting crew. A sharp right turn was attempted but almost ended in disaster, a drop being prevented by a fast nose-dive which added speed to the machine and enabled Artman to glide out over the Similkameen River, where the course was changed to head cross-wind. Up currents were strong enough to maintain elevation until after the river was crossed, and the glider flew as evenly as a power ship.

Telling about the flight afterwards Artman said:

"After I got straightened out on my course, I played a few notes on my bugle to let folks know I was OK and then controlled the ship with my knees while I took four snapshots with my camera. When I got nearer to town I began to bugle some more, but found that the mouthpiece had dropped off, so further music was out. I ran into a stronger wind which I was afraid would make it impossible for me to get to the ball diamond and I began to look for nice vacant lots and to wonder whose front porch I would land on; but I lost altitude to about 1,300 feet and when almost directly over the Civic League building I turned east, following the railroad tracks until I was downwind from the ball grounds for which I headed. As I neared the ground I got into slower wind which enabled me to get to the field without trouble."

The landing was perfect and the young man climbed out of his tiny craft to receive the congratulations of the crowd which arrived by car and afoot almost as quickly as he did. His time in the air was clocked at seven minutes and twenty seconds.

What Artman does not talk much about is the hardship he met, and obstacles which he had to overcome in the acquiring of the material and the construction of his glider. With no previous training, he built and learned to fly it himself.

Cloyd announced this week that he would put on a program of glider flying next Sunday afternoon. He plans to make towed flights of six or seven hundred feet altitude and will take his sister Audrey up for a passenger.

He will also demonstrate several stalls and a nose-dive, he says, and he invites all to bring their Kodaks, promising that the program will be followed regardless of any weather conditions, except, rain.

The flight just completed is the only one from which Artman has realized any financial gain. This flight was sponsored by the following firms and individuals:

Prince's Store, Quality Market, L. E. Elsie, H. L. Price, R. Harrington, Ike Ramsey, R. B. Smith, F. H. Youngblood, W. B. Sexson, G. S. Adam, G. M. Scott, M. K. Thomson, T. B. Atherton, E. H. Curtis, Charles A. Bodie, D. Studley, Mitchell Motors, Clyde Holden, B. B. Powell, Oroville Bakery, A. S. LeMay, F. V. Covert and Shell Oil Company.

Arrangements have been made by the Fair Association to have the glider on exhibition at the Okanogan County and International Fair next month.

The Oroville Gazette - September 9, 1932 (Friday)

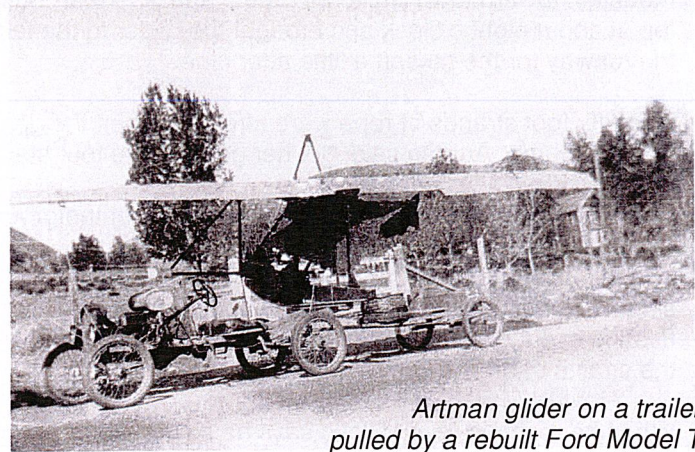
GLIDER FLIGHTS ENTERTAIN VISITORS DURING THE FAIR

One of the features of the Okanogan County and International Fair was the flights made by Cloyd Artman, local boy aviator, in his homemade glider.

The most important flight was made Sunday just before the parade, when he took off from a promontory of Ellemeham Mountain, soared up from the starting field, made a complete circle around the point of rock and then sailed over the Similkameen valley, to come down on a small field lying north of the Joe Stone property.

To lose altitude and increase flying speed, Artman came down in a steep dive to a few feet above Dr. House's corn field. He crossed this at a high rate of speed and to onlookers it appeared he would fly into the fence. When a short distance from it, however, the little plane made a graceful leap and cleared the fence with room to spare, coming to an easy landing in the field beyond.

Later in the day, and during the rest of the fair, short hops were made in a field north of the Curtis home, within sight of the grandstand.



Artman glider on a trailer pulled by a rebuilt Ford Model T



The Oroville Gazette - November 25, 1932 (Friday)

GLIDER FLIGHT MADE TUESDAY

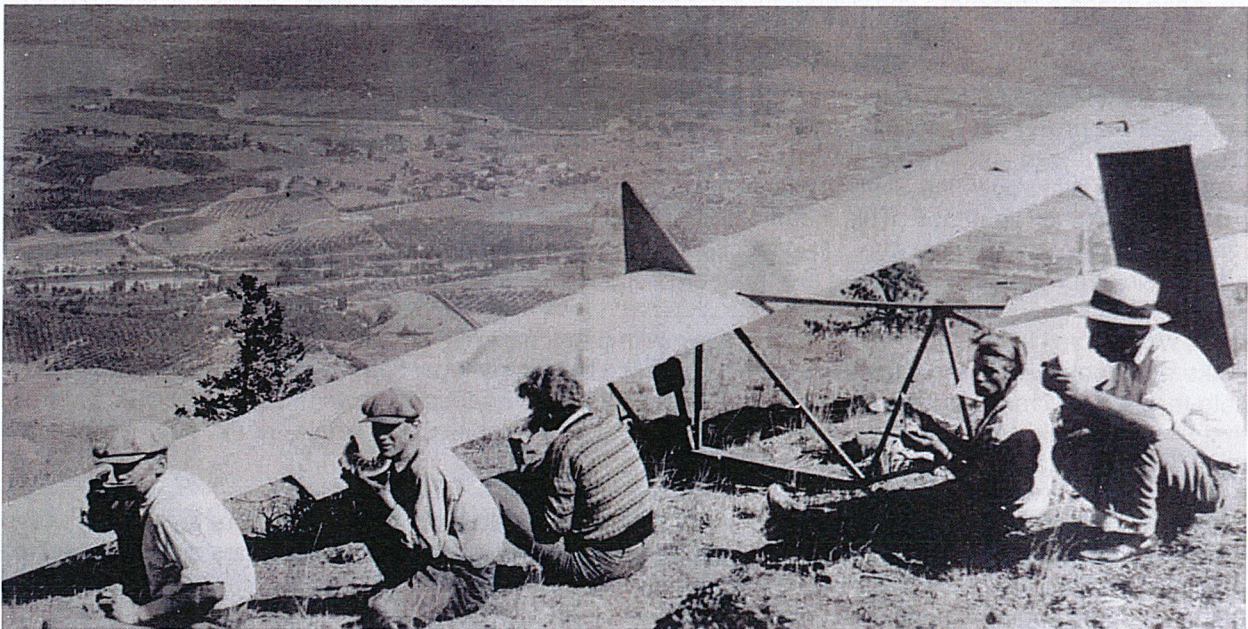
Last Stunt This Season;
Artman to Study Aviation Work

Making his third successful flight from the top of Ellemeham Mountain during the past summer and fall, Cloyd Artman made a beautiful landing Tuesday in a field belonging to Dr. House on the southwest side of town. Cloyd is one of Oroville's young aviation enthusiasts and graduated from the high school here about a year ago. He has decided to up aviation as his life work and is working towards that end expecting to take up a thorough course in the work from the ground up.

During the past summer he has been making many successful flights with his glider which he constructed himself and has also been teaching his sister Audrey to fly it. Sunday together with Audrey and several of his young friends Cloyd spent the day making short flights from Scott's field northeast of town. In all they made twelve flights all of which were completed successfully. Audrey made the first four flights without any trouble of any kind rising to a height of 200 feet in the fourth attempt and making perfect landings in all four. Cloyd took the controls for the fifth and sixth flights reaching an altitude of 600 feet. Audrey then tried five more flights and Cloyd took the last or twelfth flight.

The glider was sent into the air by the aid of a long cable attached to a car and as it reached altitudes from 125 to 200 feet was released from the cable by a device on the nose of the machine which could be operated at the will of the pilot. Cloyd says this is his last trip with the glider this season as the weather is getting bad for further flights of this kind. He is now corresponding with the object of attending school and Congressman Samuel H. Hill of this district has expressed his interest in the young fellow. The people of Oroville have also often expressed their interest in seeing him have a chance to go as far as he can in this work.

The point on Ellemeham Mountain from which he made his takeoff Tuesday and also on two previous flights is approximately 1,500 feet high. It takes nerve and a cool head to pilot an engineless plane out over the valley to a safe landing in the fields below.



Five men, including Cloyd Artman (left) and 1930s glider experimenter, Paul Loudon (right), eating watermelon beside a glider on a hill overlooking the valley near Oroville.

The Oroville Gazette - April 21, 1933 (Friday)

GLIDER PILOT BREAKS RECORD

Cloyd Artman Stays in Air Two Hours Wednesday Evening

Making what is thought to be a record breaking flight for a training glider, Cloyd Artman of Oroville stayed in the air here for almost two hours Wednesday evening. Cloyd has been making numerous flights around Oroville for the past couple years in a glider which he constructed himself. He has flown from the top of Ellemeham Mountain west of town to the ball diamond in town on several occasions without mishap. Wednesday evening from the same place on the mountain from which he had made other flights he started another trip with the idea of doing altitude soaring before landing in town. Wind conditions were just right and he was able to stay up long enough to give everyone in town a thrill wondering why he did not come down before it got to dark to land.

His own story of the flight as told to the Gazette is as follows:

"The wind velocity at the point of takeoff was about twenty miles an hour and when the signal to was given to take off; the glider rose easily off the ground in a ten foot space. I turned left along the hill and slowed the glider down as slow as I could safely and gained about fifty feet above the takeoff point. I circled slowly back and forth for several minutes and gained altitude very slowly at first. Then I found that I could head straight into the wind without moving and at the same time would rise slowly.

I couldn't rise any higher than 600 feet above the takeoff point from this position so I stayed there until sunset or about 6:45 PM. I hollered down to my crew to go to town and they left. After a bit I decided to see if I could work around the bigger point of Ellemeham which loomed up west of me. It took three attempts to make it and after I got better acquainted with the different currents of air, decided to see if I could jump over the next range and land near the customs house. When I reached the power plant I saw I couldn't make it so decided to take a little jaunt up to Nighthawk. I shoved the nose down until my airspeed reached about sixty and headed for Nighthawk. I was flying at an altitude of 2,200 feet and it was plenty cool. In fact I was shivering at a pretty good rate at this time. To make things a little more interesting my leg started to cramp so I straightened my legs out on the rudder bar and working the rudder with my left hand until the cramp passed.

I sailed up until about 2,500 feet above the Oroville elevation and went to within a half a mile of Nighthawk. When I reached the power plant again I had enough altitude to jump over the next range but it was so dark that I didn't feel safe in trying to land back of the custom house. I headed back across the range and lost altitude heavily. I was only 500 feet above the Similkameen when I passed over it and the air was every bit as rough as the road ever was going to Nighthawk. This meant I had to keep my airspeed up to 60 or 65 and had to fly close to the mountain. I managed to gain about 100 feet by the time I reached the point on Ellemeham next to town. I managed to hold my elevation in circling around there but could only gain altitude a few feet at a time.

I was worried as I knew I couldn't make it to town with that much altitude and I had little hope of getting enough to make it. About this time my leg started cramping again but luckily it passed off. After about fifteen minutes of delicate maneuvers I managed to gain 1,500 feet of elevation and headed for town as fast as I could. It was so dark that I knew I would crash if I landed anywhere except at the baseball park. I knew I could steer into there by the town lights and had a hunch that a few cars would light up the field.

When I reached town I could see only one car light at the ball field and I wasn't very sure of that so I whistled until almost out of wind and then hollered down for some light at the field. I saw a dozen cars or so drive up to the field and they set their lights in a semi-circle giving me a perfect light to land by. The only thing that troubled me was the trees at the edge of the field as I couldn't see them but I came in with plenty of altitude and killed altitude by making short choppy turns. I made it in alright and made a smooth landing in the center of the ball park. The timekeepers then informed me that I lacked five minutes of being up two hours.

I wish to thank the crew that did the hard work of carrying the glider up the hill. The crew was: Troy Burnham, Wesley Rogers, Julia Grinz, Kenneth Collins, Dal Windsor, Ralph Zosel and Donald Borst.

This is so far as I have been able to find out, the setting of two records for this type of glider, a training glider. The glider was flown over a course of approximately 34 miles, this being a record for distance also.

The Oroville Gazette - June 9, 1933 (Friday)

ARTMAN INJURED IN GLIDER ACCIDENT

Cloyd Artman was considerably injured Sunday evening when his glider crashed while taking off in a soaring flight from Ellemeham Mt. He had recently fixed the machine up and tried it out several times before going up on the mountain. Soon after leaving the ground the machine was caught by a heavy gust and cartwheeled against the mountain throwing Artman out before it hit. He was bruised severely and had a bad cut in his head being knocked unconscious for a time. He was taken to his home and given immediate medical attention and is still reported confined to his bed.

The Oroville Gazette - June 23, 1933 (Friday)

ARTMAN LOSES TOOLS FROM GLIDER HANGER

According to Cloyd Artman, someone stole a bunch of tools from his glider hanger the night of June 2, just before he smashed it up on June 4. Cloyd says he was working on his machine up to 10:30 p.m. that night and was back at 8:30 a.m. the following morning. He had placed the tools in a tray and covered them up and whoever took them simply lifted the tray and walked out with it. The tools taken included a small block plane, small vice, combination square, emery wheel, soldering outfit and torch, assortment of bolts, chisel, hammer, hacksaw, coping saw, three steel drills, brace and a three cell flashlight. Cloyd who was hurt in the crackup of his glider is now out and around and says he would appreciate the return of his tools or information leading to their recovery.

The Oroville Gazette - August 25, 1933 (Friday)

ARTMAN BREAKS OWN RECORD

Oroville Youth Stays Up In Glider Two Hours 55 Minutes

Cloyd Artman, Oroville's young glider pilot, broke his previous record of one hour and fifty-five minutes by exactly one hour Saturday evening when he managed to stay in the air for two hours and fifty-five minutes. He tells the following story in regard to his flying which took place mostly after dark:

"I took off from Mt. Hull at exactly 7:17 p.m. and turned left over a big gulley which shot me upwards for nearly 75 feet. From there I followed downwind along the mountain until even with town without gaining any altitude. The air was the roughest I had ever been in. I was pounded around like a rubber ball and was thrown into a nose dive two or three times. When I reached a position just back of East Oroville orchard tracts the air was quite a bit smoother but not smooth enough to allow me to cut my speed very low so I used my system of gaining altitude by handius, I would pull up sharply and gain thirty or forty feet and nose down to gain speed again. This way I could gain altitude without having my speed cut for any length of time.

It didn't take long to gain 1,500 feet above Oroville. I reached my ceiling at about 3000 feet then turned part of my attention to other things. Here are some of the notes I took down at this time:

I am now above Mt. Hull and have been up about twenty minutes. (I didn't at that time, know the time of my takeoff). I'm about 2,000 ft. above Oroville and about half a mile or a mile from town. Boy the scenery is sure beautiful. It's almost dark." It was very difficult to write this as I had to work the stick with my knees and it was too dark to write anymore by the time I got around to it again.

I had instructed my crew to put my car on a certain field at night but as night drew near they didn't show up as I directed. I would have to look for a different field. I saw a very large grain field about a mile south of town and I took special notice of its position, as I knew I might have to land there. I could reach it with very little loss of altitude as it was downwind from the route I was flying.

After dark I took my flashlight and signaled every little bit. At first I repeated "lights" until I saw plenty of car lights at the ball park and then I signaled "turn lights off" shortly afterwards I signaled "Tell Mom Hello" and then sent "send some cars to the field one mile south of town". After that I only flashed OK to let everyone know I was still there. All they understood however was my OK.

I found I could keep warm by simply tensing all my muscles for short periods of time so the cold didn't bother me. The only thing that bothered was that my jacket was lacking enough buttons that I had to hold it shut with one hand. I had a roll of parcel twine along with which I was if possible going to let down to take up hot supplies with so I untied the roll and was planning to tie a piece of this around me to hold my jacket shut. It fell out of my legs and I grabbed for it catching on the loose end. The ball unrolled and I could feel the jerks as it streamed out. Rather than loose it I started winding it around the control stick and it took so much of my attention that I drifted back over the brow of the hill quite a ways before I noticed it. The wind was so strong that I only cleared the brow of the hill with a hundred feet or so. I finished winding up the cord but watched my position closer."

The Oroville Gazette - April 6, 1934 (Friday)

GLIDER PILOTS PROVIDE THRILLS

Artman Has Spill At End Of Record Making Flight

Oroville had the thrill of watching two glider pilots in the air at one time Monday. Cloyd Artman, local pilot, and Volmar Jensen of Seattle, had their planes up for several hours.

Artman took off with his glider at 9:20 a.m. and stayed up for five hours. He went up first to test out the air currents for Jensen who had never been up for a sustained flight of any duration. On first going up he said he hit a wonderful air current which carried him to an altitude of 5,150 feet, which is a world record for his class of glider. Coming down he made three complete circles as a signal to Jensen that everything was fine for flying. Jensen took off at 11:20 a.m. and stayed up for three hours. His glider which was a sailplane model maneuvered so much easier than Artman's that he was able to maintain an altitude of 1,000 feet higher on the same air currents. His lack of knowledge of the air here, however was such that he occasionally was forced to drop below him and make a circle to get back up.

Jensen who had only had 12 minutes in the air at one time before this flight was highly delighted with his adventure. The young men took several pictures of each other while in the air and Jensen tells that at one time a large eagle followed Artman for a long distance and he being above and behind it had a wonderful view of the bird.

Artman says at the top of his altitude breaking flight he surely got a wonderful view of all the surrounding mountains and valleys. A lull in the wind forced the two to come down in the middle of the afternoon. Jensen lighted in the field across the river from the Zosel mill while Artman had slight mishap while landing that partially wrecked his glider and gave him a severe bump. As he was flying over a small knoll close to the ground he hit a down current of air which nosed him into the earth with considerable force.

Jensen left Tuesday, morning for his home at Seattle accompanied by Hank Richmond, a young U of W friend who came here with him. He has stored his glider here and expects to return in the near future.

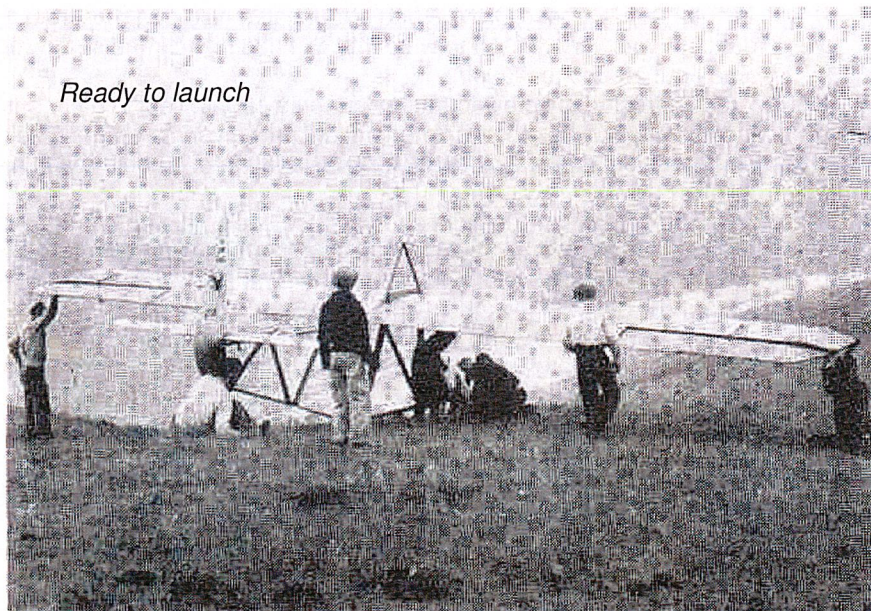
The Oroville Gazette - April 20, 1934 (Friday)

GETS OROVILLE GLIDER FAME

Oroville Chamber to Cooperate

G. M. Scott made a short talk on the publicity given Oroville by Cloyd Artman local glider pilot in hanging up a record and also spoke of the possibility of Oroville becoming a national glider meeting point due to the exceptional air currents which make conditions ideal for glider flying here. He passed around a picture published in the Sunday Post-Intelligencer of Seattle showing Volmer Jensen, a Seattle pilot, who recently flew for three hours in his glider at Oroville and one of Artman who at the same time stayed up for five hours.

Mr. Scott said that many were contributing from 25 cents up to five dollars toward helping Artman repair his glider which he damaged in his last flight in landing, or if enough could be secured to buy him a new sail or soaring plane. Many there expressed willingness to contribute and a motion made that a committee be appointed to help Artman with securing necessary funds to build or secure a safe glider. G. M. Scott was named chairman of the committee. No further business the meeting adjourned.



The Wenatchee Daily World - June 21, 1934 (Friday)

FLYING ARTMANS RECONSTRUCTING GLIDER FOR ATTEMPTS ON WORLD'S SOARING RECORD

Cloyd And Audrey Do All Work On Homemade Glider

When Audrey Artman, 19-year-old Oroville girl, recently established an unofficial world's glider record for women by staying in the air two hours and five minutes her skill with needle and jig-saw played as an important part in the record as flying ability. Audrey has taken an active part in building the glider with her brother, Cloyd, and in repairing it after minor mishaps. She specializes in sewing on the cloth for the wings and to doping the material. She also assisted in making the ribs and other delicate parts of the plane.

-Has Made 43 Flights-

Audrey has made 43 flights for a total flying time of three and one-half hours. Her biggest thrill, of course, was when she broke the woman's record for sustained flight and altitude. To break the latter she soared more than 1,200 feet above her take-off point and more than 3,000 feet above the valley floor at Oroville.

"It was a lot of fun, but I don't think I'm interested in making any longer flights until the cockpit is enclosed - I nearly froze." Audrey said as she landed at the end of her record-breaking flight.

Cloyd, who astonished the flying world a few weeks ago by remaining in the air for more than eight hours in his glider, is as proud of his sister's accomplishments as he is modest about his own achievements. His record is remarkable in that it was made in a primary type glider while other maintained flight records have been made in more advanced types.



Audrey Artman

-Will Install Radios-

He is now building a new sailplane -type tail assembly for his glider. The cockpit will be enclosed, making an advanced primary type of it. In cooperation with radio amateurs at Oroville the plane is also to be equipped with a short-wave sending and receiving set. It will be installed as soon as Cloyd gets his operator's license. The glider used for the various record flights has a span of 33 feet, and the wing width is five feet, three inches. It weighs 175 pounds empty and is of the training glider type. He began construction on it in 1930, teaching himself to fly it, and later instructing his sister.

Cloyd is the main provider for his family, his father being dead. Both he and Audrey plan to attend college next Fall. He has already enrolled at Washington State College where he has promise of a janitor work. He plans to attend college for two years, then join the army air service for the 18-months' training course. Eventually he plans to complete his college work.

The Oroville Gazette - July 13, 1934 (Friday)

STAYS UP IN SKY 13 HOURS

Artman Makes New Record For Glider
Flight Over Mt. Hull

Cloyd Artman flying his remodeled glider broke all his former records of endurance flights, Saturday by remaining aloft over Mt. Hull just east of Oroville for 13 ½ hours. It is believed that record beats even the world record for the type of glider he is using. Cloyd left his takeoff up on the side of Mt. Hull between 9:30 and 10:00 o'clock Saturday morning. All during the day and way into the night he kept a fairly steady position over the mountain and in full view of the people of town. Along toward dusk people could be seen staring eastward to try to keep track of him as he appeared as a tiny speck in the sky. After dark, watchers kept track of him by an occasional flash of a flashlight with which he signaled to his ground crew.

To pass away the time while in the air Artman wrote a letter to another pilot friend. Don Stevens, Ocean Park, California, a more complete idea of his flight follows:

"The wind varies from five to 15 m.p.h. Let me down to 1,100 feet about two hours ago. Took off at 9:45 a.m. The sky says that I'm going to have enough wind to break all U. S. records at least.

It has been nip and tuck more or less most of the time, 3,100 feet was my highest. I'm around 2,500 feet now and it is 4:22 p.m. I flew out over the valley once and lost to 1,100 but I raised 500 feet in the first minutes after I returned to the hills. How's that?

I just finished my second candy bar. Got one left. Guess I better save it for breakfast tomorrow. I wish I had the tub on now, I'll bet I could stay up all night and all day tomorrow. I'll try it anyway. I'm fairly comfortable now, but it will be plenty cool after dark.

"Well you'd better come up.

"Here I am at eight hours, 15 minutes and the wind is getting better whoops.

"Nine and one half hours and all is well---7:15 p.m.

"Ten hours guess that covers all U. S. records.

"Eleven hours and it's dark almost."

Cloyd came down about 11:30 p.m., landing in the dark in a small field at the foot of Mt. Hull.

The Oroville Gazette - September 21, 1934 (Friday)

ARTMAN LEAVES FOR WSC WITH GLIDER

Cloyd, under glider wing and Audrey, center right

EAST WENATCHEE—Cloyd Artman left Tuesday morning for the State College after visiting at the home of Mr. and Mrs. A. D. Richardson. Cloyd has taken his glider with him and flew in the afternoon at Almira. He expects to earn his way through school by means of flying. All the high schools in-route to Pullman are making arrangements for flights. Miss Audrey Artman is making her home in Wenatchee for the winter.



September 29, 1934 (Saturday)

DAM SITE FOLKS DUE FOR THRILL

Artman to Seek New Glider Record
Today - New Machinery on Job

GRAND COULEE DAM SITE - Sept. 29 - Cloyd Artman, holder of unofficial endurance and altitude records for gliders, will thrill Grand Coulee spectators Sunday by a spectacular flight off the coulee wall. If conditions are right he will attempt to attain a new distance record, flying from his take off point down the coulee and back. His 19-year-old sister, Audrey, holder of woman's altitude and endurance records, will also be here and will make exhibition flights.

October 01, 1934 (Monday)

GLIDER PILOTS TEST MACHINE

COULEE DAM - Oct. 1 - (Special) - In a frail, home-made craft costing but \$68 to build, the flying Artman family from Oroville, Cloyd, 21, and his pretty blonde sister, Audrey, 19, sent shivers up and down the spines of Grand Coulee citizens yesterday in the area's first glider exhibition.

Taking off from a sheer 800-foot precipice, the south wall of the Grand Coulee, Audrey, in the 175-pound ship, made of old boxes, crates, tin cans and what not caused a considerable number of gasps when the glider slid slowly off the rocky point and dropped 100 feet before straightening out.

No attempt was made by the Artmans to better any of the unofficial records they hold, Cloyd holds the record for altitude 3,550 feet and sustained flight of 13 1/2 hours. Audrey, both altitude and sustained flight records for woman.

The Oroville Gazette - July 19, 1935 (Friday)

ARTMAN BREAKS FORMER RECORD

Soars To 5,700 Feet With Newly-Constructed Primary Glider

Cloyd Artman is again thrilling the folks of Oroville with his glider flights high in the heavens above Mt. Hull which seems to be his favorite place to try out for endurance and altitude records. Of the numerous places he has flown Cloyd, who makes his home here seems to think Oroville is the best glider spot in the northwest.

Cloyd is a graduate from the Oroville schools and during his high school days a few years ago he constructed a homemade glider with which he electrified the people of this community on more than one occasion.

How well the people of Oroville remember the first time he attempted to fly from the top of Mt. Ellemeham west of town. He took off without hitch and glided out across the valley passing over town and landing in the ball park at the north city limits. Later attempts were more disastrous, one try landing him in bed for several days. Perseverance won however, and he is now one of the outstanding glider pilots in this part of the state.

Cloyd is now a student of aeronautics at Washington State College. The glider he is now flying is his second one, the first being demolished last April while it was being hauled along the road, a puff of wind catching it in front of a passing car. With the financial help of Oroville business men he started construction of a new ship which he completed a few days ago. The new glider is entirely of its own design and is classed as a primary training glider. It weighs 180 pounds and has a wing spread of 36 feet. He has christened it the "Lone Eagle No. 2".

In a try over Mt. Hull Tuesday Cloyd put his new ship up to an altitude of 5,700 feet, or 4,300 feet above his takeoff on the side of Mt. Hull. He was up for three hours and while in the air made a couple of complete loop the loops. His record in Tuesday flight broke his own previous world record for a primary glider by around 400 feet. He was in the air again Wednesday evening for a couple hours.

By putting on exhibition flights this summer, Cloyd hopes to make enough money to reimburse his backers for the cost of his glider and lay aside enough surplus to enable him to return to college this fall where he has arranged to teach a course in glider construction during the next term.

Okanogan Independent - July 20, 1935 (Saturday)

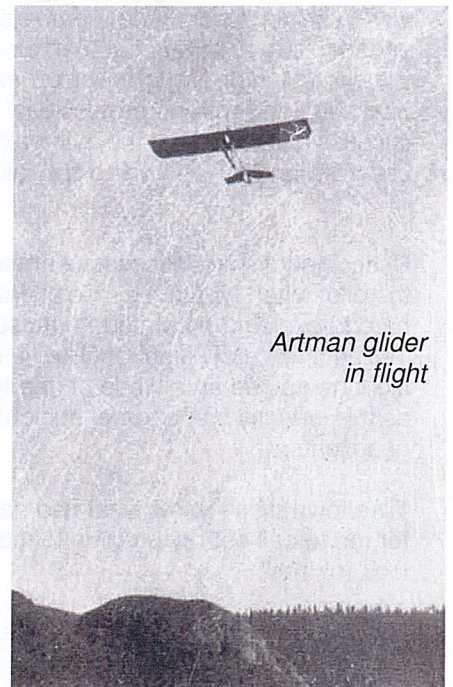
ARTMAN SETS NEW GLIDER RECORD

Boosts New Machine 4,300 Feet Above Takeoff on Mt. Hull

A large picture of Cloyd Artman, popular young Oroville glider pilot, appeared in the Wednesday edition of the Seattle Post-Intelligencer newspaper together with the following story about his latest exploit above Oroville:

A new glider altitude record of 5,700 feet, or 4,300 feet above his takeoff, has been set in Oroville by Cloyd L. Artman in a glider of his own design and make. Taking off from Mt. Hull with a favorable wind, Artman kept his ship afloat for three hours and climbed to the record-breaking altitude of almost 6,000 feet.

Artman is a student of aeronautics at Washington State College, and this is the second glider he has built. His first was demolished last April. Undaunted, he set about the task of building a new one. With the financial aid of Oroville business men he completed his new ship a few days ago. The new glider is classed as a primary training glider, and is entirely his own design. It weighs 180 pounds and has a wingspread of thirty-six feet. He has christened it "Lone Eagle No. 2" and hopes to establish even greater records. By putting on exhibition flights this summer, Artman hopes to make enough money to reimburse his backers for the cost of his glider and to accumulate a sufficient surplus to enable him to return to Pullman this fall. He has also arranged to teach a course in glider construction during the fall term.



The Oroville Gazette - August 2, 1935 (Friday)

TO BARNSTORM WITH GLIDER

Cloyd Artman To Make Exhibition Flights This Week

Cloyd Artman, Oroville's nationally famous young glider pilot left Wednesday on a couple week's barnstorming tour of the Wenatchee valley. He will put on a show at several towns in the valley explaining glider flying to interested persons and staging exhibition flights. He is accompanied by Donald Kerkow and Bud Johnson of Oroville who will help him with the ground work in his flights. Starting Wednesday evening at Tonasket, they will go on down the valley putting on an exhibition on Thursday at Omak. Friday at Brewster and landing in Wenatchee Saturday. After the exhibition at Wenatchee Cloyd and his companions will spend about a week trying out and making a log of the air currents around Badger Mountain near that city, the boys camping out for the week. They then expect to come back to Oroville for a short rest when Cloyd will go to Coulee Dam and Mason City for further exhibition flights.

Cloyd's exhibitions will not depend on the wind blowing as he will use two different methods of shooting his glider into the air for short exhibition flights. Should the wind be blowing a little he will use rubber ropes. A method used almost exclusively by German glider pilots. These shoot him into the air high enough to catch the wind which he can then use to gain altitude. In event no wind is blowing he will use the American method of a large drum fastened to the rear wheel of a car and a long cable to throw him into the air several hundred feet so that he may give a demonstration of piloting a glider.

Artman recently had the pleasure and honor of being interviewed for fifteen minutes over one of the Seattle radio stations on the technical side of glider flying. Those hearing his story state that he put on a very interesting talk giving Oroville plenty of publicity. He recently hung up a new unofficial world record for altitude going up to 4,700 feet in a new glider which he constructed here during the past summer vacation. He has been offered an opportunity to give an exhibition at Boeing Field, Seattle. This offer also includes the use of an airplane for his first solo flight. Without previous instruction in aviation prior to his flight Artman will rely only on his knowledge of glider aeronautics to guide the plane. Cloyd who has been making experiments including designing, building and flying for over four years, both before and after graduation from Oroville high school had been making his way through the state college at Pullman through his activities and has been given a position in glider construction at the college where he expects to return this fall.

The Omak Chronicle - August 2, 1935 (Friday)

THRILLS OF GLIDER FLYING DESCRIBED HERE BY ARTMAN

Graphically describing glider flights as "safer than driving a car in the winter time," Cloyd Artman, holder of one unofficial world's glider record, told members of the Kiwanis club Thursday of his early flights and explained the various thrills that attend this form of heavier than air flying. Mr. Artman gave an exhibition flight in Omak last night.

His interest in gliding grew out of experiments made near Oroville, he explained. Building his first machine in a small workshop and with no professional assistance, Mr. Artman attempted his initial flight in June 1931. The trial flight was not successful because of the lack of 'dope' on the wings, but after experimenting further with various types of glider construction he was able to stay aloft several hours at a time.

-Queer Sensation-

Describing his first successful attempts at soaring, Mr. Artman told club members of the feeling of mastery that overcomes the pilot when he finds himself floating in the air with only a frail, home-made apparatus between him and sure death. "It is hard to explain," he stated, "I am sure, however, that there is no other sensation quite like it."

Telling of an early flight at Oroville during which he remained aloft for nearly two hours, he said that during the course of the flight he gained an altitude of nearly 6,000 feet and flew over a wide area. The flight started in the afternoon, he stated, and as this was his first attempt at night landing it was necessary for cars to park along the landing field and guide him with their headlights.

-Tried Night Landing-

"The town didn't know what had happened to me," he stated. "They couldn't see me from the ground and it was necessary for me to call out my position to those below. Many turned out and I discovered later that searching parties had been sent to look for me."

Mr. Artman is now a student at Washington State College and was named instructor of the Aero Club at Pullman. Courses are offered in airplane and glider construction, he stated, and interest in the new sport is gaining rapidly.

The Oroville Gazette - April 16, 1937 (Friday)

CLOYD ARTMAN KILLED SUNDAY

Funeral Services For Local Glider Pilot Held Wednesday Afternoon

Funeral services for Cloyd L. Artman, 24, of Oroville were held Wednesday afternoon from the grade school auditorium, the Rev. Will Richardson, pastor of the Methodist church here preaching the sermon. The large room seating several hundred people was filled to capacity with friends and relatives gathered to pay their last respects to this intrepid young man who lost his life in a glider accident Sunday near Pullman, along with a classmate Frank See from Colfax. Cloyd was a junior at the Washington State College at Pullman and See was a sophomore. The glider in which they met their untimely death was recently built by the Washington State College Aero club. It crumpled in midair, dropping the two students to their death from the towering heights above the Snake River southwest of Pullman.

Deputy Sheriff R. L. Waller, who went to the scene of the accident, said spectators reported a wing of the plane collapsed and dropped the pair 400 or 500 feet to the river bank near Wawawai. The ship was a twisted mass of splinters and canvas. Artman and See had gone aloft while a half dozen fellow club members and a crowd of spectators watched from the towering cliff. The club members had made numerous flights in the sailplane during the day, which concluded a several days' exhibition in the motorless craft. Waller said the club members were unable to offer an explanation for the sudden wing collapse. Flying a new dual control ship in a series of test flights, the men encountered an air pocket and the ship began to drop. A strong squall of updraft wind caught the ship and twisted it causing a wing to collapse.

Art Plotner, Kelso, raced down to the ship, 1,200 feet below the starting point to find that both men had been instantly killed. Almost every bone in their bodies had been broken.

First flights of the week were taken at Steptoe Butte but the club was forced to go to the Snake River country when a land owning farmer forbade them to use Steptoe Butte. Artman had flown the plane in a solo flight for more than four hours on Tuesday at Steptoe. Artman had been up for more than 30 minutes in his own single place ship before taking the dual job up and had reported that the air was rough and not very suitable for the best gliding. Each of the club members except See had been taken up in the ship while at Steptoe Butte and See was taking his turn at the time of the crash. Earl Nelson, newsreel cameraman of Seattle, was filming the flights. After filming the takeoff he went to change the camera lens only to have the plane go into its fatal dive before he could film it. The plane had been up for little more than five minutes at the time of the dive.

According to Fred Wollenberg, Edwall, a member of the club, the left wing of the ship folded up and then dropped down alongside the fuselage, causing the plane to plummet nose down to the ground. The ship was completely demolished. Cloyd Artman was born at Richland, Washington, in 1913 and was a member of the 1932 graduating class of Oroville high school. He first became interested in gliding in 1928 and from that time on his heart and soul was wrapped up in this activity. In 1932 he made his first major flight over Oroville from a mountain top southwest of town landing on what is now the ball diamond. His tests with a glider brought him national recognition and he held the unofficial world's record of more than 13 hours sustained flight and had a mark of more than five hours at 5,000 feet. On several occasions he had remained aloft until after dark landing by aid of a flashlight. He was undaunted by mishaps to himself and his ship and nearly met disaster when his glider crashed during a takeoff a couple of years ago.

Cloyd had taught his sister, Audrey, to fly and together they made a name for themselves as one of the west's most accomplished soaring teams. Audrey was present when her brother made his last flight.

He leaves his widowed mother, three sisters, Audrey, a freshman at Pullman, and Eva and Peggy, sisters in the Oroville grade school, also several aunts and uncles. Of the latter, a number were present at the funeral, Mr. and Mrs. J. H. Bretz of Tyler, Mrs. P. R. Moreland of Lamont and her nephew George Bruce; Mrs. Alice Starr of Seattle and Mr. and Mrs. Walter Artman, Colville.

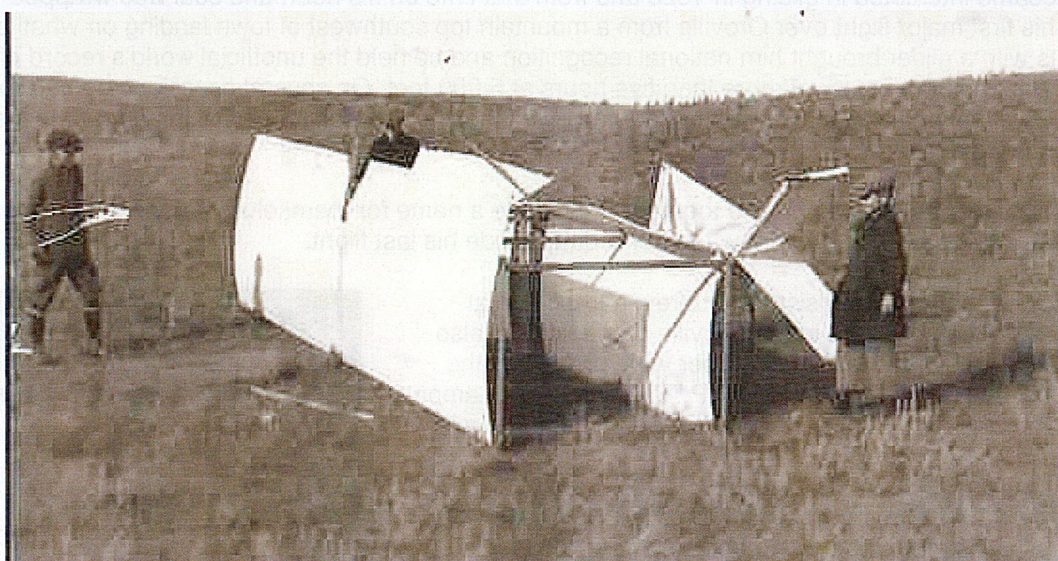
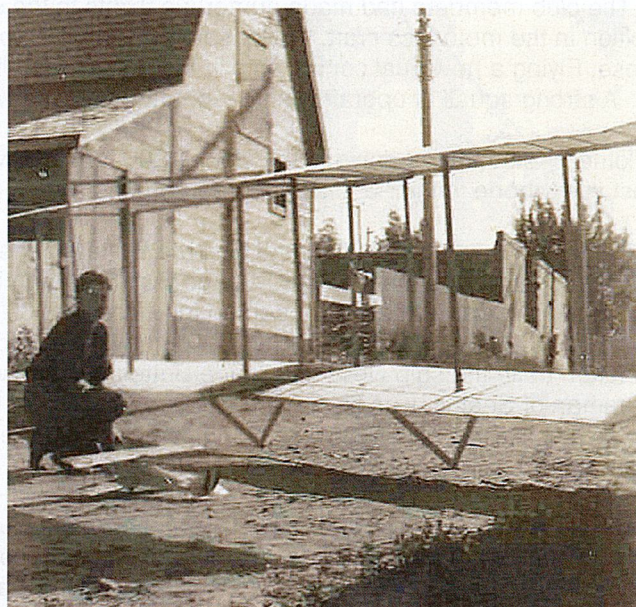
In the loss of Cloyd Artman, Oroville has lost a beloved young man of whom the whole community was more than proud and sincere sympathy is extended to the bereaved family.



Norman Bruce - 1907-1970 - Father of Soaring in Western Canada

Norm Bruce began his interest in soaring in much the same way as youngsters anywhere did in the 1920s, but where he took that interest was far, far beyond what was accomplished by most enthusiasts. In 2017, the National Soaring Museum was given the opportunity by Norm's granddaughter, Tamara Hughes, to copy in its entirety, one of his original photo albums. Because of the great number of priceless images included in this album, Norm's life-long pursuit of motorless flight becomes a significant story of early soaring in North America. Tamara also sent us a copy of an article on Norm's life written by Bruce W. Gowans in the spring 1984 edition of the Canadian Aviation Historical Journal, which is condensed here.

Norm was born in Medicine Hat, Alberta, Canada - a small, but prosperous city - and, as a boy, he would frequently walk to the outskirts of town, where he would enjoy watching clouds go by and birds in flight. Therefore, it was no surprise that Norm would become interested in flying. As a youth, he initially built and flew model airplanes, but in 1922 he began to construct a Chanute-style hang glider. His version was fairly typical of the Chanute concept, but with the addition of a two (bicycle) wheel landing gear. In August 1926, with the help of five other boys, Norm took the glider to one of the nearby hills for a test flight. With the glider held firmly to him by straps, he proceeded to run down the slope until he became airborne and accomplished a free flight of about 50 feet - at an altitude of around 3 feet. Some claim that this was the first recorded free flight of a glider in Canada.

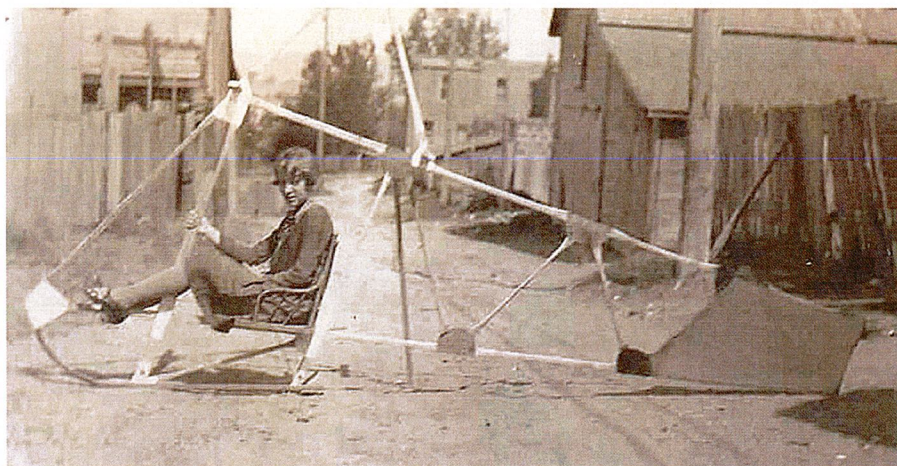


Norman Bruce as a boy with his first home-built Chanute-style glider

A second glider was begun but never completed. His third glider was built in the basement of the family home with his brother, Tom, during the winter of 1927/1928. By July 1928, it was completed and towed to the Medicine Hat Fair Grounds on July 4.

Norm was eager to fly his glider and described the day as follows:

"I turned the glider into the wind and fastened in place the 34-ft. rope with which the ground crew would tow the glider thro' the air without releasing the machine. Wing ropes were soon fastened to the wing tips so the plane could be controlled from the ground.

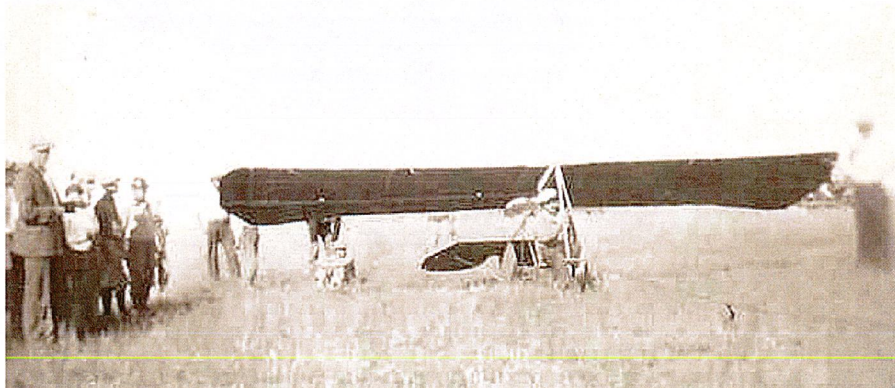


Norm's sister, Jennie, demonstrating one of his early primary gliders

I had a mad desire to take the seat and go with her. I knew that possibly she might be smashed in a crash although I had made every precaution for its safety. I wanted to fly with her. Why shouldn't I? I had built her. Spent my time working fondly over each brace and rib.

I made up my mind I would fly it and come down safely with her. Gathering the ground crew around me I instructed them thoroughly. Each one had a certain duty. Two men were situated at each wing tip, one holding a brace rod and the other holding a length of wire fastened to the brace rod in case the first man let go or tripped and fell. Six or seven husky boys were put to the tow rope and after the crowd had cleared well back, I climbed into the seat and made myself ready for my first ride in a flying machine.

I raised my hand as the starting signal. Slowly the skid bounced over the ground. As we gained momentum, the bumps grew short and sharp and finally I was moving along slowly (a fast run) smoothly without any feeling of passing through the air. It did not seem as though I was fling. Everything was smooth, just as though I had been sitting at home safely in a chair. I glided about 200 or 300 feet when the skid once again came into contact with the ground as it scraped sharply, leaning slightly to one side. I stepped out, proud and happy. My work had not been in vain and I had actually flown in a glider successfully."



After this first successful flight, Norm made a second flight using a group of boys and rope to tow it into the air. A third flight was made, but this time using a car. The rope was fastened to a car and a boy was positioned by the rear window to signal should anything go wrong. The tow was begun, and soon the glider reached a height of 20-ft. At this point the rope broke and the glider stalled, crashing to the ground. Although Norm was not seriously injured, he was badly bruised and knocked unconscious for a time. His glider was demolished but he was able to add three more flights to his log book. Norm summed up his last flights with the words: "We had a few happy seconds together in the air."

That fall, Norm left Medicine Hat for the United States where he attended aeronautical engineering school. He first attended Guardian Air College at Moberly, Missouri, and then the Curtiss Wright School in Kansas City. While at Curtiss Wright, he helped to build a convertible airplane/glider.

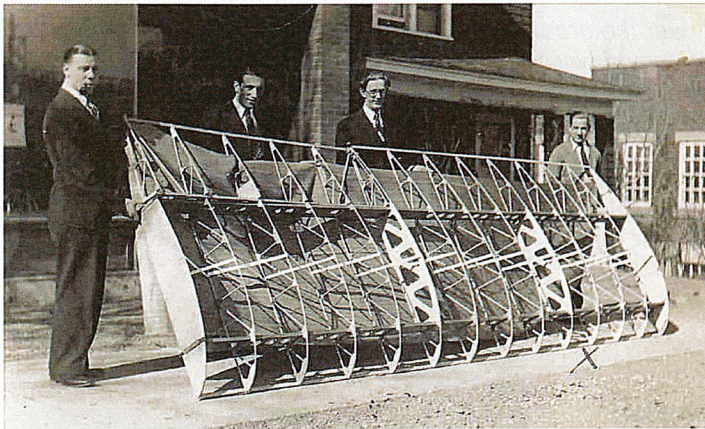
Guardian Aircraft 1929

IMMIGRANT IDENTIFICATION CARD	
UNITED STATES DEPARTMENT OF LABOR	
SURNAME	Bruce,
GIVEN NAME	Norman B.
COUNTRY OF BIRTH	Canada, October 2, 1907
NATIONALITY	Canadian
DATE OF BIRTH	Blue
PORT OF ARRIVAL	DATE OF ARRIVAL
DATE ADMITTED	STATUS OF ADMISSION
IMMIGRANT'S SIGNATURE	
IMMIGRANT INSPECTOR	

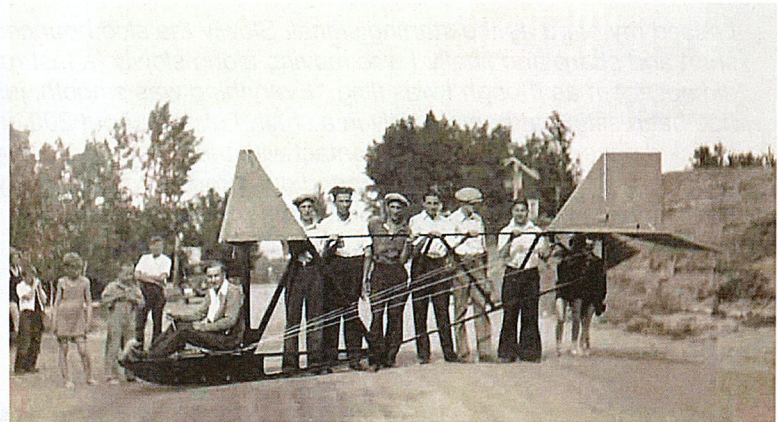
ORIGINAL

When Norm returned to Medicine Hat in 1930, he was determined to build and fly a glider. He now had the knowledge to do just that.

On January 14, 1931, the Cloud Rangers Glide Club was formed. The president was Ron Vincent, with Lawrence Bruce as secretary-treasurer. Norm was to be the instructor and designer for the glider. During the next nine months, members of the club were busy constructing the glider. The club had an office complete with club room. The glider was given the name, "Gull". By September, the glider was completed and taken to the airport at Medicine Hat where it was assembled for flight. Norm flew a test light on September 9, 1931. Student training soon commenced and numerous flights were made by Norm and his students. All flight training was carried out using auto tow. Flights lasted about one minute.



Members of the Cloud Rangers Gliding Club showing the structure of the wings for the "Gull"

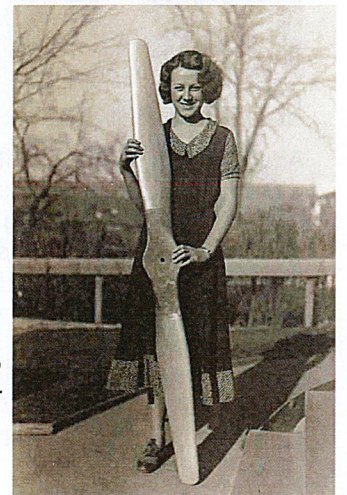


Gull fuselage with club members and Norm's brother, Lawrence, in the pilot's seat

The 1932 gliding season began on June 12 and by the end of that year, the club reported that it had made a total of 207 flights. In the winter of 1932 the club acquired new quarters at the fairgrounds across from the airport. Norm's brother, Lawrence, was a very accomplished musician with his own band and gave concerts to support the operations of the glider club.

During 1932, Norm was attempting to establish himself in the aeronautical business, and set up a propeller manufacturing business, constructing a propeller of his own design for a Pietyenpol. Also during 1932, Norm additionally planned to open up a factory in Medicine Hat to manufacture glider and airplane kits, but the Depression precluded such a venture.

Norm's sister, Jennie, with the Pietyenpol propeller



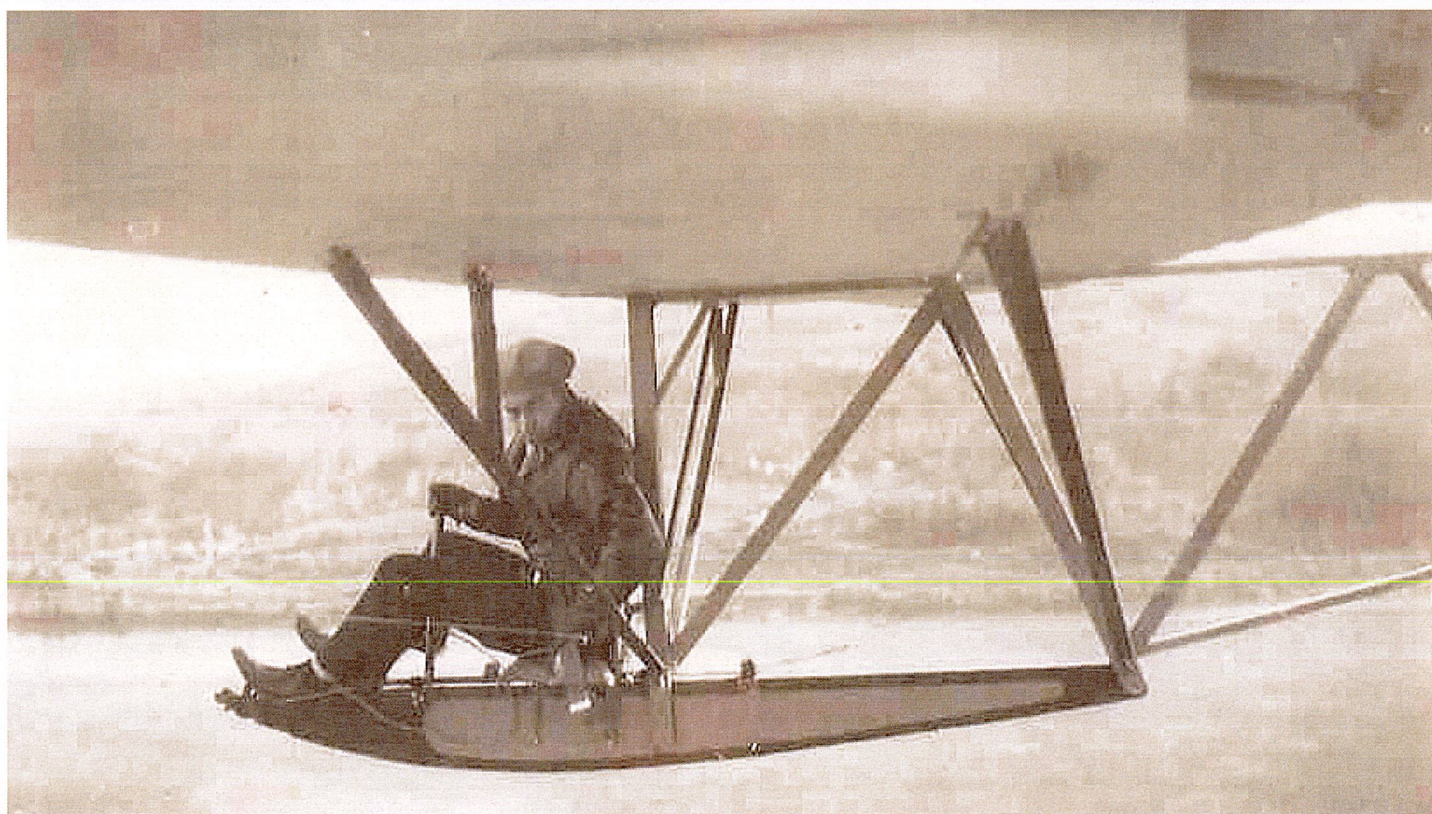
In September of that year, Norm was able to visit the Lindgrens of Amisk, Alberta. The Lindgrens were early gliding pioneers, who used a winch to launch their gliders. During this visit, Norm was given his first winch launch.

In 1933 flights began in January, with 370 flights being made up to March 26. One of the more active club members at this time was Norm's brother, Tom. Sunday, April 2nd, started out to be a good soaring day and Norm's brother, Lawrence, was eager to fly. He had logged a total of 62 flights and was considered to be a good pilot. On his 63rd flight, he stalled at 200 feet and spun into the ground. The crash demolished the glider and Lawrence was rushed to the hospital unconscious. Two days later he passed away at age 22, having never regained consciousness.

Lawrence's death brought about an end to the Cloud Rangers Glider Club, and Norm's family was pressuring him to give up flying. But Norm was too dedicated to give it up, despite the tragedy. During the summer of 1933 he constructed his fourth glider which he called "Lawrence" in memory of his brother. The fuselage was painted blue with red trim. The wings had a span of 33 ft. and were painted silver. The *Lawrence* was test flown on Oct. 4, 1933 at Medicine Hat. Soon after this, the Skylarks Glider Club was formed. From October 4 to January 7, nine people flew the *Lawrence*, including four women.



Lawrence's crashed glider

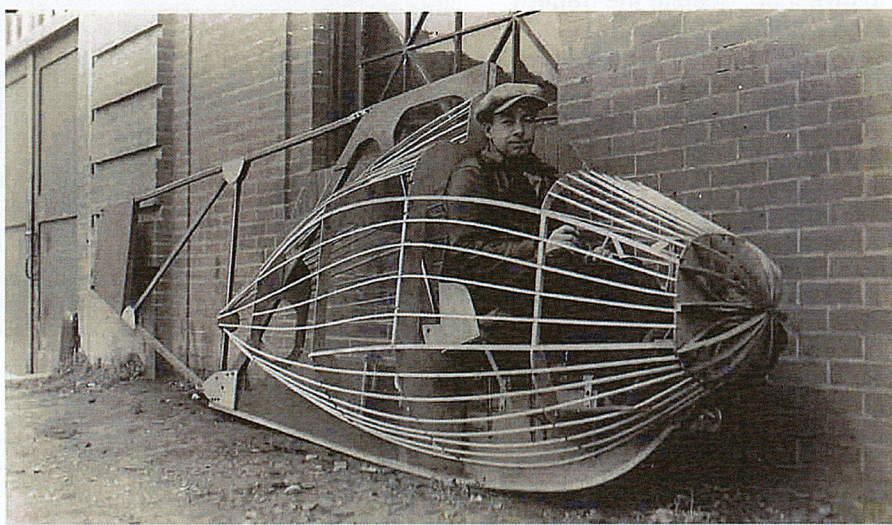
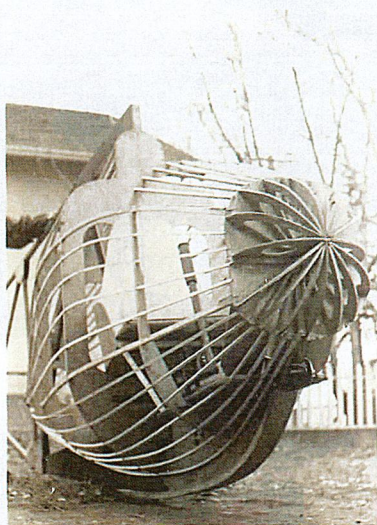


Norman Bruce flies the "Lawrence" over Calgary in the spring of 1934. Photo was taken by a wing-mounted camera.

In January 1934, Norm left Medicine Hat for Calgary where he took over the operation of a service station for British American Oils. The *Lawrence* had been dismantled and shipped to Calgary. With Norm's departure, the Skylarks Glider Club was disbanded.

Soon after his arrival in Calgary, Norm began to investigate the formation of a glider club. He learned that there had been a Calgary Glider Club, formed in 1929 but now inactive. The club owned a German *Gotha* glider which was in need of repairs. Norm contacted a club member and the members agreed to re-activate. Norm agreed to make the *Lawrence* available to the club. On May 19, 1934, the *Lawrence* was reassembled at the Calgary Institute of Technology, Norm made four short flights, and the glider club was back in business.

During the summer of 1934, it was decided that a glider of improved performance was required. A Northrup fuselage was built and a pod was added. The wings from the *Lawrence* were then installed on the Northrup fuselage. This new glider was also called the *Lawrence*, and it was test flown by Norm on November 4.



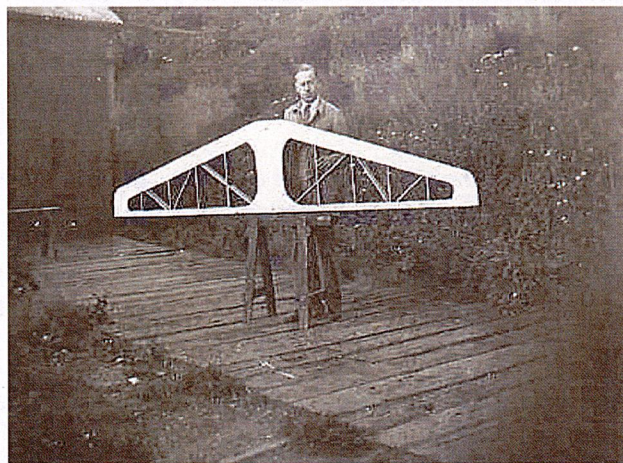
Northrup fuselage with pod under construction - Norm in the cockpit.



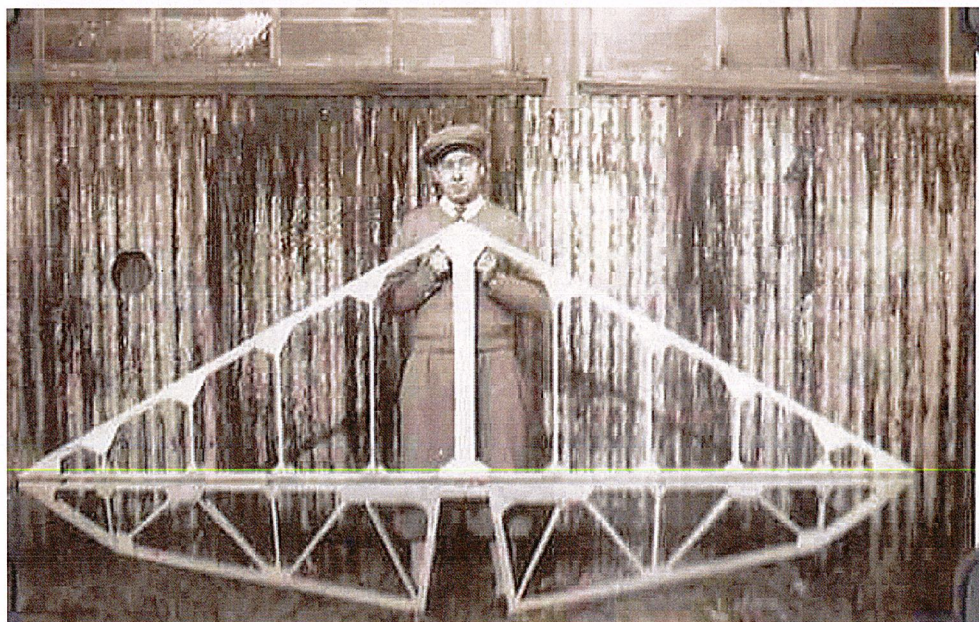
The new "Lawrence" - tested and flown November 4, 1934

In May 1935, Norm Bruce, along with Paul Pelletier and Jim Fretwell, organized the Canadian Glider Boosters. It was their intention to demonstrate gliding across Canada on the way to Elmira, NY, to attend the international glider competition. The tour started on May 25 and ended on July 1 in Carman, Manitoba, when a wind storm wrecked their glider. After the loss of the *Lawrence*, Norm returned to Calgary, where he and other members of the Calgary Glider Club began building a new glider.

At his point, Norm decided that if he were to further his knowledge of gliding, he would have to move to a location where gliding was more advanced. Norm worked long hours at the service station and saved every penny. In the spring of 1936, Norm sailed for England. He soon made his way to the Slingsby Sailplanes factory in Yorkshire, where he was hired on June 3, 1936. For the next nine months he worked there, building tail units for all the Slingsby products.



Norm with "Kirby Kite" rudder and stabilizer



CANADIAN GLIDER BOOSTERS

NORMAN BRUCE JIMMIE FRETWELL PAUL PELLETIER

who are making a complete tour of Canada in the interests of Amateur Gliding and Sailplaning, will give a

DEMONSTRATION and EXHIBITION OF GLIDING

at _____
(town)

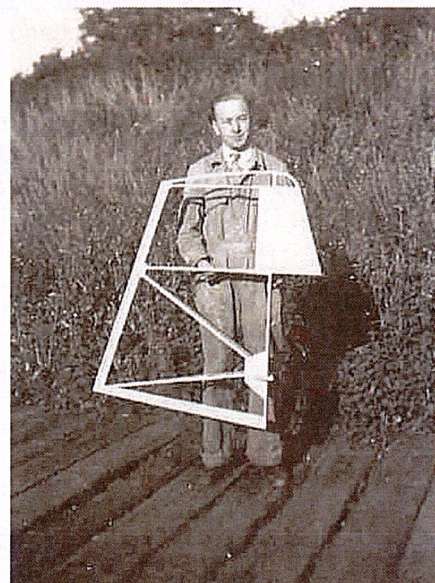
on _____
(date)

at _____
(time)

The "Canadian Glider Boosters" are en route to Elmira, N.Y., to attend the International Soaring Competitions held at that point and their purpose is to promote Amateur Gliding throughout Canada. If anyone in your locality is interested in forming a Glider Club these experts will gladly assist in the construction of your machine and the methods used in operating a successful club.

See for yourself this skilled exhibition and the flying of the motor-less plane.

SILVER COLLECTION



Norm with a Kirby Cadet rudder assembly (above) and stabilizer (left)

Norm soon became a member of the Yorkshire Gliding Club at Sutton Bank. He then earned his A, B and C licenses. On August 30, Norm distinguished himself with a five-hour flight in a Slingsby Falcon II glider. Had he taken a barograph along, he could have earned his altitude leg for his Silver "C".



Norm flying the Slingsby Falcon II

In 1937 Norm left Slingsbys to take a position with Percival Aircraft at Luton, England, and in the fall of 1937 he was loaned to Short Bros. and Harland Ltd. in Belfast, Ireland. While in Ireland, Norm married Ena Cullen, whom he had met while living in Calgary.

Norm was able to make only one gliding flight while in Ireland. This flight was in September with the Ulster Gliding Club at Downhill. They used a car to launch the glider from the beach at low tide. Early in 1938 Norm returned to Percival Aircraft at Luton. In August of the same year he moved to Hull where he took up a position as aircraft inspector for Blackburn Aeroplane Co. Norm made one gliding flight on September 4, 1938 with the Hull Gliding Club at Hedon Airfield.

The outbreak of WWII put an end to all non-military gliding in England. In 1943, a gliding program was initiated at Hedon Airfield to train Air Cadets. After attending an instructor's course on gliding at the RAF station at Wooslington, Northumberland, Norm was made deputy chief gliding instructor for the gliding school at Hedon. From July 1943 to March 1944, Norm spent most of his weekends at Hedon Airfield training Air Cadets.



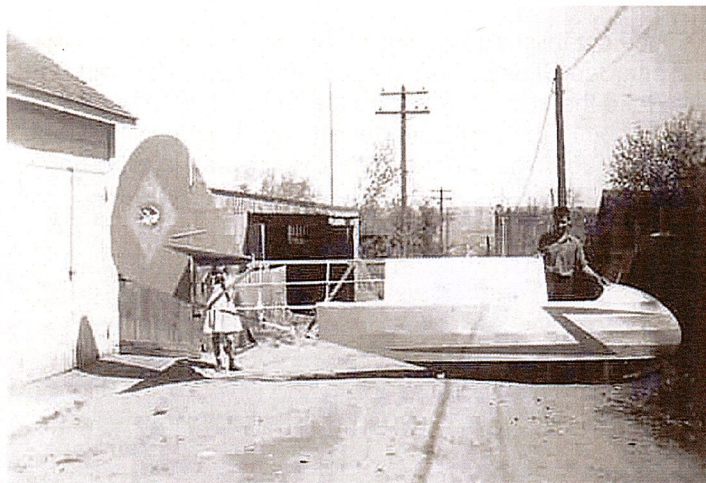
Norm's first group of air cadets being presented to the Mayor of Hull for proficiency

After the war, Norm expected to participate in gliding once again, but economic constraints made that impossible. By 1947, he became convinced that it would be years before living conditions in England would improve. Food was still being rationed and he found it difficult to properly provide for his family. Letters from Canada told of much better living conditions. With reluctance, Norm and his family sailed for Canada in February 1947 and arrived in Medicine Hat in March.

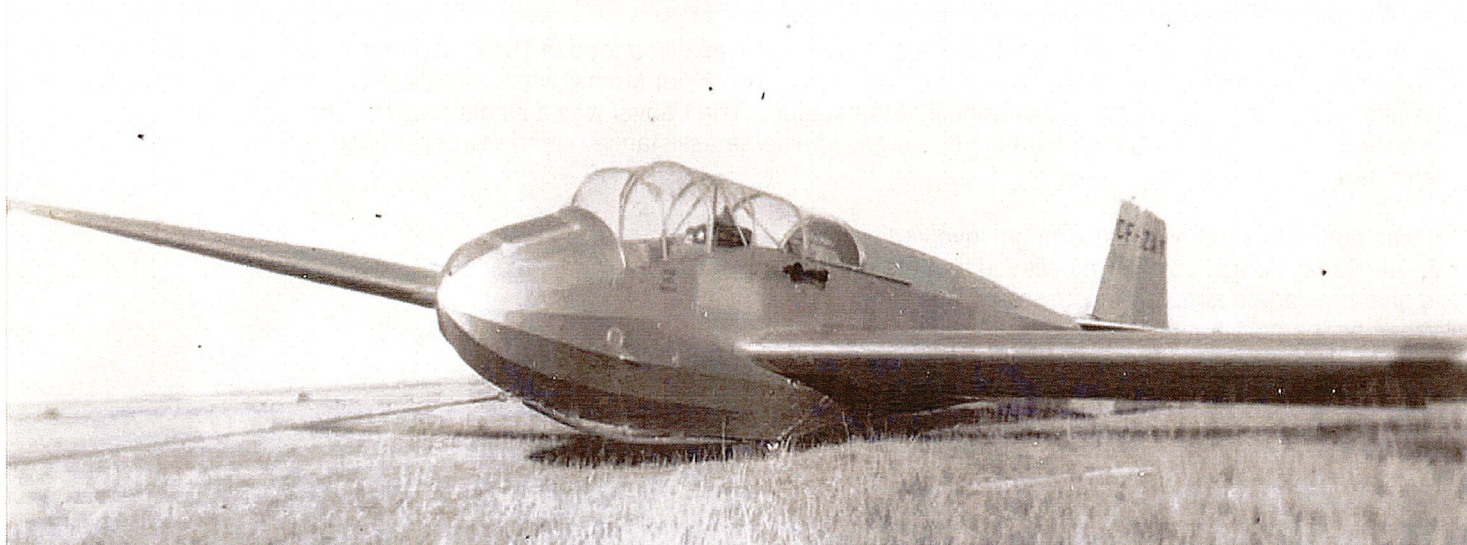
Once established in Medicine Hat, Norm began to think about gliding again. In June 1947 he acquired a Mead Challenger glider that had been built during the war and began to modify and refurbish it. When he wrote to the Department of Transport for a license, however, they would not approve the project.

By this time, Norm had gathered together a group of active supporters. He arranged the purchase of a used Schweizer TG3A glider in Denver, Colorado. With this purchase the Medicine Hat Gliding Club was formed. The TG3 was registered and the club began operations in September of 1947 at the Medicine Hat Airport. Most flights were launched by car, but the Medicine Hat Flying Club's Tiger Moth was used on a few occasions. The club expected to use aero tow the following year.

In May 1948, Norm accepted a position teaching drafting at the Red Deer Composite High School in Red Deer, Alberta. His departure from Medicine Hat along put the gliding club's future in jeopardy. Later that summer the TG3 was involved in an accident which substantially damaged one of the wings. Norm agreed to take the TG3 to Red Deer, as he thought he might be able to have the wing repaired at the school. Meanwhile, Norm was busy organizing the Red Deer Gliding Club.



Schweizer TG3 purchased in Denver, CO



The club was able to purchase a Dagling Primary glider from the Lethbridge Soaring Club. The glider was delivered to Red Deer on November 20th.

The Red Deer Gliding Club commenced operations on Dec. 1, 1948 and continued until May 1949. During this time, many enthusiastic members were introduced to gliding using the Dagling, and others looked forward to the day when the TG3 would be repaired and they could take lessons in the two-seater.

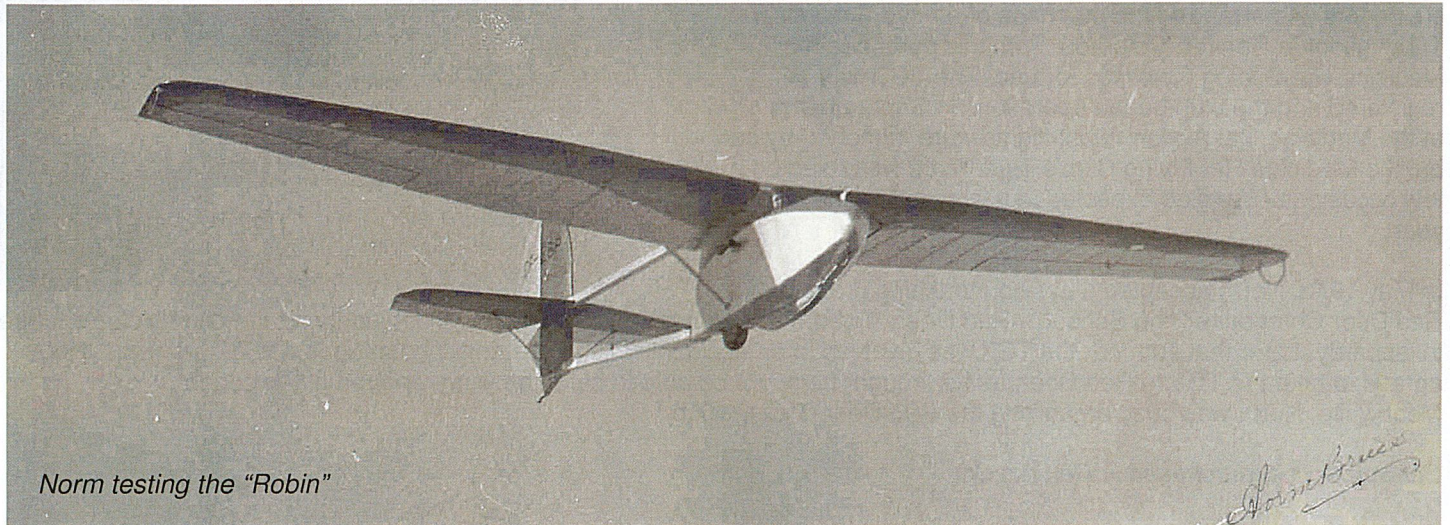
Dagling Primary Glider



However, in May of 1949, Norm accepted a position in the drafting office at the Ogden Shops in Calgary. That summer Norm moved his family for the last time.

When Norm left Red Deer, the gliding club suspended operations. The Dagling was sold to the Edmonton Gliding Club and the TG3 was taken to Calgary.

Once established in Calgary, Norm's thoughts again went to gliding. Fortunately, an RCAF gliding club called the Tenardee Gliding Club, had been formed at Lincoln Park. They were in need of a chief flying instructor and invited Norm to take the post. At this time the club did not have a glider, but had one named "Robin" under construction. The *Robin* was completed that summer and on Nov. 11, 1949, Norm test flew it at Lincoln Park. During the next two years, Norm put in over 200 flights in the *Robin*, which was later re-named the *Chinook*.



Norm testing the "Robin"

Norm continued to act as CFI for the Tenardee Club until it was disbanded in 1955. By then, the club had purchased the TG3 from Norm and acquired two other gliders as well as two Tiger Moths, which were used for glider towing. As a club project, four Fauvel AV.36 gliders were built at the station. (The Fauvel was a single-seat tailless glider designed in France in the 1950s by Charles Fauvel.) Norm gave valuable assistance during the construction of these gliders and later flew one of them.

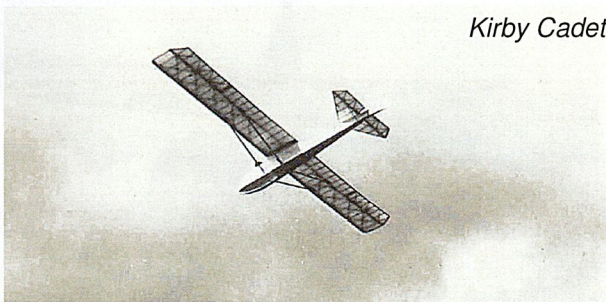
It was during this period that Norm got involved with the 52 Air Cadet Squadron. Norm believed that the best way to give the cadets air experience was by way of gliding. When he learned that the Dagling from Edmonton was for sale, Norm arranged a demonstration flight for his commanding officer on December 5, 1953. The Dagling was purchased, refurbished by the cadets and used for training at Lincoln Park.

Dagling



In 1955 the Red Deer Gliding Club was re-activated when they purchased a Kirby Cadet from the Regina Gliding Club. They needed an instructor, so for the next two years, Norm spent many of his weekends driving to Red Deer to instruct new members.

Kirby Cadet



In 1951, Norm began work on his last glider. He always had a fondness for Schneider's *Grunau Baby* design, and although the design was 15 years old, it still had lots of potential. Norm modified the design and called it the *Zephyr*. For the next seven years, when he was not helping someone else with their gliding project or instructing, he could be found in his garage working on the *Zephyr*. His workmanship on the *Zephyr* was outstanding, with no detail being overlooked.

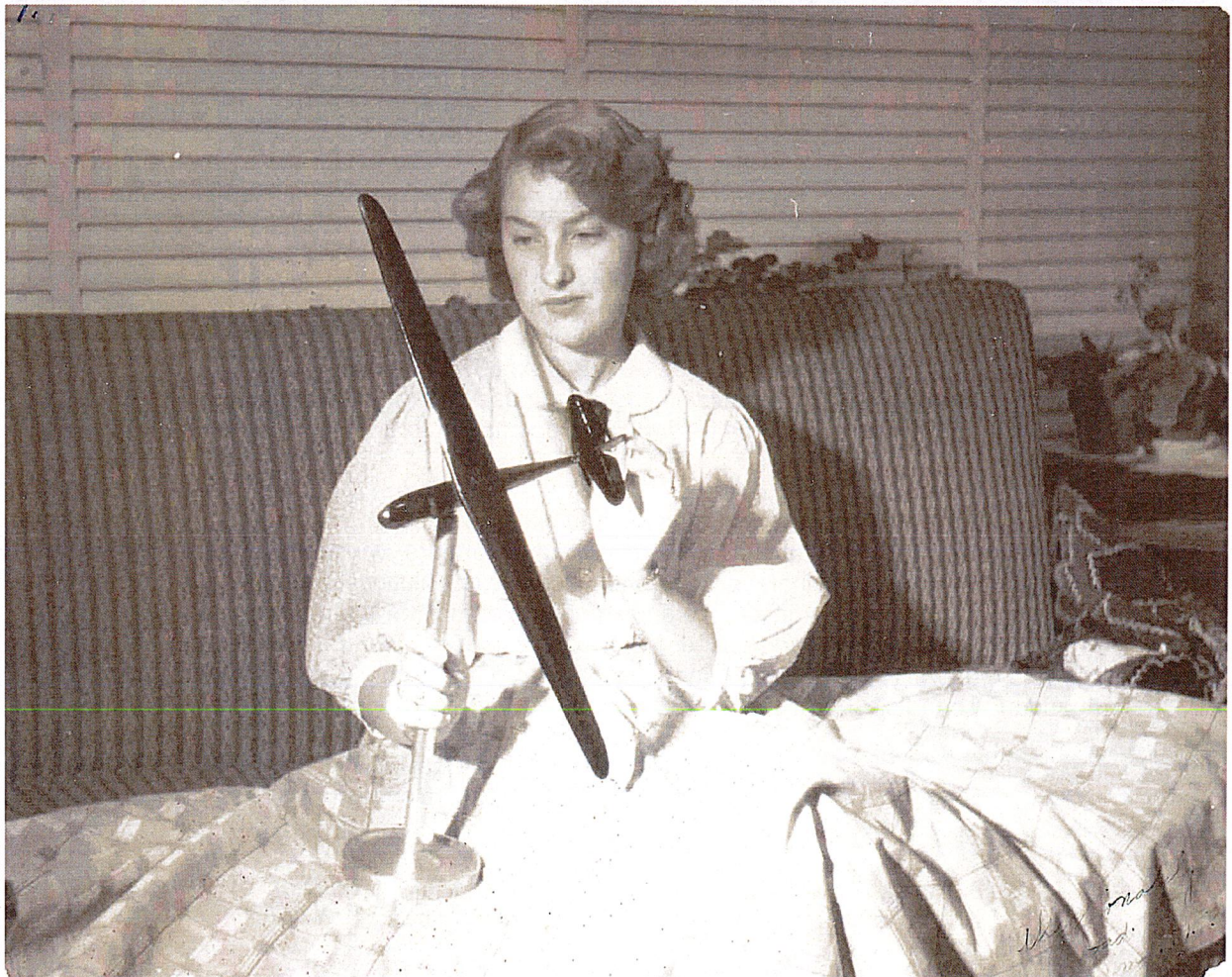
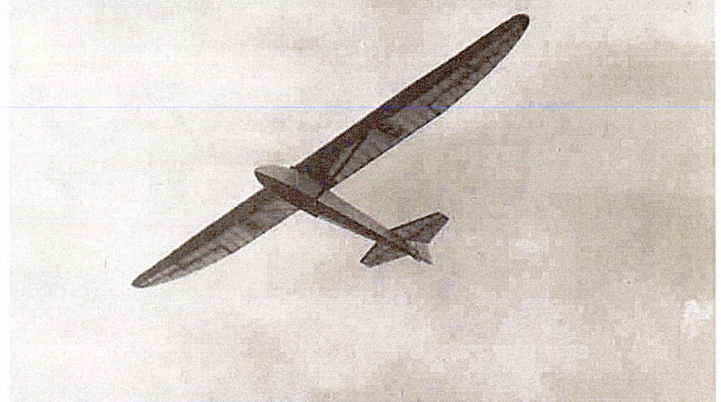
The wing struts were a novel feature on the *Zephyr* - they could be rotated in flight to act as air brakes. On May 4, 1958, the *Zephyr* was test flown at the Airdrie Airport, near Calgary. Norm continued to test the glider that fall and the following spring when he thermaled it to over 10,000 feet.

In the summer of 1959, Norm and a friend took the *Zephyr* to Regina, where they competed in the Canadian Gliding Championships and Norm completed his Silver "C". Norm logged his last glider flight on August 22, 1965. The *Zephyr* was later sold to an old friend, Frank Holman.

Norm's entire life was dedicated to gliding. Rather than pursue gliding records for himself, he spent all of his available time furthering the sport. Typical of his devotion to the sport was his response to Ralph Weissman's need of a test pilot to fly his newly-completed *Grunau* in 1951. Norm took an overnight train to Rosetown, Saskatchewan, test flew the glider, and took the next overnight train home. Norm and Ena's home was always a welcome haven to any gliding enthusiast who might be in the area. They welcomed pilots from all over the world.

In 1969, Norm's lifelong contribution to soaring was recognized when he was made a life member of the Soaring Association of Canada. Norman Bruce died on April 7, 1970. Each year the Norman Bruce gliding trophy is presented to a deserving Western Canadian glider pilot.

Grunau Baby II



Norman Bruce's eldest daughter, Edleen Bruce Hubscher



*Norm's modified Grunau Baby design
that he called the Zephyr*



Norman Bruce with his glider trophy

IBSN #0892-0516

The **NSM Historical Journal** is a publication of the National Soaring Museum
Harris Hill, 51 Soaring Hill Drive, Elmira, NY 14903
Phone: 607-734-3128 Fax: 607-732-6745
email: info@soaringmuseum.org
website: www.soaringmuseum.org

Anyone is invited to contribute article material and photographs with identification about historical soaring activities, renovation of old sailplanes, soaring pioneers, unusual uses of sailplanes, etc. Manuscripts are subject to whatever revisions, additions or deletions are necessary to make the material conform to the space limitations and standards of the NSM. Material that is to be returned must be accompanied by a self-addressed, stamped envelope. No compensation other than credit will be given. Materials sent by e-mail should go to: info@soaringmuseum.org. If we receive an overabundance of articles for the upcoming edition, your material will be saved for a future edition.

Publisher: National Soaring Museum
Executive Director: Trafford L-M. Doherty
Editor: Jean Doherty

*The National Soaring Museum is an affiliate of the Soaring Society of America
and is the official repository of all SSA documents and artifacts*

