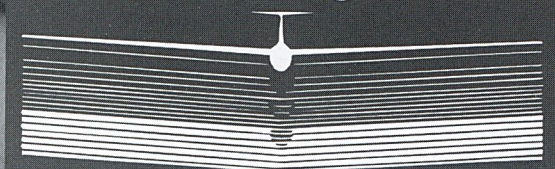


NSM

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SCHWEIZER
GALLERY

National Soaring Museum



Grand Opening of the Schweizer Gallery At the National Soaring Museum

December 7, 2001



On The Cover

This image of Paul, Ernest, and Bill Schweizer greets visitors upon entering the new Schweizer Gallery, opened in December 2001.

Left- Visitors at the Schweizer Gallery opening view model case at left, and a replica of the first Schweizer glider, the SGP-1 from the gallery promenade.

Modelers will be especially interested in the realistic 1/8-1/10 scale aircraft overhead. They include a Grumman Ag Cat, with a Schweizer SGS 2-32 sailplane on tow; the special mission advanced electronic payload carrying, surveillance SA 2-37A, and a partially covered TG-3A Army Air Forces training glider.

The new 2,300-square-foot Schweizer Gallery opened to the public in December 2001. It was enthusiastically received by over a hundred community, area, and national visitors.

On entering the new wing, Museum guests pass a large plexiglass mural introducing the three Schweizer Brothers, Paul A., Ernest (Ernie), and William (Bill). Walking around the panels, visitors emerge into a bright, spacious exhibit area. A glassed-in display case complex extending along the entire south and west sides of the Gallery features over 40 different exquisitely crafted, 1/24 scale models. Every Schweizer-produced sailplane is represented, from their first 1930 SGP 1-1 glider, to the exotic Bede World Flyer, the Lockheed YO-3A, and the Ling-Temco-Vought L450E, spyplanes. Behind the model exhibit, there is a raised, semi-circular, observation promenade. Visitors can enjoy a 180 -degree outside view, not only of all the activity on the glider field, but a vista of the winding Chemung River Valley to where the rugged Alleghany foothills meet the horizon.

On the floor and above, some of the actual Schweizer production aircraft are on display. Just inside the south entrance, there is the full-size reproduction of the first Schweizer glider, the SGP 1-1. This is the ship that the Brothers flew in 1989 to mark the 50th anniversary of the Schweizer Aircraft



Above- Schweizer Gallery looking southeast from the elevated promenade. The 1937 Pterodactyl hangs overhead, with models of the wartime TG-3A and a Grumman Ag-Cat towing SGS 2-32 in the background. Visitors check out the cradled SGS 1-26E at floor level. Gallery entrance to the Windrider Gift Shop is at far right.



Left- Another view , looking toward the gallery's south wall from the promenade. Model cases are at left with just-visible fuselage of the SGS 1-35 overhead. SGP 1-1 is at upper right, with SGU 1-19 fuselage and wing over model cases. Upper left, visitors view the Chemung Valley from the elevated promenade.

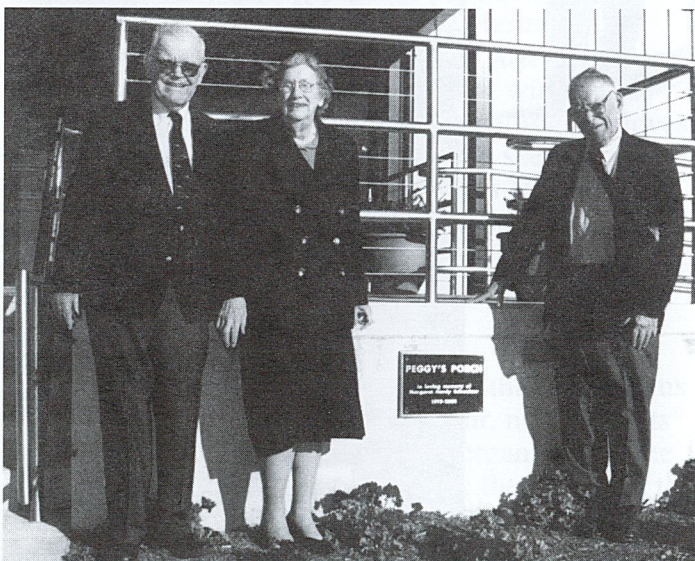
Strollers through the Gallery will see kiosks devoted to Schweizer memorabilia (even Ernie's slide rule and a copy of the 1929 *National Geographic*

Corporation. At right angles to the 1-1, the beautifully restored 1937, SGU 1-7 Pterodactyl awaits onlookers' inspection. This 1-7 flew with some of the world's most famous historic gliders two years ago at the 2000 International Vintage Sailplane Meet, held here at Harris Hill. On the floor is a de-rigged SGS 1-26E . The relatively low-cost 1-26 motivated the formation of the one-design 1-26 Association, a group that insured fairer competition and more fun flying. In soaring configuration, skimming overhead, the sleek SGS 1-35 high-performance sailplane prototype commands attention.

magazine that started the Brothers' interest in motorless flight.) Ernie, Paul, and Bill were and are prolific writers. Their books and publications are shown, and also are available for sale in the Windrider Gift Shop.

Above eye level, on the north wall, are the SGU-19 skeletal fuselage frame and wing. Upright, at the south wall corner, there is the massive spar and leading edge of an SGS 2-12 (TG -3A) wing.

Strategically-placed, unobtrusive see-through information panels are positioned around the Gallery, so that visitors will never be at a loss for detailed information on the exhibits they are viewing. The entire \$200,000 cost for exhibits and planning were underwritten by the Schweizer family and the Schweizer Aircraft Corporation.



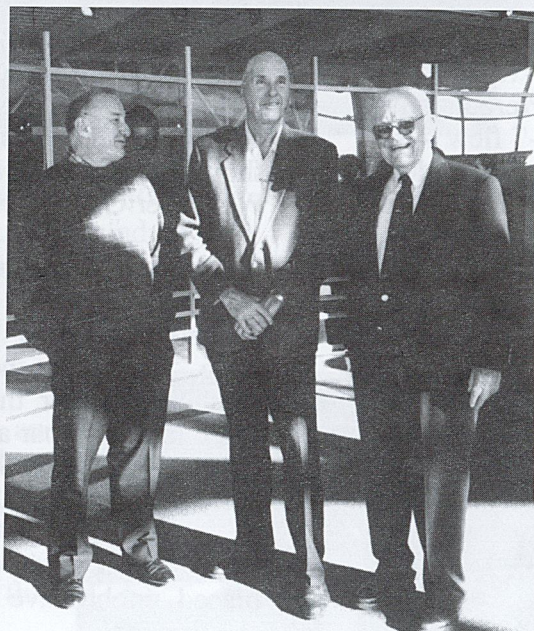
Paul, Mrs. Ernest (Eileen) and Bill at the dedication of Peggy's Porch. It was named for the late Margaret Hardy Schweizer, Bill's wife.



Bill Schweizer, right, makes a point to brother, Paul, during the Gallery opening.



Left- NSM Exhibit Task Force, left to right: NSM trustee Jeffrey Byard, NSM Past President, Paul A. Schweizer, NSM President Robert H. Ball, Todd Rohner. Holding Certificates of Appreciation: James Lehner, Joe Lamberta and Gil Harrop.

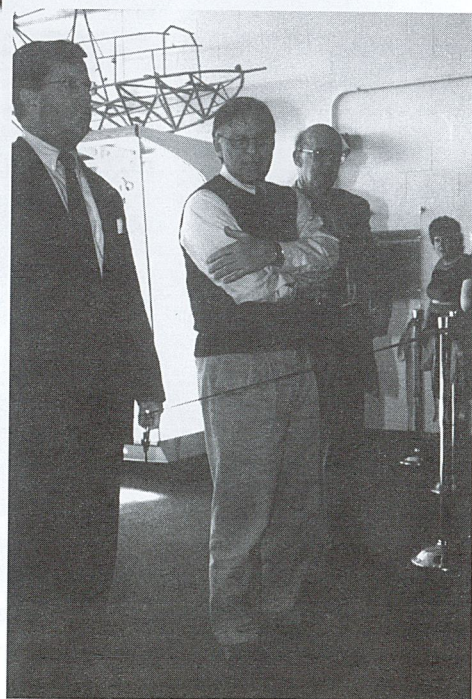


Lower left- Left to right: Bill Schweizer with Erwin Jones and Rolf Beyer in front of one of the Gallery model cases.

Center-Left to right: Jeffery Byard and Jan Scott at the Gallery opening with Paul A. Schweizer

Lower right: Left to right- N.Y. Assemblyman George Winner, Paul Hardy Schweizer, Schweizer Aircraft Corporation President; and Robert Ball, National Soaring Museum President, discuss exhibits at the Gallery opening.

The expanded front entrance to the National Soaring Museum has been entirely re-configured and named Peggy's Porch, in honor of Margaret Hardy Schweizer. It also was dedicated at the Gallery opening. Peggy Schweizer, Bill's wife, recently passed away, and a commemorative bronze plaque is mounted adjacent to the NSM stair approach. It reads, "...In loving Memory of Margaret Hardy Schweizer, 1919-2001." Peggy's Porch evokes the spirit of the National Soaring Museum, the Harris Hill Glider Field, and the surrounding Harris Hill Park. It is at once exciting and relaxing. It extends a welcome to all. It's just the way Peggy would want it.



Dr. Francis P. Bundy, Allen L. Leffler and John J. Montgomery - Inducted at the 48th Annual United States Soaring Hall of Fame Ceremonies

Dr. Francis Bundy, (Lebanon, OH,) Allen Leffler, (Santa Paula, CA) and John Montgomery, (Otay, CA) were 2001 inductees to the United States Soaring Hall of Fame. They were inducted at a National Soaring Museum reception during the February 2002 Soaring Society of America convention, in Ontario, CA.

This recognition is accorded to individuals who have made a lifetime commitment to the advancement of the art and science of motorless flight. SSA president Larry Sanderson noted that in order to maintain some of the historical perspective of the sport, a decision was made to occasionally induct a deceased American historical figure who made significant contributions to the progress of gliding. In this spirit, the SSA and NSM trustees recognized the sometimes eclipsed, late 19th and early 20th century aero-pioneer John J. Montgomery.



Robert H. Ball, National Soaring Museum Trustees president

Ball welcomed 125 guests to the event. He opened saying, "The National Soaring Museum has never looked better than it does now, thanks to a very nice expansion program, and the generosity of a lot of people to the Heritage Campaign." Calling attention to the just opened Schweizer Gallery, and the other new wing of the building, he mentioned the floor-to-ceiling northwest glass wall. It allows NSM visitors to see not only the new exhibits, but the entire Harris Hill runway, the ridge, and a panoramic view of the Chemung Valley. Sightseers on the outside can catch a teasing glimpse of some of the historic ships on exhibit inside.

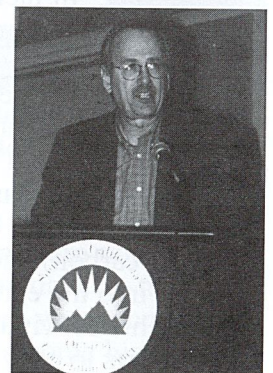
Ball said, "I'd like to remark that those of us who soar leave no contrails in the air, no footprints in the sand; therefore it falls to an organization like the National Soaring Museum to be the archivist, the collector of data, the holder of the histories of soaring throughout the United States."

In introducing the first selectee, Ball noted that it was regrettable that the 91-year-old Dr.

Francis Bundy was not able to make the trip out to California, "although he is still able to fly dual." He called on SSA's Larry Sanderson to read Dr. Bundy's acceptance.

In a conversation with Dr. Bundy, Sanderson said that the new Hall of Fame inductee was truly excited about the Award. He said "I am flattered that the SSA board and membership has tendered me this honor. It is indeed appreciated and highly valued." He said that he was distressed concerning his health, and his inability to make the trip to California. He added that he was looking forward to going to Dayton, OH, much nearer his home, for next year's SSA convention. Sanderson said, "Dr. Bundy set a standard for all of us." He asked Dr. Bundy to write a few remarks about his experiences and reminiscences so that they could be passed on to reception guests. The following are edited excerpts.

"Thank you very much for this award. I'm sorry that I'm unable to be present, due to health and mobility. I do appreciate Larry standing in for my formal acceptance. For 50 years such an award never crossed my mind. I was just promoting and enjoying the sport in whatever ways were needed at any given time: teaching, demonstrating, trying for F.A.I. (Federation Aeronautique Internationale) badges, maintaining equipment, fighting for airport rights, serving as F.A.I. designated flight examiner for gliders, serving as advisor on construction, static strength tests, flight tests at Rensselaer Polytechnic Institute, composite materials, gliders, etc."

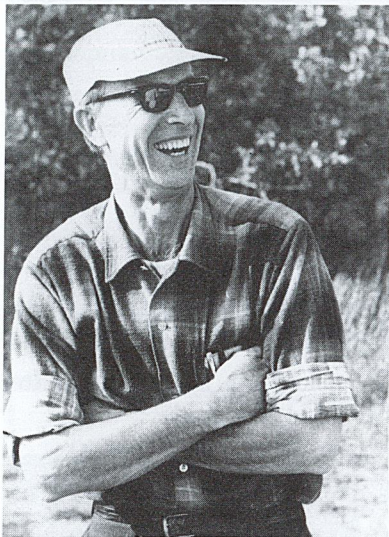


Larry Sanderson, Soaring Society of America president, reading Francis P. Bundy's acceptance remarks.

Even as a boy, Dr. Bundy had a fascination with soaring birds and flight. He remembered around 1916, going with many others to a farmer's field and waiting a long time for the arrival of a biplane flight demonstration, a Wright Flyer, he thought. In 1927, he was caught up in the Lindbergh craze to fly. With his father and college friends, a glider club was formed and their first project was a single place high wing glider. Made of aircraft spruce with gusset joints, static strength tests on the ship were completed

and accepted. Then came the great 1929 economic crash. "We couldn't afford to buy the fabric and dope to cover the airframe. Graduate school, marriage, career, and World War II came along, and the glider was never completed."

His opportunity to learn to fly came in 1952, when he and his high school-age son became charter members in the newly formed, Mohawk Soaring Club (Schenectady, NY.) He's been flying ever since.



Francis P. Bundy (Photo taken sometime in the mid-sixties.)

that I taught. In fact I referred back to the old text many times."

He mentioned how the element, carbon, came to play an important part of his life as a scientist, father, husband and citizen. His research work with General Electric teams aimed at finding a process for growing diamonds, (a pure crystalline from baser forms of carbon) and finding a system for safe re-entry into the earth's atmosphere for orbiting space vehicles without burning up. In soaring there were efforts to earn the F.A.I. diamond leg soaring badges.

His G.E. synthesis team was eventually successful in both these endeavors. "Today about 90 percent of industrial diamond is manufactured from graphite (carbon), and the heat shield on the Smithsonian's Gemini re-entry vehicle hanging alongside Lindbergh's "Spirit of St. Louis," was composed of a special graphite material that withstood fiery re-entry. Three members of our diamond synthesis team eventually earned all three of their F.A.I. diamonds. They knew that the diamonds issued by the SSA were not genuine, but 'spinels.'

"So we put REAL man-made diamonds, grown in our lab in our badges. The center one in

One of the advance courses that he taught, pre-WWII at Ohio University, was the physics of the atmosphere; mathematical and thermodynamic detail about convection, lapse rate, global circulation, etc. "Years later, when I took up flying, I became part of the atmosphere, and considered this activity as a sort of "laboratory session" to that academic course

mine is unique. It is 33% carbon 13 isotope, the only such diamond in the universe." He explained that there are three isotopes of carbon, with atomic weights of 12, 13, and 14. Carbon 12 is stable and constitutes about 99% of all the carbon in the world. Carbon 13 is also stable and constitutes about 1%. Carbon 14 is unstable, and disintegrates radioactively. My special diamond is not radioactive, because it is made of carbon 12, and 13."

He paid tribute to the people and organizations that made his flying career possible, the Mohawk Soaring Club, the Caesar Creek Soaring Club, and especially to his wife, Hazel "...who, over all the years gave her support and tolerated my flying activity. She went so far as to learn to fly gliders herself and became a good soaring pilot. When we were 88, and celebrating our 62nd wedding anniversary, we took a flight together in a Schweizer 2-33. With me piloting from the rear seat I thought, 'What a lucky guy I am to share 62 years with the lovely, talented lady riding in front.'"

Allen Leffler was co-introduced by James Payne, (Rosamund, CA), and Hannes Linke, (Inglewood, Ca.)

Payne said that joining the SSA, in 1971, and reading Soaring magazine he kept coming across a competition pilot nicknamed "low boy," Al Leffler whose contest number is LB. "Later when I moved to Region 12, I got to know and respect the man. Al is handy. He modified an L-K (WW II surplus TG-4 Laister-Kauffmann) to what he called an L-K-1, and said that the glide ratio was 30-to-1. If Dick Johnson got a hold of it, it would probably do a little less than that," Jim said. "This guy is as good as any manufacturer today. In 1959, he helped found the Orange County Soaring Association. "Al started racing, and by the time 1976 rolled around, he's a National Champion. He did it again in 1983; after that, he got a little international experience. He took his glider to Alaska. One of his goals was to fly up to Mt. McKinley. Unfortunately, he couldn't get anyplace because there was no opening in the clouds, and he couldn't find a wave to get up to the top. He was an important contributor to the establishment of Minden's High Country Soaring. While Al is really famous for his racing, Payne said that it is amazing how much he has done behind the scenes in establishing places for soaring



Hall of Famer Hannes Linke, who along with James Payne, introduced Al Leffler.

in "work that has not necessarily been recognized."



Al Leffler, 1978 Region 12 Unlimited Class Champion, checking out his Nimbus 2.

the first Cirrus, then a Nimbus -1, a Nimbus -2, a Nimbus -3 and now he has the Nimbus-4. "He's been true to the Open Class; however he has flown a couple of 'kiddie gliders' (smaller sailplane classification). He's the one who actually coined the term," Linke said. He added, that one of the things that impressed him and others, was that Al Leffler always came with this wife, Irene and their children. "Al has had much success in his private life but he has never changed. He's still the same guy that we all knew and respected for 38 years." Linke chuckled when he related a habit of the new Hall of Famer. "Whenever Al describes how he won the day, he invariably pulls up his pants before he starts talking." Hannes continued, "he's accomplished so much, is always generous with his time, and never shows any anger. He really deserves this honor."

As Allen Leffler was presented, and stepped up to the rostrum, he tugged up his pants, setting off a ripple of laughter from the audience. He said that the first glider he ever saw was when he was in the Air Force, stationed at Scott Field, IL. He and a friend went to see a fellow at Park Air College who had what the speaker described as "this thing sitting in the back in the corner of a dingy barn. I didn't have any idea what kind it was, but he wanted \$300 for it. Man-\$300? My Aeronca Chief only cost \$450, and that had an engine in it!" He decided to bypass soaring at that time, "maybe because I didn't have \$300."

He said that after moving to California, marriage, and a bunch of kids, seven or eight years later, he drove out to El Mirage and conned a ride in a Pratt-Read (WW II surplus LNE-1) with one of the Club members. Al said that the pilot explained the procedure as they spiraled around, and soon they were at 12,000 feet. I said, "this soaring is a piece of

Jim Payne next introduced his fellow Region 12 director and good friend of Al Leffler, Hannes Linke. Linke came to Los Angeles from Germany in 1963. He and Al Leffler started soaring together at about the same time. Linke said that after the L-K-1, Al bought a Boomerang, then

cake...Later on I found out that it didn't work that way."

Two years later Leffler helped organize the Orange County Soaring Association and proceeded to add sailplane ratings to his commercial power license. "I really had the bug I guess. I spent the rest of my life chasing dust-devils, and my wife chasing me."

He mentioned an S.S.A. questionnaire wanting to know if he had any off-field landing experiences. He smiled and said that for about the first 20 years, that's about all we had...We didn't know you were supposed to come back."

He said that one of the early things that got him interested in competition soaring was the Southern California Competition Club (S.C.C.C.). About every weekend they

would create a soaring task. One of the things they had problems with was recognizing turn points. Several different verification methods were tried; even with camera verification there was strong suspicion that some pilots reported some highly imaginative times. "At one of the earlier meets," Al said, "Paul Bikle made us aware of another option. He went out around first turn, came back, restarted and went to the second turn, and so on, then finished. We started figuring it out. A truly remarkable flight for a Schweizer 1-23: over one-hundred-and-some miles an hour!"

With a wave of thanks, he said that he had a lot of great soaring flights at some great soaring places and met a lot of fine people. "I just hope that I can put back into soaring some of the things that I have taken out. I'd like to close by thanking my wife, following me around, and picking me up in some of those bad places."

Larry Sanderson said that this year the first



Al Leffler recalling some of his Soaring experiences.



NSM president, Bob Ball welcoming Al Leffler to the United States Soaring Hall of Fame.



New inductees are welcomed by members of the United States Soaring Hall of Fame:
standing left to right, back row; George Applebay-1999, Robert Lee Moore-2000, Bernald S. Smith-1984, William C. Sproull-1997, Edgar D. Seymour-1995, Howard E. Burr-1987. Standing middle row: Sterling V. Starr-1979, Carl D. Herold-1996, Hannes M. Linke-1998, Alcide Santilli-1979, Henry G. Combs-1988, H. Ray Gimmey-2000. Seated left to right: William Adams, Santa Clara University accepting on behalf of 2001 inductee John J. Montgomery, 2001 inductee Allen L. Leffler, Richard Huppertz, producer of the Montgomery slide presentation and Bertha M. Ryan - 1972.

inductee to the new historical candidate is John Montgomery. Introducing Dick Huppertz, Sanderson said, "Current soaring enthusiasts, led by Dick Huppertz, (Pacific Palisades, CA), and others put together background material and a presentation that became very persuasive as to what this pioneer accomplished."



Richard Huppertz, narrator of the John J. Montgomery slide presentation.

know that real truth lies behind Hollywood films," he commented with a wry smile.

Huppertz went to San Diego to meet with aviation historian, Gary Fogel to finish his

Huppertz said that when he was a high school student in New York City back in the 1940s, he saw a film, "Gallant Journey," about a young California flying pioneer, John Montgomery. Glenn Ford played John Montgomery; Janet Blair, his girlfriend. Prologued, "The story of the first man who ever flew with wings, it stayed in my mind for years. I believed it to be true because we all

Montgomery research and to visit the Air and Space Museum. Then they drove toward the Mexican border to Otie and to Montgomery Park.

Huppertz' slide presentation, edited to conform with space limitations follows on the following page.

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Anyone is invited to contribute material and pictures 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 accomplished by a stamped self-addressed envelope. No compensation other than credit will be given.

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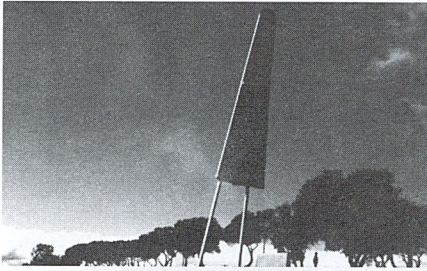
The National Soaring Museum is an affiliate of the Soaring Society of America and, as such, is the official repository for all its documents and artifacts.

2001 United States Soaring Hall of Fame

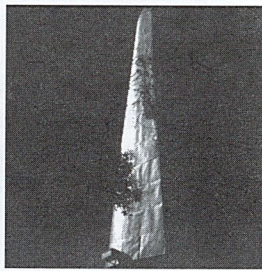
John Montgomery, Aero-Pioneer

By Richard Huppertz

When I was a high school student in New York City in the late 1940's, I saw a film titled "Gallant Journey." It was about a young California flying pioneer named John Montgomery. Glenn Ford played John Montgomery and Janet Blair played his girlfriend. The prologue of the film boldly stated, "This is the story of the first man who ever flew with wings." Well, that stayed in my mind for years, and of course I believed it to be true...

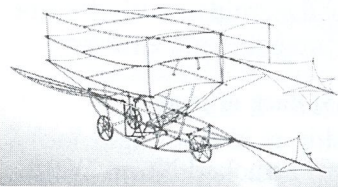


1) Wing Monument



2) Controlled wing

A few weeks ago, I went to San Diego to meet with aviation historian Gary Fogel and to finish my research on Montgomery at the Air and Space Museum. Gary was kind enough to drive me down south towards the Mexican border on the Montgomery Freeway (US Interstate 5) to the community of Otie Mesa and Montgomery Park. I saw this impressive 90-foot angled wing monument, (1,2) at the base of which was a plaque that read, "John J. Montgomery made man's first controlled winged flights from this hill in August 1883." This supported the prologue of the film...but was this really true? Well, it didn't take much research to find the answer: an emphatic no! Although the middle ages are full of tales of people leaping off towers and cliffs with some form of wings, few lived to tell about their downward plunge.

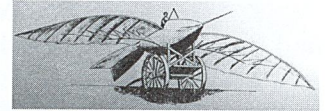


3) Cayley Glider

Most historians believe that the 18th and 19th century English nobleman, Sir George Cayley, was the first to scientifically study "aerial navigation", as he termed the study of winged flight. He built this aerial contraption about 1849, and convinced a ten-year-old boy to be the "rider". It apparently made some tentative hops. It was said that the boy was the first person in history to develop a bad case of "fear of flying."

Several years later, Cayley built a larger version of the boy glider, and enlisted his coachman

to be the rider. (3) After a glide across a small valley, ending with a very hard landing, the terrified coachman cried out, "Please Sir George, I wish to give notice, I was hired to drive and not fly." Clever man this Cayley. Always got others to fly his gliders! But he did prove that motorless flight was possible.

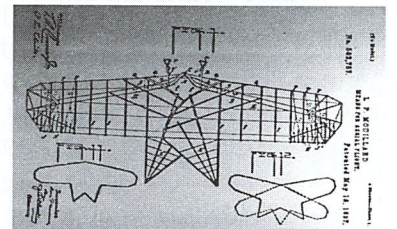


A French sea captain, Jean Marie LeBris, was the next to take to the air in a

4) LeBris glider

glider fashioned after an albatross, the beautiful soaring birds he had been observing on his long ocean voyages. (4) His glider was said to have a span of about 23 feet, with around 215 square feet of wing area. It was launched from a horse drawn cart, speeding down a hill. He apparently made two flights in 1857, the first somewhat successful. With the second, a rope tethered to the glider tangled around the horseman and lifted him into the air for a few seconds, making this man the world's first glider passenger! LeBris broke his leg on landing; the crash also destroyed his "artificial bird," as he called it.

The next person to glide was another Frenchman who spent most of his life in Algeria and Egypt, Louis Mouillard.



Mouillard studied the flight of soaring birds on his farm in Algeria and in the early 1860's built three gliders along the lines of drawing. (5) As the story goes, he was taking a glider out to a hill on his farm. He strapped on the machine, and came to a ditch that he normally could easily jump over. He jumped, but this time instead of landing on the other side, his feet never reached the ground until 128 feet later. Though badly frightened by the sensation of flight, Mouillard lived to continue his experiments and even wrote a popular book, "Empire of the Air."

5) Mouillard glider drawing

"But my purpose today is to tell you why John Montgomery deserves to be in the US Soaring Hall of Fame," Huppertz said.

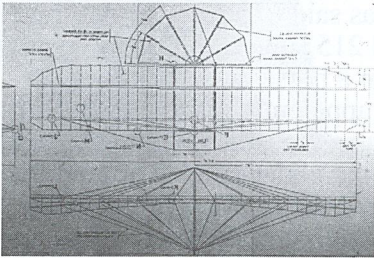
He was born in 1858 in Yuba City, CA and became fascinated with bird flight and cloud movement as a young boy. Montgomery attended schools in the San Francisco Bay area, and graduated with bachelor and master degrees in science from St. Ignatius College.



7) Montgomery age 23

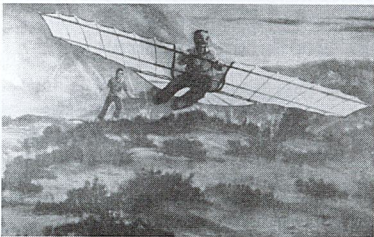
At around age 22 or 23, (7) Montgomery graduated from St. Ignatius. He was a serious young man and rather stubborn in following ideas he thought were right. About 1882 his family bought an 80-acre farm south of San Diego, near the community of Otie Mesa. His father, a busy lawyer and journalist, asked John, the oldest of three sons, to manage the farm.

Montgomery took on the job, and with his science background, set up a workshop in the barn to conduct electrical experiments, and later wing profile studies. The seagulls soaring over the farm fascinated him - he captured some and studied their wing shape.



9) Gull glider plan drawing

drawing, made much later by those who studied the documentation Montgomery left, is of a glider with a 20 foot span, 4 1/2 foot chord and a weight of 40 pounds. Calculations made by engineers in the 1940's and later, indicate that it was capable of lifting the 130 pound Montgomery at age 25.



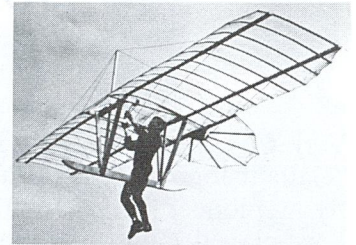
10) Artists sketch of 1884 flight

This artist's sketch (10) shows that first flight in March 1884. Montgomery and his brother James took the glider and hay wagon, and covered it with hay to disguise their activity from neighbors, who considered any attempt to fly in that period as a sure sign of lunacy! On Wheeler Hill - John climbed onto the saddle, ran into an 8-12 mph wind and found himself airborne and in Montgomery's own words, "I felt as if I were being supported by something firm, and yet at the same time by something that had a cushiony softness. When I found that the machine would follow my movements, I felt I was self-buoyant. I was frightened at first, but then I felt safe."

There is much controversy about the length of the flight and the number of flights made that day. Montgomery stated that a number of flights were

made, the longest of which was just over 600 feet. Other accounts say that only two flights were made, the first at 600 feet, the second resulting in an upset causing damage to the glider.

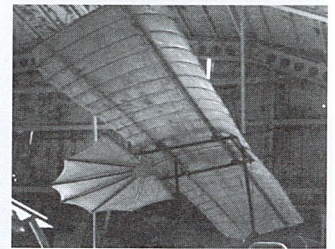
Models (11) of the glider have been flown successfully, but I was told by historians that they knew of no one who had ever successfully flown a full-scale replica to prove its airworthiness.



11) Glider model

I found this replica (12) hanging in the Western Museum of Flight in Hawthorne, CA and asked a museum official to tell me who had built it. The name he had was Norm Ward.

That name was familiar; some months before while reviewing the archives on Montgomery at Santa Clara University, where Montgomery had taught, I discovered this photo of Norm Ward with the replica. (13)



12) Replica at Western Museum of Flight



13) Black and White photo of Norm Ward

But an even more startling photo of Ward surfaced, (14) with him airborne in the glider.



14) Ward in flight

Printed on the back of photo (15), was the following: "1883

Montgomery glider in flight, September 10, 1973. Ship now hangs in San Diego Aerospace Museum. It flew well and was stable. Several flights were made. It takes off quickly and

1883 MONTGOMERY GLIDER IN FLIGHT SEPT. 10, 1973 IN SAN DIEGO. SAID ALOU HANGS IN SAN DIEGO HERI'S SPACE MUSEUM. IT FLEW WELL AND WAS STABLE. SEVERAL FLIGHTS WERE MADE. IT TAKES OFF QUICKLY AND FLIES STRAIGHT AND TRUE. THE SHIP IS IN FREE FLIGHT!

15) Back of photo

flies straight and true. The ship is in free flight." With the help of the museum, I tracked Norm Ward down in El Centro, CA. He told me five flights were made that day - most over 100 feet. The ship was flown as part of a competition of Montgomery Glider replicas, built from approved plans. Ward won the competition with his flights.

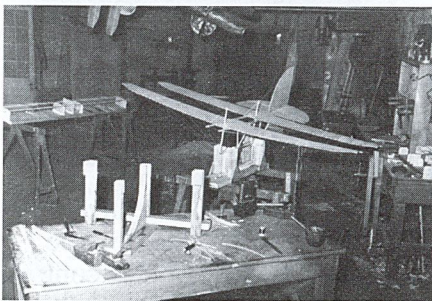
You've probably noticed that two different months and years have been mentioned for the first flight - August 1883 and March 1884. Not that it matters much in the scope of time, but some

historians have taken issue with this in an attempt to discredit Montgomery.

A key aviation historian, Tom Crouch, chairman of the Department of Aeronautics at the Smithsonian's National Air and Space Museum, after exhaustive research, has sided with Montgomery's own statement that it was March 1884. The Smithsonian has recognized Montgomery as the first American to build and fly a man-carrying glider.

In 1885 Montgomery built and tested two new gliders, one with hinged, spring-loaded aileron like flaps, for automatic gust damping, apparently not controllable by the pilot. Both machines were unsuccessful. For some unknown reason, perhaps just continuing experimentation, Montgomery abandoned the cambered airfoil of the gull glider for essentially flat wings.

For some years he discontinued manned flight experiments, but continued studies on airfoils on a whirling table he constructed in his barn workshop. In 1893 he took a vacation to attend the Chicago's World Fair - where he understood that some scientific conferences would be held. There he met the famous engineer and promoter of the study of aerial navigation - Octave Chanute. Chanute and his associates were astonished to meet this unheard of Californian - and apparently the only successful glider pilot in America!



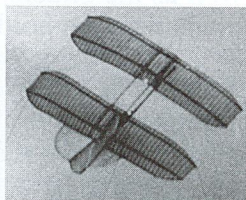
19) Workshop

plus a light teaching schedule. (19) Such academic support was unprecedented in the 1890's!

There he focused on experiments with 3 to 7 foot span models, launching them from the top of college buildings. The design he developed then was the tandem wing glider. It also had a vertical stabilizer, which was not used in previous gliders.

Besides free flight, he often flew them tethered as kites. (20)

Some of the models became full-scale machines with wingspans in excess of 20 feet,

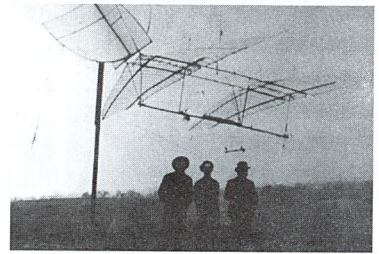


20) Glider as kite

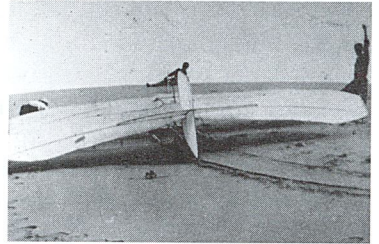
which were launched on a wire device above the beach of Aptos, CA. (21)

He often launched them inverted and was not satisfied unless they would quickly right themselves and make a long and successful glide to land on the beach below. (22)

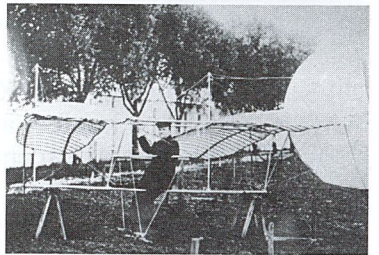
In the next period, 1904 - 1906, he concentrated on man-carrying gliders of the tandem wing design. He built two. (24) Here is Montgomery seated on the saddle of the California. His feet are on the bar controlling the wing warping mechanism, his right hand is on the friction clamp control for the tail assembly. The glider's wings had a span of 24 feet and the craft weighed about 50 pounds.



21) Glider on launch wire

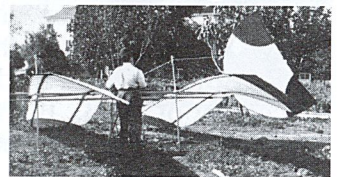


22) Glider on beach



24) The California

This is his second and most famous tandem wing glider, the Santa Clara. (25) Note the wing support towers and guy wires above and below the wings.



25) The Santa Clara

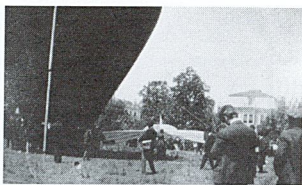
Montgomery, second from left, believed he was not agile enough at his age to be a good pilot for a glider of this type, so he found a 26-year-old professional balloonist

and parachute jumper, by the name of Dan Maloney - on the far left - who he trained in the Santa Clara with hillside and hot air balloon launches. (26) It was the first in-air launch of a glider in history.



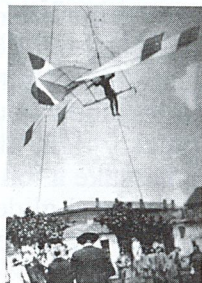
26) Group shot in front of Santa Clara

Although there had been witnesses to Maloney's training flights, Montgomery felt the time was right to make the first major public demonstration of his gliders at Santa Clara College Presidents Day - April 29, 1905. Over 1,000 spectators from the college and nearby communities, including 25 members of the press, attended. Here

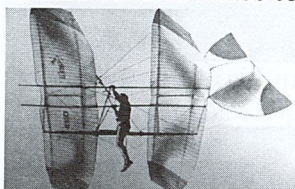


27) Balloon being inflated

the 40 foot high balloon was being inflated with hot air from a nearby fire pit. The Santa Clara on the right was already connected to the balloon. (27)



28) Glider being lifted



29) Santa Clara In Flight

Maloney was lifted to an altitude of over 4,000 feet, (28) where upon he cut the lifting rope and (Santa Clara in flight) made a 20 minute, very controlled glide to the ground, (29) circling in both directions at will and being seen to rise several times to regain altitude. It was perhaps the first thermaling in history. This was also the first high altitude flight by a heavier-than-air craft.

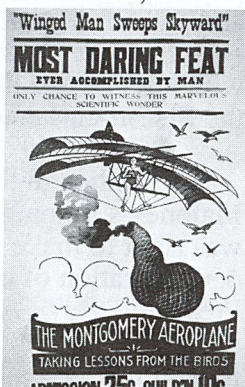
Maloney made a perfect landing on his feet at a predetermined spot. (30) Then the crowd descended upon him to take a closer look at this aeronaut, as these early aerial exhibition performers were called, and to take a good look at this remarkable flying machine.

Newspaper accounts and photos of the April 29th flight appeared in major newspapers across the country. Major European papers also picked up the story. Why was this such big news? After all, the Wright Brothers had made the first powered flight in December of 1903. But the Wrights were very secretive. Public knowledge of what they had achieved did not surface until about 1907. To the public, it looked like Montgomery alone had solved the problem of aerial navigation.



30) Landing site

In order to raise funds for further glider development, Montgomery agreed to a series of public demonstrations... This was common during the early days of aviation. (31) His brother, Richard, designed this poster to promote such events. Note the use of the word "Aeroplane." Some historians believe Montgomery was the first to use this word to represent the entire aircraft, and not just the wing of the craft as others had used it.

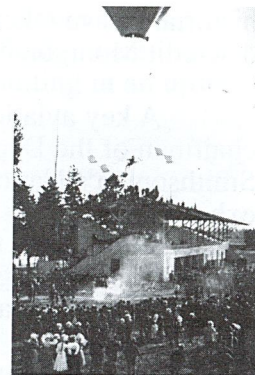


31) Poster

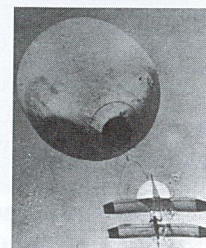
But these demonstrations were plagued with mishaps - as at this exhibition at San Jose Race Track in May 1905. As

Montgomery and the Santa Clara lifted off for the first flight, (32) the lifting rope broke at about 200 feet.

Maloney made a safe landing with minor glider damage, but the crowd was not pleased with so short a demonstration, so the back up glider was brought out. On re-inflating the balloon, another attempt was made. (33) After Maloney lifted off, he felt something was wrong with the glider and noticed that some of the guy wires and bolts were loose. Apparently the glider had been tampered with when left unguarded. So he did the right thing, and stayed with the balloon until it landed 30 miles away in Gilroy - the garlic capital of America. Again, the crowd was not pleased - the glider and balloon went out of sight; no show!



32) Glider on balloon lift-San Jose



33) Balloon and glider

In July, another demonstration was planned at Santa Clara College. (34) When the balloon lifted off, Montgomery and some others noticed that an errant rope from the balloon tangled with the

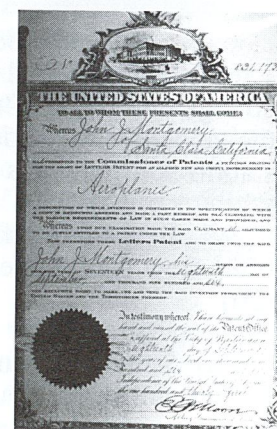


34) Another lift

support mast and guy wires for the rear wing. Montgomery shouted to Maloney to ride the balloon down, but the cheers of the unknowing crowd drowned out his voice. Maloney did not realize there was a problem - until he cut the release rope, and the rear wing collapsed! He struggled to control the glider, but to no avail. He died in the crash.

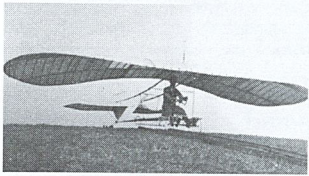
Montgomery was devastated; he had lost his trusted aeronaut and friend. He went into seclusion for weeks. When he was able to consider continuing his gliding experiments again, the Great San Francisco Earthquake hit in April, 1906. His workshop was ruined as well as his gliders. All future plans went on hold.

The only bright note later that year was this US patent for his tandem wing aeroplane design. (35)



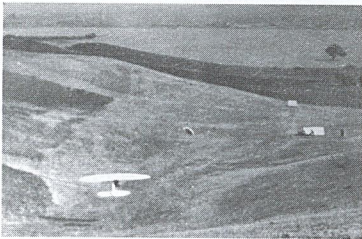
35) Patent

After years of lab experiments and speaking engagements, he finally returned to glider development in 1910-1911. He decided to abandon the risky balloon launches and found an ideal site for hillside launches in the Evergreen area of San Jose.

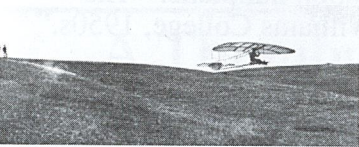


37) Evergreen on Track

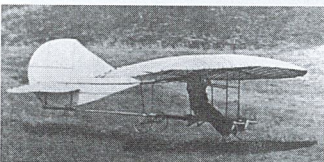
He called his new glider appropriately, the Evergreen (37)...It had a span of 26 feet and a 6-foot chord, it weighed about 150 pounds. A unique feature was the ability to change wing camber by unbolting the wing and with ribs in fabric pockets and special adjustment wires - making the profile change before reinstalling the wing. Note the launching rails below the glider.



38) Top of Hill



39) Glider ridge soaring



40) Glider Landing

With just a downhill roll, the glider took off to fly down over the valley. (38)

But there were times he and his associate pilots were able to soar along the ridge and then come down to a smooth four wheel landing in the valley. (39)

After 55 successful flights were made in October 1911, on the next to the last flight, Montgomery was able to gain sufficient altitude to return to his starting point...he was elated. (40)

Then disaster struck:

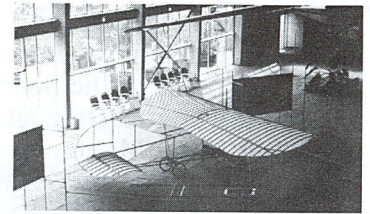
On his final flight on October 31, 1911, the Evergreen rose at a steep angle just after take-off, then stalled and fell to the ground, striking the right wing. One of the protruding stove bolts used to connect the wing pierced Montgomery's head. He died a half-hour later. This was to have been the last flight in this series of tests. What happened?...I've heard four explanations ranging from Montgomery suffering a stroke, or vertigo, to a gust of wind and pilot error.

This past December, aviation historians Ace and Judy Campbell took me to the site of his last flights, which is now called Montgomery Hill Park. (41)



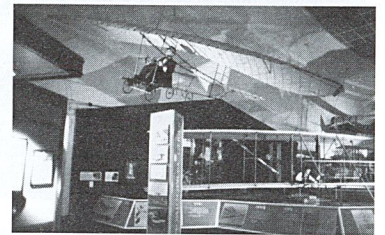
41) Montgomery Hill Park

Replicas of the Evergreen glider have been built and displayed in several museums. This replica was built in the 1960's by a group of Lockheed engineers under the direction of Stan Hall, well-known as the designer of the Cherokee Sailplane. (42)



42) Evergreen replica

And in the San Diego Aerospace Museum last week, I found the original Evergreen sailplane rebuilt from parts salvaged from the 1911



43) Evergreen in San Diego Museum

crash. Perhaps appropriately, it was soaring above a replica of the Wright 1903 Flier. It had a well-dressed Montgomery mannequin at the controls. (43)

So - what were John Joseph Montgomery's accomplishments that earn him a place in the US Soaring Hall of Fame?

*Well, he certainly did not invent the glider or the aeroplane, although he may have first used the term 'aeroplane' as we now use it.

*He was not the first to discover the lifting power of a combined wing.

*He did not invent the aileron even though he had hinged gust dampers in an 1885 glider.

*He made many of these discoveries independently, in the then isolated Southern California of the 1880s, without knowledge of flying machine experiments in other parts of the world.

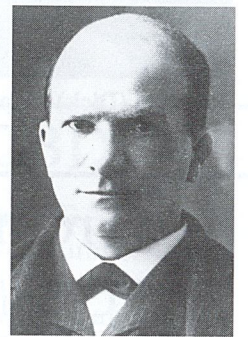
*He was most likely the 5th human being to make a successful flight with a winged craft, and most certainly he was first to fly a glider in the United States, and the Western Hemisphere.

*He flew seven years before the great German gliding master Otto Lilienthal's first glides in 1891.

*He also flew 12 years before Octave Chanute and associates flew in 1896 and 16 years before the Wright Brothers' first gliding experiments in 1900.

*He was truly the father of gliding in America.

*It is appropriate that John Montgomery is the first historical inductee into the U.S. Soaring Hall of Fame.



44) Montgomery portrait

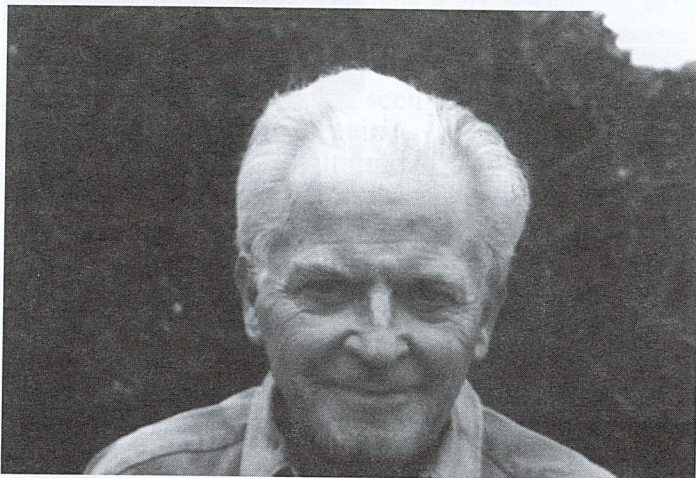
I want to thank the people that made my John Montgomery research possible:

*Ace and Judy Campbell, Aviation historians from San Jose who have an extensive Montgomery

archive, and who built an 1884 glider replica now hanging in the Hiller Aviation Museum.
 *Jim Short, one of the Soaring Society of America directors, who made me answer some tough questions about Montgomery.
 *Gary Fogel - Soaring Historian who was an

excellent speaker at the 2002 S.S.A. Convention, and author of a recent book on the history of soaring in San Diego.
 * Santa Clara University, and its representative Bill Adams, who accepted the award for the University today.

About The Author



Richard (Dick) Huppertz

Richard (Dick) Huppertz is a licensed commercial pilot for land, sea, and gliders. He has been in soaring for 50 years, and holds U.S. Diamond C (756).

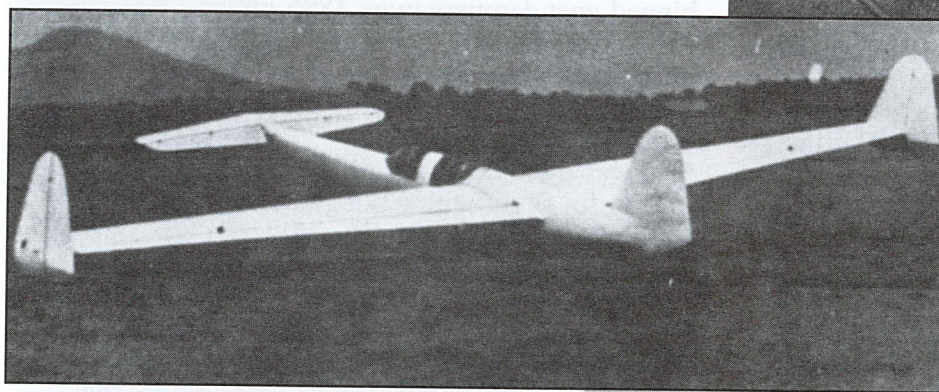
After graduating from Williams College, he took an MFA in visual communications from the University of Copenhagen, Denmark. He produced and directed over 30 industrial and documentary films for Westinghouse. He is founder of the Westinghouse Corporate Design Center and worked with noted designer and film-maker, Charles Eames of Eames chair fame.

Huppertz was an executive V.P. with Saul Bass & Assoc. (Oscar for best theatrical short film, 1970) and did feature film titles for Robert Scorsese's, "Casino," "Age of Innocence," and "Cape Fear," among other notable projects. He wrote, filmed and produced, "Sky Sailing," "The 1-26 Regatta" and wrote and narrated "Operation Sailplane." His current film project is, "Williams College, 1950s."

From The Archives

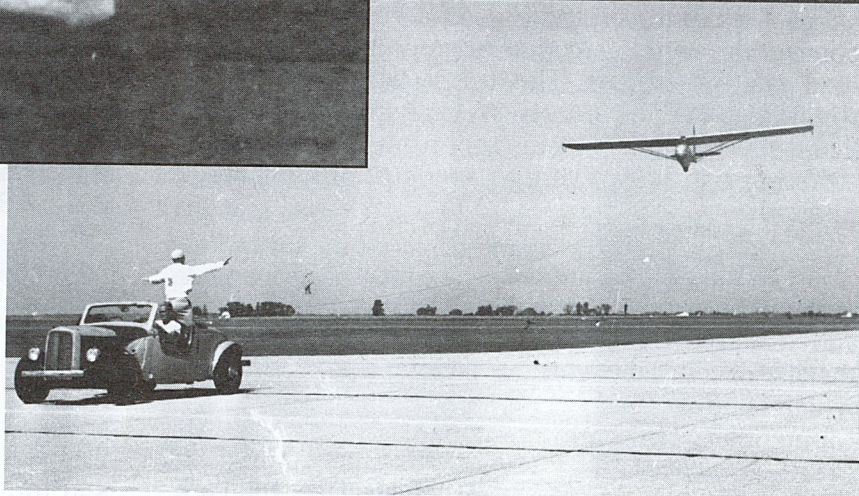
(Continued from page 16)

Right: In this 1924 photo, little Marie Bernard seems somewhat unhappy at the controls of the German Gymnick primary glider built by Dana L. Darling



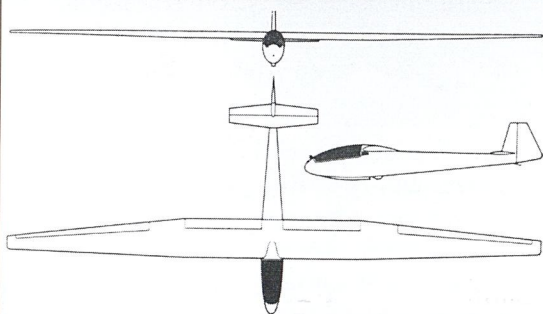
Above- Japanese "Komo" glider built in 1945, designed by S. Honjo as a prototype for fighter aircraft. (*Soaring*, July-August 1954)

Right- Tom Page photo of solo training -1956. Instructor sits in the rear of the glider club jitney facing aft, and arm-motions directions to student pilot in the towed Schweizer 1-19.



Now on Exhibit

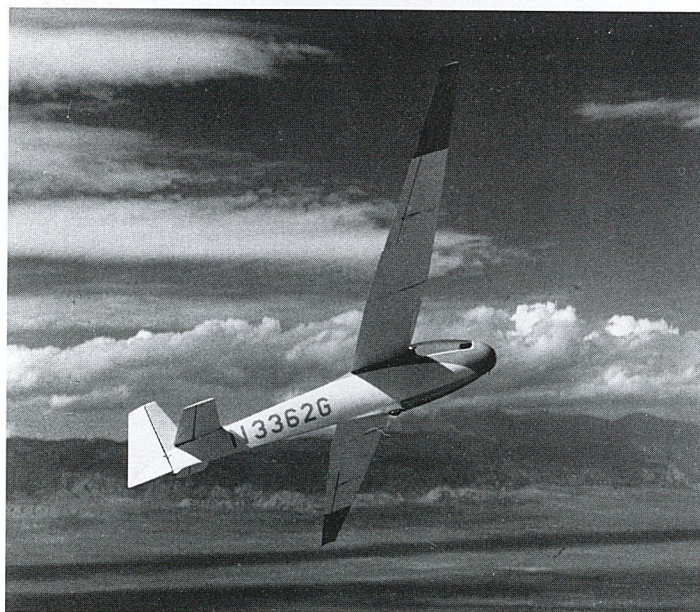
By: Brian Howard, NSM Director of Development and Collections



The National Soaring Museum's exhibit overhaul in May 2002 allowed the Museum to display many aircraft that had been in storage for many years. One of these was Gus Briegleb's BG-12BD. This high performance racer was introduced just prior to the proliferation of fiberglass-reinforced plastic sailplanes in the middle 1960s. It remained a popular ship throughout that decade and is remembered today as one of the last all-wood U.S. sailplanes to be built in large numbers.

A Thumbnail Sketch of the Briegleb BG-12BD

William Briegleb's BG-12 series stands among the best of the all-wood U.S. contest sailplanes. Designed specifically as a kit for homebuilders, approximately 350 kits and sets of plans were sold after the prototype's first flight in 1956. The BG-12 was intended to provide pilots an affordable, easy-to-assemble sailplane with contest-level performance. Kits were sold through the Sailplane Corporation of America.



Above: 1961 photo by George Uveges.

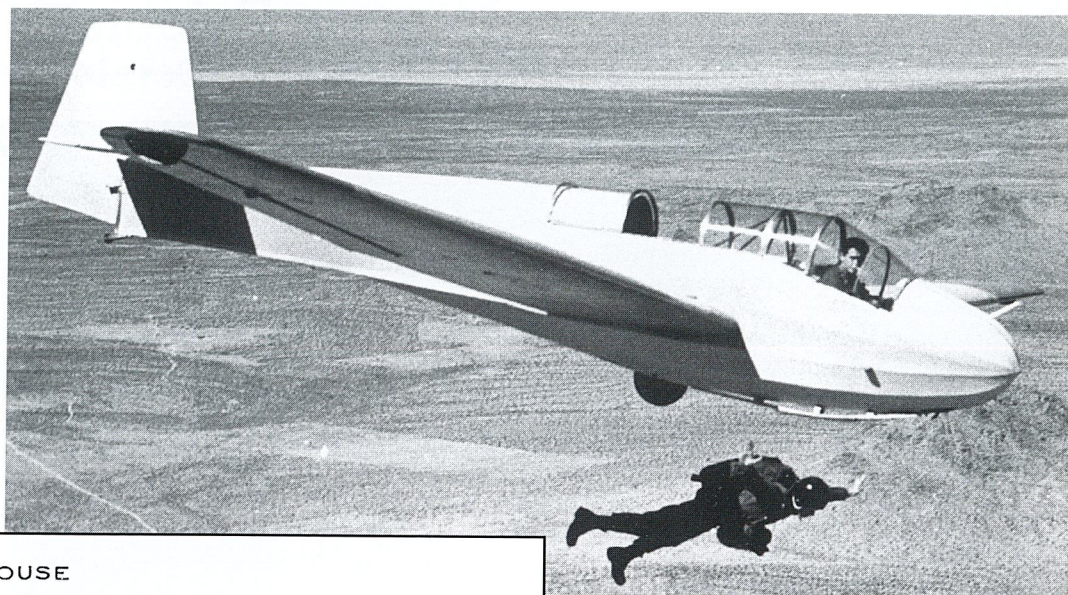
The first production model, the BG-12A, employed a three-part wing that proved cumbersome to assemble. The BG-12B featured a two-piece wing, and became the most popular variant after its 1963 introduction. The sole BG-12C was built without flaps and had airbrakes installed to conform to world Standard Class requirements. The BG-12BD variant eliminated 3 degrees of wing twist and had an aileron linkage system installed to enhance performance and to delay the onset of wingtip stall.

The BG 12-16 racer developed from the basic BG-12, employing a mixed construction of wooden wings, metal-framed tail, and a fuselage covered largely by fiberglass-reinforced plastic. Robert Kellner of North Olmstead, Ohio built the aircraft on display between 1969 and 1972. This BG-12BD, serial number 162, first flew in March 1972 and was donated by Mr. Kellner to the National Soaring Museum in October 1977.

Span:	49' 2"	15.0 m
Length:	21' 11"	6.68 m
Wing Area:	141 ft. ²	13.08 m ²
Empty Weight:	500 lbs.	227.3 kg
Wing Loading (max.):	5.3 lbs./ ft. ²	25.87 kg/m ²
Glide Ratio:	34:1 @ 56 mph	(93 km/h)
Rate of Sink:	2.26 ft./sec @	.69 m/sec
	46 mph	@76 km/h

From The Archives

Right- 1963, A George Uveges photo of a parachutist jumping from the rear seat over the leading edge of a Schweizer TG-3A. (No ID of jumper, pilot or location.)



THE WHITE HOUSE
WASHINGTON

May 3, 1939.

Dear Mr. Lawrence:

I should like to take this occasion to congratulate the officers and members of the Soaring Society of America, Inc. on rounding out ten years of excellent accomplishment in the science and art of motorless flight.

Soaring, originally conceived as merely a sport, is now generally considered by those interested in aviation as a most valuable phase in the training of pilots in the operation of airplanes. It may well be considered that a corps of experienced glider pilots forms a valuable aviation asset to our nation.

From the first flights of a few minutes' duration soaring pilots have made records of many hours sustained flight. This increased performance has been attained not only due to the increased skill of the pilots, but also to the improved design and construction of sailplanes and gliders. These modern aircraft are now equipped with flight instruments so that the pilot may gain experience in flying at night and under conditions of poor visibility.

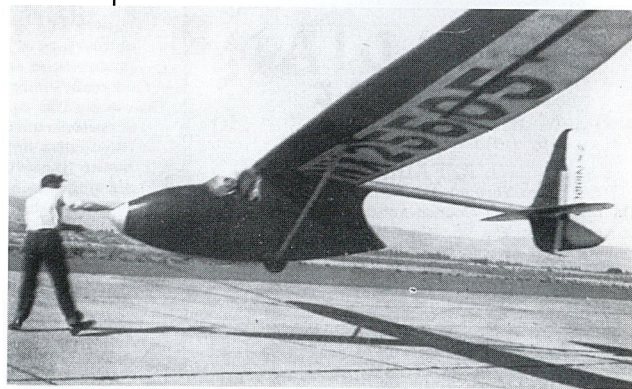
The development and continuation of interest in motorless flight are especially important in the development of air mindedness in the youth of the country.

I wish to extend my hearty good wishes to all soaring pilots participating in the Decennial Celebration. May all of them turn in performances greater than any they have enjoyed in the past.

Very sincerely yours,

Mr. Arthur L. Lawrence,
Chairman of Contest Board,
The Soaring Society of America, Inc.,
Box 385, Glen Head,
Long Island, N. Y.

Left- President Franklin D. Roosevelt's congratulatory birthday message to Arthur L. Lawrence, Chairman of Contest Board of the Soaring Society of America on its 10th birthday, as it appeared in the June 1939, Soaring. The SSA was founded in 1932, and this year it celebrates its 70th birthday. Apparently Mr. Roosevelt or his advisors confused the National Glider Association, which in 1929 encouraged glider clubs throughout the country to sponsor meets, with the Soaring Society of America. The National Glider Association was dissolved in 1931 due to financial pressures.



Kit Carson demonstrates a one-man hand launch to Ray Lurger in his Bowlus Baby. Others who tried their hands at one-man launches were Prater Hogue and Gerald Casey, longtime glider enthusiast who is now with CAA. (Have been trying to get a story on this unusual activity of the Tacoma Glider Club, but no luck. I've had fun looking at the pictures; maybe you will too.--Ed.)

Above: From Soaring,
November-December, 1951.