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Vol. 1, Number 1



Papers Available

Four papers are available through the National Soaring Museum. The first three are reprints from the 1974 symposium and are \$1.25 each, plus \$.25 for postage and handling, or \$4 for all three including postage and handling. The fourth is \$.50, including postage and handling.

1. Some Light and Ultralight Sailplane Designs, Carmichael.
2. Second Generation Ultralight Sailplanes, S.O. Jenko.
3. Some Thoughts on Ultralight Sailplanes, E. Schweizer.
4. Experiments and Observations in Soaring Flight, Wilber Wright

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Publisher — National Soaring Museum
William D. English, Jr., director

Editor — Meta L. Levin

Advertising is welcome. For more information please contact the National Soaring Museum, Harris Hill, RD 1, Elmira, N.Y. 14903, or telephone (607) 734-3128.

ON THE COVER: A museum symbol (see page 7). Capt. Ralph Barnaby, USN, Ret. (left) and former SSA president Miles Coverdale enjoy a nice day at the wing's dedication in 1972.

An Introduction . . .

NSM is a new venture for the National Soaring Museum. It is published to keep you informed of museum activities and to encourage an exchange of information about historical soaring information and activities.

Like the museum, the magazine can't survive without help. Do you need information about a subject? We'll publish your request.

Have a good story to tell? Perhaps you were a part of a significant event. Or maybe you renovated an interesting old glider. Why not tell us about it?

How about pictures? If you have accurate identification about them, why not share them with other museum members via NSM?

Manuscripts must be typewritten or printed — double spaced, please. If you want them returned, you must include a stamped, self addressed envelope.

Comments on any articles? We welcome letters, too.

Filling Needs

This column will be reserved for want ads, trading requests and the like. Please address all requests to NSM, c/o The National Soaring Museum, Harris Hill, R.D. 1, Elmira, New York 14903.

I need several issues of **Soaring** magazine for the years 1951 and 1952. I also have some duplicates to trade in case you know of anyone who might be interested in trading or who might need the duplicates.

The ones for 1951 and 1952 which we need are —

- 1951 March-April, July-August, September-October, and November-December
1952 January-February, March-April, May-June.

Duplicate **Soaring** Magazines

- 1941 May-June
1957 March-April, May-June, July-August, September-October
1958 May-June
1959 Jan.-February, March-April, December
1960 Complete set for year except for March
1961 January through June
1962 January
1964 January, April, May
1965 January, March, June, July, August, September, October, December
1966 March, April, June (2 copies), July (2 copies), August (2 copies), September (2 copies), October (2 copies), November (2 copies) and December (2 copies)
1967 January through December — 2 complete sets plus an extra January
1968 January through December — 1 complete set plus January, March, April, May, June (2 copies), July, August, September, October, November, December (2 copies)
1969 February (2 copies), March (2 copies), April (2 copies), May, June (2 copies), July, August, September, October, November (2 copies), December (2 copies)
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1971 January
1972 March
1973 February, March, July, August, September
1974 March
Jack Baugh, Almahurst Farm, P.O. Box 4237, Lexington, Ky. 40504

From the Director

From 1969 to 1975



ARTISTS MODEL ... A model of the new National Soaring Museum sits hopefully upstairs in the old one.

Photo by Allan Mitchell

by Liam English

One of the primary goals of this newsletter is to keep our members informed of progress made at the museum. In this article I will summarize the activities of the past several years, particularly as they relate to our efforts to develop a suitable facility to house our growing collection.

Since 1969, when the SSA first authorized the establishment of a museum on historic Harris Hill, a great many individuals and organizations have given generously of their enthusiasm, time and energy to bring the museum to its present state of development.

Under the leadership of Paul Schweizer, the first National Soaring Museum president, and with a great deal of help from Harris Hill Soaring Corporation members and other interested people, exhibits and displays were designed and built. Chemung County officials made crucial contributions in the form of loaned buildings and continuing maintenance support.

Through SSA authorized programs like the 5 x 5 and 50 x 5 funds, inaugurated in 1972, people from all over the country contributed financially to the fledgling organization and made it possible to plan and prepare for a bright future. This support, coming from nearly 1,000 soaring enthusiasts, has made it possible to develop a comprehensive and detailed plan for future growth. This support also has encouraged foundations and government agencies at the federal, state and local levels to make grants to the museum.

In 1973 the NSM began hiring a full time staff to help deal with the increasingly complex museum operations. As of this writing, the museum employs four full time people: Shirley Sliwa, business manager; Deborah Hudson, secretary and film librarian; Meta Levin, archivist, and education coordinator; and Liam English, director. During the summer months, part time employees are hired to help with the large number of visitors that come to the museum.

A planning study initiated in the fall of 1973 and underwritten by a government grant was of great significance to the museum. Conducted by outside consultants, the study made two points clear to the trustees: first, a museum devoted to motorless flight located on Harris Hill could become one of the most popular and important aviation museums in the country, and second, predicted high at-

tendance levels could be achieved only if the museum were carefully planned and designed to take full advantage of its spectacular site and exciting and unique subject matter.

Acting on this study, the trustees retained Richard Huppertz, a soaring pilot and highly regarded designer from California, to develop an exhibit program that would involve visitors in the spirit as well as the technology of motorless flight. Huppertz presented his program to the trustees at their October, 1974 meeting and received an enthusiastic response. Throughout his report, Huppertz emphasized that a visit to the National Soaring Museum "should be fun — something you tell your friends about, a unique experience that is only possible at this museum."

Armed with a coherent and comprehensive program the trustees began looking for an architect capable of translating their general ideas into a building suited to its site and subject matter. In Eliot Noyes, a long time soaring pilot and distinguished architect, the trustees found their man and put him to work on the project.

The design concept for the new museum building was made public last February at the SSA convention in San Francisco. Two models of the museum building, one in large scale and the other small, accompanied by mounted schematic drawings and site photographs, made up a popular booth at the convention. This will be a special building, one that could provide for the needs of the museum in the years ahead.

However, buildings don't get built without money, even beautiful buildings. For the past several months the trustees have been planning a fund raising strategy that will put into action when exhibit and building plans are completed. Volunteer solicitors have been recruited, data gathered, and printed material developed.

The museum trustees and staff have been encouraged by the support that they have encountered since the start of the project. The goal of developing a truly well thought out and professionally competent museum, capable of contributing to the growth of the soaring movement and aviation throughout the United States has attracted men and women of great talent. As museum director it has been my honor and privilege to be associated with these extraordinary and far seeing people. I am certain that a bright future lies ahead for the National Soaring Museum.

2nd Annual VSA Meet Signals New Movement

by Geoff Steele
President - Vintage Sailplane Association

Wednesday, the 14th of May.

Two fronts, back-to-back, push eastward from the Great Lakes, promising an occlusion and poor flying weather for the Second Annual Vintage Sailplane Regatta scheduled for the coming weekend in Elmira, New York.

Although the weather service at Washington's National Airport predicts that both fronts will slide through before Saturday, they're unclear how conditions will be on the other side — "maybe good, but maybe wet."

Passing through Frederick, Maryland, early Friday morning, the drizzle is heavy enough to run the wipers constantly, but by Harrisburg, the sky is clearing and cu are beginning to form in the lee of the trailing cold front.

To the East, the Schuylers, Stan, Karen and new young son Eric — are probably preparing to leave New Jersey with their LK-10, not knowing that the gray overhead will soon be blue. To the North, Peter Masak and several friends are preparing their Scheibe MU-13d for an all-night run from the Ottawa vicinity to Harris Hill by basking in the clear air behind the front and looking forward to a weekend of fine flying.

Tom Smith's blue and white Kirby Gull has been in Elmira for a week already, resting peacefully on its trailer in the Hill's glider hangar next to the impressive orange and white Schweizer 1-19 owned by New Jersey's Aeroclub Albatros and beautifully restored by Gus Scheurer.

The schedule calls for "informal flying" on Friday for whomever can show up. Although the event is scheduled for three days, to coincide with the National Soaring Museum's Spring Symposium ["The Use of Sailplanes In Atmospheric Research"], the "Old-Timers Get-Together", and the Spring Meeting of the Museum's Trustees, the regular work week prevents most pilots and ships from taking advantage of the northwest "ridge" that is working on the Hill.

Late in the afternoon, Jan Scott and his family arrive from Lovettsville, Virginia, trailering his petite, swastika-tailed Wolf — an open cockpit high winger designed in 1936 in Germany. Jan, who normally sits astride a triple blowtorch for American Airlines, is taking six giant steps backward in soaring history this weekend.

Because Saturday promises to be a good day, Friday evening is spent settling last-minute details for the meet. Roy McMaster, tapped to be "contest director" almost gloats in the fact that the previous weekend had provided magnificent flying weather — enough at least to push his Cirrus more than 13,000 feet over the Chemung Valley in a wave. His wife, Ellen, noting the wistful look on my face, honchos three blond sons into the house and remembers that most of our "oldies" have a hard time topping 20:1 in L/D. To console me, she suggests a swim in their heated backyard pool, an invitation easy to accept after several hours in the saddle of a VW.

Roy finishes a little work on his Winnebago in preparation for his coming jaunt to Sugarbush and we sit down to sketch out a rough schedule of contest events.

Saturday dawns bright, but not entirely clear. Pilots and crews down a nifty breakfast produced by stalwart soaring booster Shirley Sliwa and Company in the Administration Building, then take in a few minutes of the opening Symposium session before ambling out to assemble ships and attend the pilots' meeting.

Horace Meredith, ex-Syracuse TV and Strategic Air Command weatherman appears and is dubbed the "unofficial official weatherman for the contest". He looks for a marginally soarable day. An occlusion to the southeast apparently has backed up the upper air; a cap of hot air will keep convection to a minimum today. Official unofficial recommendation: "Stick to the 'ridge' — if there is one."

Pilots and crews then buddy-up the ships and themselves for a group portrait and some longing glances from some of the Symposium attendees — many of whom flew these same aircraft years, maybe decades ago. The number of ships present is surprising, considering the timing of the event, coming before the "usual" summer vacation for most people. Six ships have assembled to compete: the LK-10, the Wolf, the Kirby Gull, the Scheibe MU-13d, and RJK-5 and the Schweizer SGU 1-19. Most designs are over 20 years old and with the exception of the Gull and the Wolf, most were built that long ago as well.

Gull wings on a glider seem to have a certain fascination. One conscientious bystander notes that the Gull "probably won't be able to fly with its one wing all bent up like that" as he watches assembly of N-41829. Yet, all together and in the air, it's a marvelously graceful ship. Tom Smith proudly shows off the beautiful lines as he makes a towed fly-by of the field after take-off.

The rather informal contest yields some surprising performances. First task: spot landings, with a one-hour flight duration. Two "classes" of ships compete — those without wheels, spoilers and brakes — and those with. Skidding the Wolf across the grass on its "afterthought" of a wheel, Jan Scott captures the winners laurel in the former class by stopping just 4' 8" from the mark — not bad for a glider with no spoilers and brakes. Aeroclub Albatros' Schweizer 1-19 takes the "sophisticated" spot landing top spot, screeching to a halt just 28" from the "X".

Then comes altitude gain and duration. Peter Masak and his sky-hungry MU-13d drop the tow, climb smartly to what cloudbase there is, and promptly begin to set up housekeeping for the rest of the afternoon. This "floater" from Canada and its skilled pilot absolutely cream the altitude gain and duration tasks with one fine flight topping 6,000 feet ASL and lasting more than 4 hours.

When the sun goes down, so do the pilots. But the day is not over. The evening brings the combined VSA-Museum banquet. Hangar flying buzzes with the renewal of old acquaintances. And there's the enjoyment of new friends made and new experiences shared. Dr. Ernst Steinhoff, a pioneer gliderguider, entertains the crowd by recounting the world's first 500 km cross country — flown by him and three other pilots on the same day from Wasserkuppe to Czechoslovakia just before the outbreak of the Second War. He also humorously recalls a later flight, tangling with some cactus in Arizona while trying to "stretch" a twilight landing approach in a glass bird. Miraculously, no damage. The strong, thin wings sliced through the cactus cells like a clean knife. Steinhoff marveled at being able to simply wipe some wet green ooze from his wings!

Walter Hausler, down from Rochester for the weekend, is one soaring stalwart who wouldn't miss the event. Those who know Walter, and his years of dedicated effort supplying tender loving care to the SSA's film library, welcome him. Faced with no key for a cabin at midnight, he shares a

OPEN CLASS LK?

Geoff Steele's
wide angle lense
lengthened Stan
Schuyler's LK-10
wingspan.



THE ONE WITH THE FUNNY LOOKING WINGS ... Tom Smith and his Kirby Gull.

Photos by
Geoff Steele



bunk in my camper and relates several of his always-fascinating anecdotes about the Rochester Soaring Club — one of the nation's oldest organized groups.

Sunday. Another rib-spreading breakfast, complete with cinnamon doughnuts. The first "formal" VSA meeting takes place in the company of all pilots, their families and a dozen or more interested onlookers. Nate Frank from the Tidewater Maryland area is there. He's been flying 1-26's at the Hill since I was in high school. Somehow I age, but he doesn't; he looks just the same.

There's a real feeling that a vibrant new organization has been born from a mass of latent, but energetic interest. Now we're truly a "movement". With a new slate of officers, VSA now can begin to grow, capturing members and spawning events nationwide in support of some of the activities and goals of the National Soaring Museum.

The advantages of VSA as a new soaring movement pop up quickly on the fingers: there's no real "contest" pressure — everyone just loves to fly old gliders informally; older sailplanes — the TG-3s and 1-19s — are inexpensive and numerous and can provide good flying for many years to come; as a group, we can keep the oldies flying, reminding the rest of the soaring world of its heraldry (many present VSAers were "there" when it all began). Most of all, there's that glowing feeling that someone less than a corporation president with a multi \$K bankroll and a maxi-investment supership **can**, indeed, join the soaring

movement and **belong**. A Silver C in a Wolf will certainly match pilot skill at a level more than comparable to a distance diamond in an LS-1.

Drizzle spatters the sky. A breeze chills the air struggling to reach the high 50s, bringing out rainjackets and sweaters. Stan Schuyler wins the morning's ground contest cup award for having the best-of-show ship, the LK-10. The previous evening, wife Karen won the Jonathan Livingston Seagull pin award for "best crew" for her tireless efforts nature-feeding their newest crew member, Eric, and helping Stan assemble the lovely emerald green sky surfer.

Facing a no-contest day, most contestants opt to head home early — thinking ahead to the first planned regional VSA meet scheduled for Labor Day weekend at Jan Scott's private gliderport in Virginia.

Quick goodbyes. Final adjustments to gear and trailers. Dogs and kids all aboard. Sooooo long, Elmira; helloooo Routes 15, 20, 14 and 81. Only one flying day for the weekend? So what?! The smell of wood, cotton and dope was **more** than worth the trip. It was a purely satisfying meeting of good friends that happened to have the added benefit of some enjoyable flying.

Now . . . if only more old gliderguiders out there can overcome their embarrassment at owning something more than a decade in age and join in the fun with us.

The President Speaks After 1975

by Ted Sprague

I appreciate the opportunity to serve as president of the National Soaring Museum Board of Trustees for the coming year. I would like informally to outline and discuss our direction as I see it for the next 12 months.

Paul Schweizer has done a fantastic job in bringing the National Soaring Museum concept to where it is now. We are viable, recognized, and I believe an effective organization given the limits of our budget and physical space.

From this plateau, we easily can see the need and potential of a new museum building and expanded program. We also understand once the capital funding is raised, the National Soaring Museum will have to stand on its own feet and seek funding from a broad spectrum of sources.

It seemed to the Board in May that the first order of business is to contact major sources of capital for the new museum. Initial success in raising money will breed ongoing success. We have an outstanding physical site, a purpose unmet in the United States today, an educational program that can be as effective nationally as it has locally, and last but not least, the professional staff necessary to keep our eyes and work on the goal.

However, there are some problems. We are virtually unknown among most soaring enthusiasts on the West Coast. Or, if we are known, we are thought of as a local entity, not as a national institution. I believe it is important that the museum's presence and plans be made known nationally.

Any organization is strengthened with communication and NSM is no exception. If you have ideas, comments, criticisms or anything you feel should be passed on to Liam or me, please sit down and drop us a note. (Ed. note — pertinent letters will be printed in future NSM issues.)

We are on the crest of a wave. Seldom do people get the opportunity of making a significant contribution to the past, present and future of a particular endeavor of man. We have this opportunity. Our goal can be achieved and the only thing that will defeat us is lack of perseverance (and work).

Let me hear from you.



Paul Schweizer



HOW'S THE WEATHER? . . . Meet the President and Six Baker.

A Tribute Building Job For Former President

"Without Paul Schweizer, there would be no National Soaring Museum."

With these words at the May Board of Trustees meeting, new museum president Ted Sprague began a moving and effective tribute to Paul Schweizer's leadership of the museum since its inception.

Paul's interest in developing a museum devoted to soaring antedates the establishment of the National Soaring Museum by many years. He has collected material of great significance to the soaring movement in the United States. Two of his most significant acquisitions were the collection of the first SSA president, Warren Eaton's correspondence and the file of Fred Loomis's photographic negatives, probably the most complete photographic record of the early national soaring meets. Without Paul's intervention, it seems highly likely that these important files would have been lost.

Paul was instrumental in organizing the effort that in 1969 led to the decision by SSA to establish a museum on Harris Hill that would become the repository of the SSA archives.

When the museum was incorporated, in 1972, it was only natural that the trustees would turn to Paul as its first president. In that capacity he was ideal. He proved to be a virtuoso performer in all phases of the museum's development, including even the design and construction of museum exhibits.

The Board and staff of the museum is delighted that Paul will continue his active role in museum affairs as vice president in charge of the building program. In this capacity, he will directly supervise the crucial next step in the museum's growth — the construction of a permanent facility suitable to meet the museum's needs in the years ahead.

Fourth Symposium Focuses On Meteorological Research

by Victor Saudek

The fourth National Soaring Museum symposium, May 16-18, 1975, dealt with an aspect of the sport which is natural and romantic: "The History of the Use of Sailplanes in Meteorological Research."

What is more natural than scientifically inclined soaring people using their skills to explore secrets of the atmosphere? These pilots warned the world's expanding airline businesses and meteorologists of the extent, size and violence of wind fields in thunderstorms, orographic lee waves, and clear air turbulence.

The session began with an abstracted version of Harland Ross's paper on early soaring meteorology. His paper covers nineteenth and early twentieth century use of ridges (slope soaring) and Ross's early 1930 recognition of the influence of air masses and "high ground" on soaring. Ross had been instrumental in encouraging "flat-land" (thermal) soaring in 1938 in the United States; in recognizing and exploiting lee waves near Bishop, Calif. in

1944, and investigating the Marfa, Texas Dew Line Front in 1958. Ross is a "one man project" and investigator.

The other activities discussed were more cooperative ventures: "Thunderstorm Project" of 1946 (William Dolger and Ray Parker), a synopsis of early American wave soaring (1940-1950, John Robinson); the "Conception and Fruition of the Sierra Wave Projects" (Saudek) and the "Problems and Solutions Involved in High Altitude Soaring Wave Research" (Larry Edgar). John Graves' paper described the stratosailplane proposals of the Southern California Soaring Association (1952-1953). Senior Airline Captain Kim Scribner (of Pan Am) showed films and related incidents in the exploration of "Clear Air Turbulence" using a 2-32 (Explorers Research Corporation, 1968). An unexpected bonus was Dr. Michel Boue's series of slides on wave soaring at Saint Auban, France.

Texts of these papers are available through the National Soaring Museum.



WINGS FULL OF WET, GREEN OOZE . . . Dr. Ernst Steinhoff regaled banquet goers with tales of days gone by.

Photograph by Geoff Steele.

A Symbol For NSM

In 1972 the National Soaring Museum moved from its first home in the administration building, adjacent to the glider field, on Harris Hill to an old house. Soon after officials decided it needed a symbol. A combination of creativity and hard work by many people brought the Schweizer 2-32 wing. Here is its story.

By Paul Schweizer

When Chemung County gave the National Soaring Museum the use of the Merrill Building on Harris Hill, NSM

officials agreed that we needed something to show that this was different from an elegant home. We discussed what to do. Someone suggested a vertical mounted sailplane wing which would be an attention-getting pylon, as well as to be something attractive to look at.

We looked into this and found that Schweizer Aircraft Corporation had a damaged 2-32 sailplane wing.

SAC was willing to donate this to the effort. Carl Kline, in SAC Management, offered to repair the wing providing he could get volunteers to help. Tony Doherty agreed to help.

The wing, which is half of the complete sailplane wing, is 28 feet long. It was decided that it would look better to eliminate the aileron and fill this in with permanent structure. Working in their spare time, Carl and Tony rebuilt the wing at the SAC Plant and Gunter Bartsch painted it. Dale Gustin, a local artist, and sailplane pilot, put the museum initials on each side of the wing.

Because of the wing's size, and the strong winds that are prevalent on Harris Hill, it was evident that a heavy structure would be required for support. Les Schweizer, one of SAC's engineers, offered to do the structural design. He felt that sufficient strength to handle 90 mph winds should be provided. The resulting structure that developed was a welded unit, approximately 10 feet long—of which 8 feet was to be mounted in concrete in the ground. The unit was big and weighed approximately 500 pounds. American Bridge Company fabricated the assemblies.

The unit required an 8 foot deep hole, which New York Telephone Co. was willing to dig.

Various Harris Hill Soaring Corporation members helped make forms and the Chemung County employees helped do the concrete work.

The big problem then was mounting this 28 foot wing vertical into the welded assembly. This required many people with ropes to raise and support it. Here again, many members of SAC and HHSC helped. Don Quigley, also of SAC Management, developed a metal skirt to hide the supporting structure.

The Chemung County Building Department assisted by land-scaping the area and seeding grass.

This project is typical of others the Museum has carried out which depended on NSM friends and supporters. The wing has withstood the winds and weather so far, and should be a constant reminder of the National Soaring Museum.

Saga of the MU-13

by Peter Masak

Most of the following story is part of a letter written to me by Walter Piercy, the former owner and rebuilder of this sailplane and now the president of the Soaring Association of Canada.

The original Mu-13d was designed by Dipl. Ing. Scheibe, and the first builder of the type (and presumably the builder of the original ZPQ machine) was the firm of Wolh. Wilh. Jehle, Donaueschingen, Germany. It was a special "light wind soarer" design, and was advanced in its day, with an L/D of 28 to 1, and a minimum sink rate less than 2 fps at 35 mph.

This excellent weak weather performance enabled this type of sailplane to win first place at Rhon, Germany in 1936, and second place in 1938. It was subsequently used throughout Germany for glider pilot training, and many German World War II pilots flew this type of glider. It is estimated that my sailplane was built in 1940 or '41.

In late spring, 1945, when the European war was just about over, a Canadian destroyer docked at a port in Germany. The second-in-command (name unknown) was a glider pilot, and when he saw a few German gliders abandoned near the dock in a field, he knew how to handle them — dismantle, etc.

He got permission from the Captain to dismantle four gliders and place them on the deck of the destroyer for transport back to Canada. Apparently there were 3 Grunau Babies and the Mu-13.

The Mu-13 was lashed outboard, and obtained a fair amount of sea-water damage in the 8-weeks or so before the destroyer docked at Halifax. The port authorities there, of course, seized them as 'prizes of war', and after doing so did not know what to do with them.

This was in the newspapers at the time, and they were eventually turned over to another Government Agency — the National Research Council. The NRC didn't know what to do with them, either, and the newly-formed Soaring

Association of Canada wrote the NRC suggesting that the four gliders be allocated out to four clubs, and suggested that any research of an aeronautical nature would be carried out by the clubs.

The machines were given out on a sort of indefinite loan to the Gatineau Gliding Club, University of British Columbia, and Queen's University Clubs (each one got a Grunau Baby) and the Mu-13 went to the McGill University Club (which very shortly became absorbed into the Montreal Soaring Council). In the Queen's University club, the aeronautical project was to attach an oak ski to the small hardwood skid for landing in the snow. This was fairly successful, but the wide skid created a large amount of drag.

It was about 1948 or 1949 that the McGill Club got the machine, and it was about this time that the Soaring Association of Canada was working with the Department of Transport to license gliders. The DOT started to use registration letters starting with "Z" for this purpose, and apparently the Mu-13 was tentatively assigned CF-ZPQ (Z for gliders, and PQ for Province of Quebec), thus having the distinction of being the first glider in Canada to be registered. This registration was never officially assigned, because the McGill Club had no proof of ownership, but it was flown annually with a temporary license.

The people who flew the machine were not very happy with its condition. It was originally water-damaged on the deck, and it was necessary each summer, in Quebec Eastern Townships farms, to stake it down outside. This caused the glue in the wooden wings to deteriorate fairly rapidly, and because of the concern the more technical members, MSC tried injecting glue, and carrying out static tests and calculations.

Steve Brochocki, who worked at Canadair — an aeronautical engineer — and an MSC club member, decided to try and make sure that the machine was determined to be safe to fly. In spite of all they could do the



The MU-13.

machine got progressively worse due to the gradual deterioration of the wartime glue, made from animal blood. At this time I am told, the club installed a very effective placard in the cockpit, which read something like this — "DO NOT DO ANY AEROBATICS IN THIS GLIDER — YOU SHOULD SEE THE INSIDE OF THE WINGS!"

Apparently, about this time it was flown in the Canadian championships by an MSC pilot, who placed well. It was grounded in the summer of 1955, and that fall (Nov. '55), the club had progressed far enough in correspondence with NRC, to get them to declare the machine "surplus" through CROWN ASSETS DISPOSAL CORP. They got legal possession of it for \$100.

However, the machine did not fly again, and the 'temporary' registration of CF-ZPQ stayed in the Montreal Office of DOT files until its reuse was requested in 1962.

In the meantime, the glider was stored in some farmer's haymow from about 1955 until Walter Piercy decided to tackle the plans for the glider from the original designer in Germany, and went ahead with the task of building new wings, and repairing other parts of the machine.

By May, 1963, the work had been completed. Test flights were carried out at Gatineau Gliding Club during the week of May 19 to 25. ZPQ moved to a new home a few years later, when Walter Chmela purchased it for York Soaring Association.

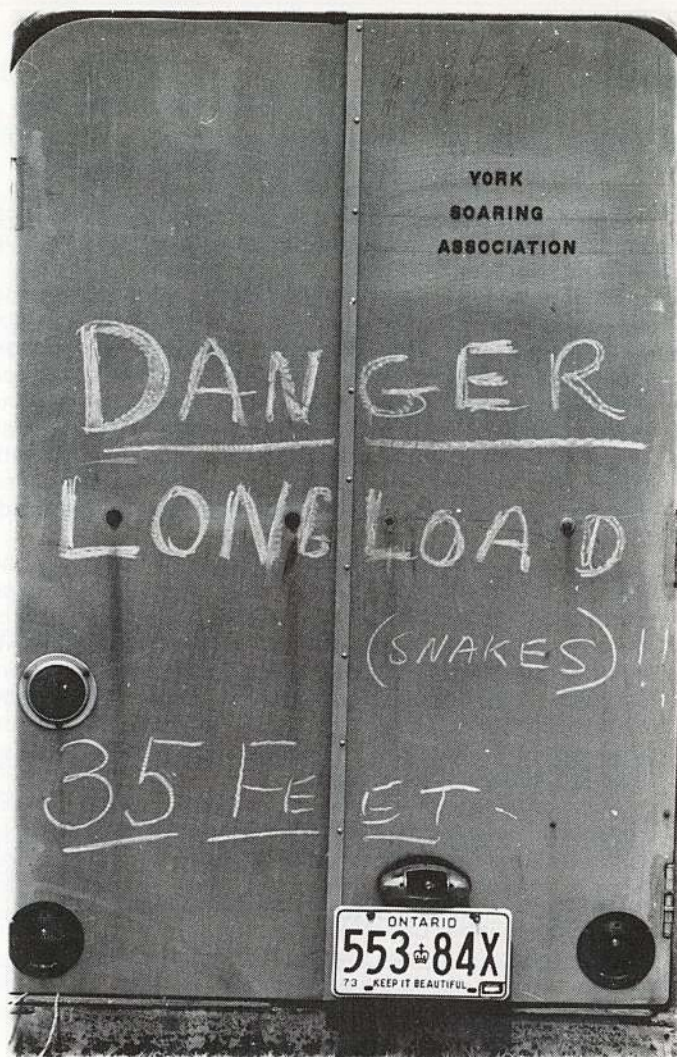
Many Silver "C's" were completed in the Mu-13, until it was damaged on landing in a groundloop. Teo Talevi and myself then jumped at the chance when we heard it was for sale, and spent the winter and spring of 1973-'74 repairing the damage.

We have since been very pleased with its performance, and its uncanny ability bank steep in thermal cores and waft up past other gliders.

At the Antique Glider Regatta in 1974, this characteristic helped me win the Altitude award, and the Altitude and Duration trophies in 1975.

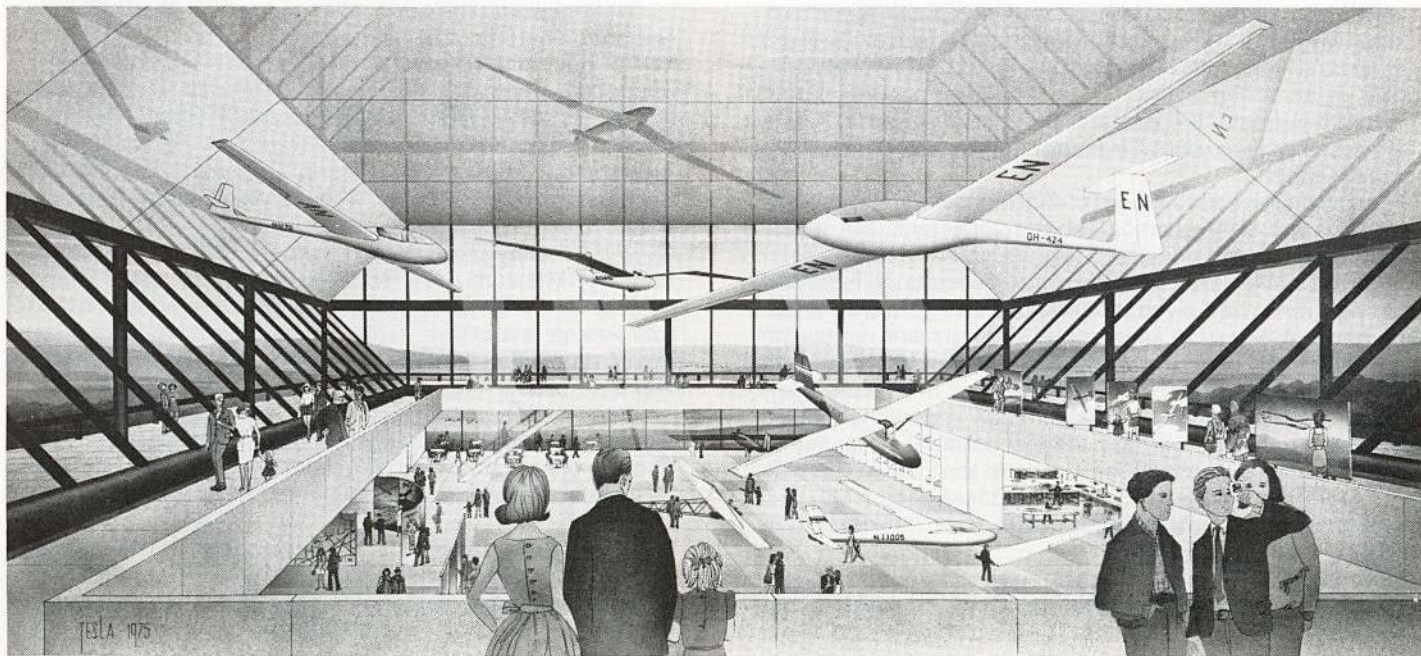
My best local flight in the Mu-13 was a 300 km. Diamond Goal triangle attempt this month, in which I completed 241 km. in 6 hrs. I plan to try again at the next opportunity.

No doubt, this sailplane has proved to be one of the most outstanding early European designs, and is still looked up to even today.



DON'T TREAD ON ME ... Peter Masak made certain no one bothered the MU-13's trailer.

Photo by Geoff Steele



RENDERING ... Artist's depiction of what the inside of the new museum would look like.

Restoring the H-17

by Marvin Frost

When I delivered the Hutter H-17 to the National Soaring Museum July 10 I was asked to provide a small writeup about the ship's restoration.

To begin with there really wasn't much restoring required; mostly patching, stripping, and finishing. The wings required a little patching because the support brackets on the trailer broke when the ship was transported from Massachusetts. This allowed the wings to drop to the axle and punch holes in the leading edges. A few small pieces of birch plywood glued in place then sprayed with aluminum dope fixed the wings. The rudder, stabilizer, and elevator were in good shape and required very little additional work.

The fuselage was another story. When I got the ship the fuselage was painted with a light blue enamel and looked pretty good. Under the enamel, over each scarfed splice of the plywood covering and at each bulkhead position, two inch fiberglass tape had been applied with polyester resin. Because I was curious about the condition of the wood joints, I tried lifting some of the tape and found it peeled off rather easily. So I decided to remove all of the tape because it wasn't adhering very well.

Most of the joints were in good shape, but this left the fuselage in a weird looking condition. Rather than try to build up the area of the two inch strips to the level of the present enamel (which was quite thick), then paint the whole thing, I decided to strip all the paint off, then

varnish it.

This proved to be a real job. The enamel was really hard and thick. It took four or more applications of stripping solution to get down to the bare wood. Thanks to the small size of the fuselage only four quarts of remover was required.

Removal of the enamel exposed one panel that had been damaged and patched with fiberglass cloth. I removed the panel and scarfed in a new one. A few short cracks appeared so I put on surface patches in these places.

The ship originally had only a landing skid and tail skid, but the previous owner had cut most of the main skid off and rigged a dolly arrangement using two six inch tail wheels. This necessitated cutting 2 holes in the fuselage bottom in the cockpit area to clear the wheels. A new skid was spliced in to bring it back to the original configuration. I found a couple of rubber shock mounts in my junk box which worked well at the aft end of the skid. Not needing the wheel clearance holes in the fuselage bottom I replaced the plywood panels here also.

The original instrument panel had holes for two instruments but I thought three instruments would be better. So I made a new panel and installed an airspeed indicator, altimeter, and variometer. Two coats of polyurethane varnish was applied to give the wood a natural finish. If you don't look too closely you may never see some of the deep scraper marks.

Education and the Miracle of Flight

by Meta Levin

Recently I had an interesting experience.

With admitted trepidation I headed for Neighborhood House in Elmira to introduce a large group of eight to 13 year olds to soaring. Neighborhood House is a community center in an urban area.

The youngsters that greeted me gave every appearance of being street wise. But I was there and so were they, so I plunged ahead.

To my surprise the miracle of flight took over. They were wonderful and enthusiastic. Not one wisecrack, but plenty of participation greeted the program.

This was even more unbelievable, because unlike every other program I had given, not one of these youngsters had ever been in any kind of airplane. Usually one or two at least have been on a commercial airliner and are eager to report what they heard and saw.

Flight seems to hold a fascination that cuts across economic and age barriers. Some women in a senior citizens tour group asked me if it was too late to learn to soar. From the smallest tots to the oldest senior citizens, everyone wants to at least try the museum's Schweizer 1-34 cockpit.

Encouraging this is part of my job.

Up until now the education work has been full of introductions — introducing me to school, camp and scout personnel, and introducing them to the museum and soaring.

But with the start of a new school year we have plans for some more specialized activity.

Teachers and principals in the area will receive flyers announcing programs geared to their special needs. For instance, local history can't be taught without some references to soaring and the impact it has had on the economy and the community. The museum is ideally suited to provide supplements to such material.

Weather and flight units also easily lend themselves to a National Soaring Museum program.

To this end a special high school level program in cooperation with the Corning Glass Museum, the College Center of the Finger Lakes marine biology facility on Seneca Lake, and our local Flight Service Station is in preparation. Referred to as earth-air-water, the program is designed to introduce the high school students to work done in each area.

With the help of flight service briefers, the National Soaring Museum will provide information on weather forecasting, then relate it to the practical problems of flight (of course motorless flight will be emphasized). Some measuring equipment and various kinds of weather maps will be used.

Cooperation is the key to another education project. The Glenn H. Curtiss Museum in nearby Hammondsport, N.Y., and the National Soaring Museum are preparing a "Cradle of Aviation" traveling exhibit aimed at fourth, fifth and sixth graders.

Using maps, pictures and artifacts that can be held and manipulated, the traveling exhibit is designed to teach the youngsters about the beginnings of flight, and the importance of Curtiss and soaring pioneers in it.

Although preliminary work has been aimed at local schools and clubs, the museum also is thinking on a

Restoring the H-17

by Marvin Frost

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PHILOSOPHY OF THE NATIONAL SOARING MUSEUM

(The National Soaring Museum was created in 1969 when the SSA Board of Directors authorized the Harris Hill Soaring Corporation to establish and operate the National Soaring Museum, Archives, and Library. In 1972, the National Soaring Museum was chartered by the New York State Education Department as an educational institution, and a separate non-profit corporation was set up at that time to conduct its activities. The activities of this Corporation are carried out by a Board of Trustees through a Director.)

The National Soaring Museum exists primarily to fulfill two major functions: (1) That of preserving the heritage of motorless flight in the United States, and (2) That of promoting a greater knowledge of gliding, soaring, and related aeronautics and physical sciences among the general public.

Motorless flight has played an important role in the realization of man's age old dream to fly. It can be said with assurance that man would not have taken to the air had it not been for the gliding experiments of many distinguished and inspired men. Over the years, aerodynamic and meteorological breakthroughs of major significance have come about through the efforts of men and women who were fascinated by the concept of using natural forces to fly. Gliding and soaring has grown increasingly sophisticated and performance has increased markedly since the days of the early pioneers. The National Soaring Museum will show that motorless flight has contributed to the overall history of man, and that this history is inspiring, instructive and one that needs telling.

The Trustees of the National Soaring Museum believe that the education of the general public in aeronautical subjects is a fundamental need in a technologically oriented society. In recognition of this, the Museum will provide educational programs that will emphasize the contribution that soaring and aeronautics have made to the whole society.

Scattered through the United States are masses of important material that need collecting, preserving and interpreting. The National Soaring Museum will provide the facilities and staff to bring this material together into a useful collection. The Trustees of the Museum are aware that they bear a heavy responsibility to the future for the preservation and transmission of this rich harvest of aeronautical lore.

The National Soaring Museum further believes that it has the duty of promoting a greater knowledge of motorless flight and related aeronautics among the general population, using whatever techniques seem appropriate to that end. The Museum intends to devote considerable effort to the task of trying to bring the general public into touch with the spirit as well as the more factual aspects of motorless flight.

The National Soaring Museum intends to become active in the life of the local community, as well as the nation as a whole. The NSM believes that it can provide valuable service and cultural enrichment to the many who visit the Museum.

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