Bungee Coffe

All About Vintage & Classic Sailplanes



Vintage Sailplane Association

Lawrenceville-Vincennes Int'l Airport 13610 Hangar Road Lawrenceville, IL 62439 A Division of the Soaring Society of America a 501 (c) (3) Charity <vintagesailplane.org>

F "Vintage & Classic Sailplanes'

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Promoting the acquisition, restoration, learning and flying of vintage and classic sailplanes and gliders and preserving their history since 1974.

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Articles, news, letters and calendar events must be submitted by 15 February (Spring), 15 May (Summer), 15 August (Fall) or 15 November (Winter). Electronic format is preferred. When sending digital photos please use the highest dpi to ensure the best finished product. Submissions may be edited for clarity or space as necessary.

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Exciting Times!

The greatest part of the Vintage Sailplane Association is the people who choose to associate through their love of vintage gliders (and other antique aircraft, models and history). As we start into 2022 several members in our inspired group are introducing new ideas and activities that promise excitement and new chances to participate in the wonderful world of vintage gliders.

First will be a **tour of some of the most exciting vintage sailplanes** that you can imagine! Through the generosity of Jerry Wenger and crew, including master glider restorer Tom Evelo (of E&A LLC), the award-winning 1938 German Minimoa and the equally rare 1944 gull winged Swiss Spalinger S-18 will be on tour at several vintage sites throughout the U.S. this season. Although details and itinerary are still in the making, the gliders will probably make stops at Tehachapi, CA, Hood River, OR, Lawrenceville, IL, and Wichita, KS. Other locations are being considered as we go to press. Why? To let more people see what these stunning pieces of flying art really are like in the air, not just on the ground or in a museum. Timing is not yet solidified, so be sure to check the VSA website <www.vintagesailplane.org> or the VSA facebook page:"Vintage & Classic Sailplanes". Many people marveled at the Minimoa flying at Harris Hill during the International Vintage Sailplane Meet last Summer. Now these iconic sailplanes can be viewed in several places that are closer to home for many. Rounding out this display at each location will be other members' rare and beautiful vintage gliders, as well. This is the unique chance for many more people than usual to become familiar with some of the most exciting vintage gliders in the U.S. Stay tuned as plans progress.

Second, after much discussion and thought, is the **planned inception** of the Midwest Glider Conservancy (MGC). Conceptually this will be a group of interested individuals banding together to preserve selected vintage gliders through a program of acquisition, restoration and (when feasible) flying. This group would be called a conservancy and could be considered some type of flying museum. It would be an IRS charitable association and not a typical flying club.

Historically, individuals, small groups and museums have been responsible for saving many vintage gliders. Single gliders have become a restoration project for a person or group, but most of these people and groups are not able to deal with more than one or two projects at a time. Museums, meanwhile, often do not have the resources to carry out a restoration, and even if it could be done, there might not be sufficient physical space to work on or display a specific restored glider. Additionally, many museums do not allow their aircraft to be flown, even when restored to airworthy condition. Hence, the Midwest Glider Conservancy is intended to address these issues and work initially in concert with existing clubs at two locations to obtain facilities and services. Being regional, the Conservancy can add to the initial locations so that it can conveniently avail itself of a variety of interested individuals and facilities.

The Midwest Glider Conservancy is developing drafts of organizational documents that will be circulated to interested individuals with the goal to form the organization within the next few months. If you are interested, please contact Neal Pfeiffer <Nealpfeiffer@sbcglobal.net> soon for a copy of the latest information.

Finally, don't forget the many vintage meets listed in this *Bungee Cord* and on the VSA website. You will love the atmosphere. Check the calendar, call for information and attend.

And, as always, FLY SAFE!



Front Cover: Guy Byars landing his Schweizer 1-20 during IVSM 2021, with Jerry Wenger's Moswey III waiting on the ground. Paul Natan photo.

Back Cover: This is N13780, Albatross II 1-S-2100, flown by Hawley Bowlus at the Arvin contest in 1939. Photo from Don Mitchell collection.



Official VSA Matters

As we have stated more than once in the past, a very big **"Thank You"** goes to many members in our little association who help in so many different ways.

VSA received several financial contributions during the past three months, where members combined their donation with renewing their memberships. These members were Burt Compton, Darrell Prather, J.J. Sinclair, Drew Sujet, Bob Wander and Jerry Wenger.

John Seymour donated his collection of *Bungee Cord* and *Gliding International* magazines to the VSA archive. We will inventory them and make the extra issues available to other members who need them for their collections.

And we have received quite a variety of contributions for this issue, and we hope you, our readers, enjoy them as much as we do putting them all together.

Photos and short or long stories are always appreciated. So, if you have a story to share, we would love to hear from you! • BC





Good News to Share! Les Schweizer receives SSA Lifetime Achievement Award

Les Schweizer has been awarded the Lifetime Achievement Award by the Soaring Society of America. The Award, established in 1993, recognizes members

who have made an exceptional, continuing contribution to fostering and promoting soaring over a period of at least three decades.

By working for most of his life toward the betterment of soaring through designing and building sailplanes, contributing to sailplane development and regulatory projects, and supporting Schweizer produced sailplanes, Les has truly earned the Lifetime Achievement Award! It will be presented to him in June at the National Soaring Museum.

In addition to designing the 1-35 and 1-36 sailplanes and the 2-37 motorglider, Les, along with son Kyle, founded K&L Soaring to support, repair and improve existing Schweizer Aircraft designs, including vintage models dating back to the 1930s and 1940s.

K&L Soaring today is a successful company



Les Schweizer, ready to test the classic 1-34R in 1968.

that can rebuild most Schweizer gliders in their original factory construction fixtures. The company supplies specialized parts individually and in assemblies, and produces new parts. In the world of vintage gliders it is rare to find this kind of support and parts availability. When specialized design, fabrication and certification or improved parts are needed, K&L can do that, too. This is all part of the resume that Les has brought to American soaring, worthy of the Lifetime Achievement Award. • BC



New Year's Day Flying Activity, from east to west ...

Due to the weather conditions as reported from several soaring sites in the eastern and midwestern parts of the United States, we are seriously thinking of moving the New Year's Day flying activity to April 1, or April Fools Day.

Report from Beltzville, PA Gerry Wild gave a brief New Year's Day report: For

Day report: For at least the 10th year in a row, our hopes for some fun on New Year's Day have been dashed by Mother Nature again. Ceiling is a little low...



Simine and Jim Short reported **from Lawrence**ville, IL. We had about 50°F temperatures and light winds with IFR ceiling ... and pouring rain for most of the day. All the gliders of the Wabash group remained tucked away in the hangar. The next day, Sunday, was IFR also, but we were home by then, and snowed in the day after.



Marici Reid reported from the Independence, OR, Glider Club that they were ready to start 2022 right. Seven kids flew in the club's Schweizer 2-33 on a bright but chilly day. Hot drinks helped keep everyone motivated.



Cam Martin and Doug Fronius reported for Tehachapi, CA: The New Year dawned sunny and cold at Tehachapi's Mountain Valley Airport, but not a single tow plane was stirring all day. While we had a large number of pilots and gliders ready to fly on 1 January, no one was able to fly due to high crosswinds exceeding the airport limit. The reports were 38°F with wind of about 38 knots. There was a very good turnout for the resulting Vintage Sailplane Open Hangar Display & Electric Golf Cart Maintenance Day. Featured aircraft were Pete Buck's Sonex and Lunak, Dan Rihn's 1-26E, Jeff Byard's Slingsby T21B, Bowlus Baby Albatross and TG-2, and Doug Fronius' LK-10, TG-2 and Robinson Robin. The next day, it warmed up to 43°F, the winds dropped and straightened out. The first glider flight of 2022 from Mountain Valley Airport was on Sunday, 2 January, piloted by Cam Martin



Dan Armstrong & Doug Fronius in LK-10. Cam Martin photo

in the two-seat Grob 103. Not long afterward it became Vintage Sailplane Open Cockpit Day, when Dan Armstrong and Doug Fronius logged a flight in Doug's LK-10.



REMEMBERING Raul

Sadly, we must report the passing of one of the Vintage Sailplane Association's most active enthusiastic and Blacksten members, Raul (1952-2022).

Until the late 1980s, the VSA Western Division was no more



than an unorganized group of enthusiasts scattered around the southwestern U.S., mostly in Southern California. In May 1988, Harry Irvine brought this group together and organized the first Vintage Western Regatta at Hemet, CA. It was at one of these early Hemet Regattas that Jeff Byard first met Raul. He believes that Raul brought a Briegleb BG-12 to that meet.

Over the years Raul attended almost every Western Regatta with vintage and classic gliders from his collection. Besides the BG-12, he owned a TG-1 Cinema with Harry Irvine as a partner, and a Bowlus-du Pont Albatross project in partnership with Steve Lowry and Stuart Baxter. He also owned a Slingsby T31 Tandem Tutor and an LS-1. Among his extensive collection of soaring memorabilia, he had a Bowlus Road Chief trailer, books, photos, artworks, models, posters, pamphlets and who knows what all else. Raul also attended several IVSM gatherings at Elmira, NY. He was a speaker at SSA Conventions and traveled to Europe to attend some Vintage Glider Club's rendezvous and rallies. With a masters degree in history, Raul had a passion for recording and preserving soaring's past. One of his favorite projects was collecting oral histories by conducting interviews with many of soaring's pioneers and luminaries. He was always encouraging the rest of us to document our own soaring experiences. Some will heed his call ...

please, in memory of Raul, document what you know in writing or other formats that will go on after you fly west!

Many recall Raul as having a gruff exterior, but he was a master of the written word. Often humorous and witty, he communicated naturally through the pen. He wrote a number of soaring-related papers, presented at seminars, and wrote articles and columns for various periodicals. He was also the custodian of the history of Hawley Bowlus via a personal friendship with Ruth Bowlus and Richard Benbough. His major life's work is arguably an unpublished Bowlus manuscript. He also worked on a manuscript about World War II training gliders. The Vintage Sailplane Association was a big part of Raul's life. Serving as the VSA archivist for 21 years (spring 1991 through fall 2012) fit right in with his history background, he probably held that position longer than anyone else. Additionally, Raul was the editor of VSAs newsletter, Bungee Cord, from 1998

until the summer of 2007.

Outside of soaring, we know that Raul liked folk music and played a mean guitar and mandolin. He also dabbled in building his own ukuleles and was active in a ukulele club. With his Scottish ancestry, he regularly frequented Scottish Highland festivals and games around Southern California as part of the Black Watch Highland Society. All of this was in addition to running his family business, Blacksten Industrial Electric Corporation.

We think that we can speak for Raul's soaring family in saying that he will be missed. Now all of us need to step up and take over as keepers of soaring history's flame. Can you hear Clio whisper?

Jeff Byard & Marici Reid



A New Vintage Meet: New Castle, VA, on the 4^{th} of July Weekend

We are looking forward to seeing old friends and meeting new ones at our Vintage and Classic Glider Meet at the Blue Ridge Soaring Society in New Castle, VA, 1-4 July 2022. Information: Bruce Patton (813)892-7134 or <pattoninfl@aol.com>.

Frauke Elber from Newport News, VA, shared her memories of flying at New Castle: "How much I would like to be there. From 1975 until 2001, I often flew our Ka-8 over that spectacular landscape and until 2013, I was part of the contest team. We have seen this site from its early beginnings when one had to ford the creek, instead of driving over a solid bridge to get to the airport, which was both an adventure and a nightmare. These were the "good old times" at New Castle."

Later, Frauke tells us, the trek to the airport became less adventurous thanks to the building of a dam and a concrete bridge for cars. Now it



is a beautiful gliderport with a big campground with RV hook-ups, the legendary fire ring and the big picnic shelter where most of the non-flying activities take place (including the sing-alongs). Gren Seibels describes flying at New Castle in his book "*Pilot's Choice*."



SSA Convention in 2023

As this year's convention had to be canceled due to COVID, the SSA has scheduled next year's event again in Reno, 23-25 February 2023. VSA will have its usual exhibits, shirt sales, luncheon and talks. So, stay tuned for updates and stay away from the virus!

Colin Henderson's e-Bay Purchase

A yellowed photo of the Bowlus-du Pont Albatross standing behind the Harris Hill hangar was purchased by Colin some time back; he and his wife Brodie recreated the situation with their T21

during IVSM 2021, some 70 years later.

This photo was the trigger for Jeff Byard to revisit Paul Schweizer's unpublished manuscript (see pages 5-8) about the Albatross I hanging prominently in the NSM.



LH: 12 October 1941, Columbus Day. Karl Lieber towing out Bowlus-du Pont sailplane Albatross from hangar basement, National Soaring Site, Harris Hill. Grace Gray Lieber photo. RH: July 2021, Colin Henderson and Christin Brodie towing out their Slingsby T21 behind Brodie's "Yellow Submarine" tow car from the hangar basement at Harris Hill. The Story of the Albatross I

The first thing you see when you enter the National Soaring Museum is the Albatross I hanging from the trusses of the exhibit hall, facing the lobby. This sailplane has an interesting story and is one of the most historic American sailplanes in the collection, justifying its prominent position.

The Albatross I is the outstanding one in the group of four sailplanes called "Senior Albatross," designed and built in the early 1930s by the Bowlus-du Pont Sailplane Company. Hawley Bowlus was the principal designer and builder with Richard C. "Dick" du Pont (of the famous du Pont

family) providing the financing and enthusiasm. They met late in 1932 at the Curtiss-Wright Technical Institute in Glendale, CA, where Bowlus was Chief Instructor in the Training Division and Dick du Pont had just arrived as a new student.

After spending one year at the University of Virginia, du Pont wanted to get deeper into aviation, so he enrolled in the Curtiss-Wright Institute. He had formed a glider club at the University of Virginia after hearing about the gliding and soaring activities in the Cape Cod area. Hawley Bowlus had taken the position as Chief Instructor at the Curtiss-Wright Training Division as a "fill-in" job after several pioneering years in aircraft manufacturing, which included building Lindbergh's *Spirit of St. Louis* as well as designing and building a famous line of gliders and sailplanes, some of which were called Albatross. Bowlus had set a number of soaring records with his American-designed sailplanes.



Pete Bryce of the Eaglenest Aviation Community provided copies of the du Pont correspondence from this time period.

With Bowlus designing the single-place Albatross, du Pont assisted with the design of the two-place (the first of Bowlus' "Pod and Boom" configuration) with both types using the same wing design. Martin Schempp, the German soaring expert who had been active at the previous National Contest in Elmira, was hired along with Rudi Setz to assist with the project. It is apparent that Schempp was responsible for the Albatross, as it showed some German sailplane design details, thus making it different from Bowlus' early sailplane work. When the prototype Albatross (s/n 100, the "Super Sailplane") was completed, it was tested over the ridges at Palos Verdes. For some reason, Schempp ventured too far out over the ocean, just off the Palos Verdes peninsula, also known as the Hollywood Riviera. He was unable to get back

It is easy to see how Bowlus and du Pont hit it off to form the Bowlus-du Pont Sailplane Company and develop a new line of sailplanes. The original company informal was an partnership between Bowlus and du Pont. Not many details known, but are some of du Pont's correspondence with his father Felix is available shedding light on his activity with the company.



Hawley Bowlus and Richard du Pont with Dragonfly in Elmira in 1933. Jeff Byard collection.

and landed in the ocean, wrecking the prototype Albatross. It apparently was not repairable; a replacement had to be built.

Bowlus had left the Curtiss-Wright Institute and now worked full-time for the Bowlus-du Pont Company, allowing them to complete the new single-place Albatross I and the two-place Dragonfly in time to trailer both sailplanes to the

1933 National Soaring Contest in Elmira.

Most of the contest was conducted from site num-6, ber the Rhodes Farm, where only



shock cord launches were possible. Du Pont took off in the Dragonfly with his father as passenger. Unfortunately, due to the lower fin on the Dragonfly and the steepness of the take-off slope Dick could not get enough angle of attack on the wings during the shock cord launch to get the Dragonfly airborne. They crashed into the trees and brush at the edge of the ridge. No one was hurt, so Dick immediately took a launch in his Albatross I and soared to the greatest altitude achieved during the contest.

The Fourth Nationals were not a very successful contest, as there were few ridge wind days and the only way to get launched was with a shock cord.

There were two classes: utility and high performance with points given for duration, altitude and distance for each class. The scoring was simple: 3 points for a first, 2 points for a second and 1 point for a third place in each class. Those who finished lower than third place did not receive any points. Stanley Smith, flying a Franklin Utility, was the winner with 8 points, while du Pont was second with 7 points. That fall du Pont went on an expedition to the Blue Ridge Mountains where he made a flight of 122 miles from Waynesboro, VA, to Frederick, MD, in the Albatross l, setting a new U.S. distance record.

Sometime before the 1934 Nationals, du Pont informed his father that he had problems running the company. He had not yet incorporated, because he wanted to be sure that it was a success before doing so. His father recommended that he close down the company. Dick followed his advice and the Bowlus-du Pont Sailplane Company came to an end. At that time, they were working on another

Albatross I in 1933. Fred Loomis photo.

on top in the soaring world; having now an American pilot, flying an American- designed sailplane, beat the German distance record was a shock; it was a "feather

setting a new world distance

At that time Germany was

record.

in the cap" for U.S. soaring, Dick du Pont and the Bowlus-du Pont Company. Du Pont's record flight played an important part in winning the 1934 championship. Although there was some controversy whether it was an official record, this "record" did not last long; within a month, four German pilots had exceeded du Pont's distance at the 15th Wasserkupppe contest. Seventeen years would pass before the U.S. would win it back.

Lewin Barringer made the second longest flight flying the Albatross II, the sister ship of the Albatross I.

Warren Eaton had taken delivery of his Albatross Falcon early that year in California and brought it to the 1934 Nationals, but he did not compete. The Falcon was the same basic Albatross, but was skinned with mahogany instead of spruce plywood, which was used on the other Albatrosses, and it had split flaps like the Albatross II.

Barringer had almost beaten du Pont's record in April 1935 with a flight of 155.4 miles, starting at Ellenville, NY, and flying the ridges into Pennsylvania, almost to Harrisburg. He made several other attempts; on the last one he was blown to the back side of a ridge and crashed, when a strong gust flipped him over in landing. Barringer was set to go on an expedition to Persia as Chief Expedition Pilot in May, so he sold his damaged Albatross II to Jack O'Meara. O'Meara was killed in an airplane test flight in 1941, and the damaged Albatross II was obtained by a group on the West Coast hoping to restore it.

two-place Dragonfly and developing a utility glider which they hoped to sell to the Navy to replace the Franklin Utilities used in Ralph Barnaby's Navy training program.

Competing in the 1934 Nationals, du Pont showed the potential of the Albatross I. He made a flight of 158 miles from Elmira to Basking Ridge, NJ,



Du Pont competed in the 6th Nationals in 1935, again flying the Albatross I, and again winning the championships, while Jack O'Meara, flying the Chanute sailplane, took second place.

Du Pont flew again in the 1936 Nationals. The contest ended with a tie between du Pont flying the Albatross I and Chet Decker flying a Franklin, both having 8 points. The contest committee chose du Pont as the winner of the contest and the Evans Trophy, which caused some concerns among the pilots. Victor Saudek, in a vignette on du Pont, said that "Decker, flying a lower performance glider, scored among the winners day after day." He said further "that du Pont made an agreement with Decker that he could fly the Albatross I in the next National where he would stand to win enough prize money, \$3,000, to buy the sailplane. And that is just what happened; in fact, Chet won in 1936."

Felix Chardon, a close friend of Decker and a member of the same glider club, recently wrote me that "this was not the case. Decker bought the Albatross I for \$ 1,200 and there was no deal as Saudek had claimed. I know since I was with Chet when he picked up the Albatross I in Wilmington." Felix also said that "Chet flew a Franklin and was named 'Junior Champion'."

Jack Laister stated another viewpoint in a recent letter, "you may not know that Chet Decker actually won the 1935 contest. When Dick du Pont found out that the figures had been juggled to show him the winner, he gave the Albatross I to Decker. There might have been a dollar or so that changed hands so they could call it a sale."

We will never know what actually happened since those involved are no longer with us. It seemed to me that the contest committee was right in awarding the championship to du Pont since he had made more outstanding flights than Decker in earning his 8 points, and the contest committee ruling was in line with the Evans Award rules. Du Pont was the winner of the Sailplane Class and Decker was the winner of the Utility or Secondary Class. As expected, Decker won the Championship in 1936, making it the third Championship for the Albatross I.

In 1937 du Pont won again, this time flying a Minimoa, while Decker came in second, flying the Albatross I.

After the Nationals, Decker put the Albatross up for sale for \$1,550; Warren Merboth apparently bought



L to R: Chet Decker, Warren Merboth, Ken Findesen, Felix Chardon, unknown, Carl Schaub, all members of the North New Jersey Soaring Association, and Albatross I. Jeff Byard collection.

it. but made only a partial payment, FAA so the records listed both names. Merboth flew it in the 1938 Nationals and finished in 6th place.

Sometime later, the Albatross

Karl Lieber of

Tenafly, NJ. It is



I was sold to Chet Decker in Albatross I. Jeff Byard collection.

not known if he flew it. After Decker retired from the Air Force, he thought of buying the Albatross back, but Lieber would not sell it.

The next information we have about the Albatross I was many years later. Charles Kerr had landed out with his 1-23B after a cross-country flight from the Hiller Airport in Barre, MA. He was waiting in a field along a road for a towplane to tow him back to Hiller Airport, when Pat Tucker passed by. Seeing the 1-23B in the field, Tucker stopped and mentioned that he had the Albatross I, but that it needed some work. Kerr m, entioned that he had a shop in Auburn, MA, and might be able to help with the repairs. A few weeks later Pat Tucker arrived at Kerr's shop and left the Albatross in his charge. Kerr asked the local FAA representative to look over the Albatross I, who declared it unairworthy since all glue joints had to be cleaned and reglued. Kerr tried many times to contact Tucker to see what to do with the Albatross I, as both Decker and Merboth were still listed as owners on the FAA records. Kerr then arranged to have the Albatross I hung from the rafters in the Auburn, MA, airport hangar until Tucker might return.

When the National Soaring Museum was getting underway we looked for historic sailplanes. Allan MacNicol of Sherborn, MA, heard of our interest and

> remembered hearing of the Albatross I being at the Auburn airport. He mentioned that Charles Kerr knew about this sailplane so I contacted him about the NSM's interest.

> Around this same time, unknown to us at the NSM, two other groups became interested in the Albatross I. In September 1965, Stan Smith wrote to Kerr for the All-American Engineering (AAE) Soaring Club, stating that "in view of my personal interest and also considering the fact that I am a member of the All-American Engineering Company, it occurred to some of us that we would like to acquire this sailplane as a memorial to Dick duPont, who had founded AAE, and for his

contributions many soaring." to Kerr responded to Stan that he should contact Tucker. Pat but nothing happened.

In July 1970 Kerr received a letter from Philip C. O'Keefe the Connecticut of Aeronautical Histo-



rical Association. They were interested in getting the Albatross I for the Bradley Air Museum. This was shortly after MacNicol and Kerr had contacted the NSM about transferring the Albatross I to the NSM; there was no further contact with the Bradley Museum.

Ginny and I took a combined business and pleasure trip to New England in September 1970; one of our stops was in Auburn, MA, to see the Albatross I. Kerr took us to the hangar where it was hanging from the rafters. The fabric covering of the wings was loose, and the sailplane was covered with a thick coating of dust. It was in a very sad condition, but we still wanted this historic sailplane for the NSM collection. Kerr said that the last official owners, according to the FAA, were Decker and Merboth. Since it had been in Kerr's control for more than ten years, and he had been unsuccessful in reaching the last owner and had accumulated costs with the Albatross. He was happy to see it go to the NSM.

We then contacted Chet Decker to let him know of our intent to take the Albatross I to the new NSM. He was happy to hear that we had located the Albatross I and said that he and his son would be willing to restore it for the NSM. I told Chet that there was no

hurry since we did not have a building in which to exhibit the sailplane yet.

Decker picked up the Albatross I the following year but then brought it to Elmira since he felt the repair work was beyond what he and his son could do. So we arranged to have two retired Schweizer Aircraft Company (SAC) employees do the restoration work. El Pullen was an expert aircraft woodworker and Dick Dassance had been our finishing foreman who did the fabric and refinishing work. Thanks to both for their excellent restoration job, which Decker paid for. The Albatross was restored to its original condition and exhibited in the main exhibit hall of the newly built National Soaring Museum in 1978.

The Albatross I is a tribute to Bowlus and du Pont for creating such a great sailplane. Our thanks go to Charles Kerr, Allan MacNicol, Pat Tucker and Chet Decker for making it possible to have this sailplane be a part of the NSM collection. The Albatross I is now hanging prominently in the main exhibit hall, to be viewed by many visitors and to tell them its story.

Paul A. Schweizer proposed this write-up in 1971. Jeff Byard updated it in 2021.

Jeff Byard supplied additional information.

Between 1910 and 1929, Hawley Bowlus designed and built 15 simple gliders. His first true sailplane was his 16th design, when he adopted the "Albatross" name for his glider designs, and designated it as the SP-1 "Albatross." This ship used butcher paper to take the shear loads in the wing ribs as opposed to the usual truss-type structure, thus it became known as the "Paper Wing." #16 was the one and only "Paper Wing." Following the #16 were the Model A and S-1000 sailplanes, all known as "Albatross" sailplanes. It was and built using the "Baby Albatross" pod, boom and in one of these that Bowlus broke Orville Wright's 95 tail surfaces along with the outer wing panel design minute 45 second duration record in an American designed and built sailplane.

After moving back to his family home in San Fernando, CA, and prior to the first Bowlus-du Pont "Albatross" was the Bowlus "Super Sailplane." This was designed in 1932 by Hawley Bowlus along with Martin Schempp at the Curtiss-Wright Technical Institute in Glendale, CA. The "Super Sailplane" had the same wing planform as the later "Senior Albatross," however it had a straight wing without any gull.

After building the "Super Sailplane," there were four "Bowlus-du Pont Albatross" sailplanes with gull wings. The "Albatross I" is the first in this series, it later became known as the "Senior Albatross." They were designed and built in the early 1930s by the Bowlusdu Pont Sailplane Company of San Fernando, CA. Bowlus' next sailplane design was the BA-100 "Baby Albatross". These were sold in kit form with 90 serial numbers assigned; about 50 kits were completed and flown. In 1939, the "Super Albatross" was designed from the "Senior Albatross". There were only two built. These were the last of the Bowlus "Albatross" sailplanes. When World War II arrived, Bowlus Sailplanes and the world's soaring movement took a different direction.

Details and location of the four "Senior Albatross" sailplanes:

1st Albatross I 1-S-2100 NC219Y At the NSM

- 2nd Albatross Dragonfly 2-PS-2000 Never restored
- 3rd Albatross Falcon PS-2100 G13763 At Smithsonian NASM

4th Albatross II 1-S-2100 G13780 In storage on West Coast

Vintage Routes Revisited

Marfa, TX, is steeped in soaring history. Its popularity burgeoned in the 1960s with the most famous names in soaring involved. Giants such as Moffat, Grosse, Johnson, Scott, Parker, Smith, Schreder, Wroblewski, and Reichmann pioneered the site and set world records there in U.S. and international competition. The many articles about those Marfa contests described an exciting time for the sport..



The kids who crewed for them later succeeded on their own and are well known in soaring today. Burt Compton is one of those who towed a trailer for his father Fritz, an Eastern Airlines captain who bought a new Schempp-Hirth Open Cirrus in 1967. Burt never forgot the adventures of those early Marfa years and returned in 2001 to build and acquire new hangars for his commercial soaring operation. The west Texas thermals are still as strong and climb as high as 50 years ago; the distances are as vast and the mountains are as beautiful. To spend time soaring from Marfa is to once again be part of that glamour, even if only in the reflected light of long days in the cockpit visiting the old turnpoint names: Van Horn, Pecos, Odessa, McCamey, Ft. Stockton.

For me as an Oregonian transplanted to Iowa, West Texas was a blank spot on the map until a couple years ago, until I attended Marfa Gliders' Oktoberfest. Not the desert I expected, but a high plain surrounded by mountains, it reminds me more of driving through Montana than the dry sand of the Southwest. Once airborne the beauty increases as the threedimensional topography unfolds into a delightful variety of peaks, plains, lakes and dead straight highways pointing to even more distant mountain ranges. One is drawn to fly there, investigate what is in that panorama. It pulls you.

Burt's main hangar is an office, a bookstore, a home to historical memorabilia that also holds four to six gliders and a towplane. There is an old rudder signed with many names of those who attended the "National Landmark of Soaring" dedication in 2008 and who were also at the 1960s and 1970s events. You can thumb through a 1930s German text on soaring while glancing up at a 1970 framed *Playboy* magazine ad prominently featuring ... a glider. West Texas is still "The Old West" and to be surrounded by the history of soaring is as natural as the landscape visible through the huge hangar doors.

For visiting pilots, Burt has an ASK-13, Schweizer 1-36 and a Standard Cirrus. His own personal Open Cirrus has been in the family 55 years and is an often flown but unchanged time capsule deserving an article of its own. I strap into the smaller Standard Cirrus to size the belts, set the pedals and check the oxygen flow. We push into the sunshine far enough to hook to the car. The hangar is perfectly placed near the end of a runway with a short taxiway walk, but in the heat of the day a car tow is luxury. Marfa is a very large but not busy airport so a slow and careful loading of the glider and towrope procedures are accomplished without regard to airplane traffic. The quiet of this uninhabited part of the United States is broken on occasional days by a law enforcement shooting range located in an angle between runways. The pop of gunfire is then frequent and is a further reminder: You are in Texas, Son.

On tow we fly through huge lift repeatedly. This is Marfa lift, the excitement that comes to every glider pilot at these moments, the promise that "It's working, it's going to be a great day." I am not concerned that thermals are many miles apart; on the contrary they are everywhere and strong enough to save me even if I fly stupidly.

My goal is Van Horn to the northwest 66 miles. Mt. Livermore and the McDonald Observatory are off to my right, to my left a fat white Aerostat on a mile high cable cannot be missed. I have a booklet and map, published by Wally Scott in 1972, clearly showing the locations for lift and sink, but I am ignoring it for the straight line today. There is cumulus building over the mountains and I am high, I can afford going direct. The Standard Cirrus is rightly named. Its handling, comfort and performance are in every way "standard." Today we might fault this classic for not being more special in some specific detail or capability, but its fame is that it does nothing poorly. Not a single thing. The edge of the mountains offers steady lift and for most of the way it is an easy flight. I have a little scare on the last 15 miles to Van Horn as sink increases making me realize that Mr. Scott's route south was better, but I have the runway made if I have to continue down. I think. I do not have a glide computer other than my eyeball. I am flying the old contest routes as they did originally. Minutes later the sink reduces, I gain a little back and finally circle the airport at 3,000. My next leg is Pecos, toward the northeast, but it is dark in that direction. Too dark, I give up on the grand tour around the Davis Mountains and turn back toward Marfa. Cloud bottoms in the distance are flat and sharply defined and make me cocky enough to fly fast, burning altitude I know I can later recover. I arrive under the middle of the cu's and the lift is fantastic. First six knots, then twelve knots and rough as I go farther. These are not tame midwest cumulus!

When the variometer shows 16 knots average, with bursts off the scale, I have to turn its urgent volume down. I am pushing forward on the stick at 120 mph and still climbing rapidly toward cloudbase. Lightning is off to my left in that dark mass toward Pecos, not yet close, but concerning. I pop the spoilers a little to stop the climb, then full out when they do not help. Everything is happening quickly. I am about to enter the cloud at my maximum spoiler deployed airspeed. I make a quick right turn toward clear skies, but it is farther away than it seems even at 120 mph. I turn even more, retreating toward a blue jagged edge and when there, pull up into the sunshine and climb the side at a terrific rate, laughing. Soaring is like that, one moment you are full of concern, the next you are ecstatic with joy. Now armed with some "local knowledge" I see how to best work these clouds. Gone are my years of aiming toward the flat middle. I must drive the 45 miles back to Marfa by merely toying with that enormous suck zone while keeping an escape route close by. And so it goes, to within sight of the airport as fast as the glider can cruise. It is absolutely thrilling. I have had a taste of why Marfa once was the soaring capital of the world. And this is only my first day.

Burt and I discussed his teenage years crewing for his dad. Those were the days of the great straight-out distance flights. Burt told stories of driving ahead, finding a suitable field when his dad got low, standing on a stump to mark it clearly, or driving on to the next field, always reporting the wires, the ditches, and the wind. So we hatched a plan: I would take the little Cirrus and fly as far as I could, Burt would bring the trailer. Like all such plans it worked, but not quite how we had hoped.

Leaving Marfa directly to the north is to cross the most rugged, mountainous and unlandable terrain. Even the two-lane road is built with constant switchbacks devoid of straight sections. On a good day, with 8,000 feet above ground on the altimeter, why be concerned? Every pilot will tell you the godlike feeling of defying such terrain in a glider, and I was elated to make the crossing to Balmorhea Lake, where lower, flatter ground pointed north to my goal of Odessa/Midland. Slightly east of the lake, Wally Scott's report had indicated there was good lift and it was true, though compared to the mountains I had just passed, it was only average. I began to descend enough to be sad I was losing the big numbers like 13,000 MSL, but the ground elevation had also dropped away several thousand feet, so I did not worry. And then the bottom fell out, and I sank like a polished crowbar. And sank even faster as I pushed for speed to get away from it. An alarmed turn toward my nearest airport at Ft. Stockton was a futile hope in the far distance, just a theory line on a map. Course changes did not help; it was a downhill cascade. I was in trouble. Descending to 2,000 feet after such a wonderful start is dispiriting and although I was now over flat land, I did not see a decent place to park. But all such tales usually end the same way, with a



tiny bit of zero sink. You hold on happily for however long it takes, anything to delay the inevitable. The zero sink becomes 1/2 knot up. You occasionally see a full knot and agonizingly gain 400 feet, then 800 feet, and then run like hell in hopes of finding real lift again. And you do.

Back on course for Odessa the distant sky was becoming black and uninviting this day too, while on a slight westerly angle there was a forming cloud street. In soaring one must remain flexible and take the offered cloud street. Perusing the map, I saw Monahans would eventually have to appear on the main highway and after interminable quarter hours and miles of oil wells, I saw the city. The sectional chart (yes, this is old-fashioned pilotage) showed the airport literally inside the center of town. The cloud street continued north, too inviting to resist as we were now old friends, so on toward the New Mexico border I flew with confidence. Halfway there, enthusiasm faded to the thought of spending lonely hours on a deserted rural airport, or worse, an unknown landout waiting for my crew, no jacket, no tie downs, no food. On the other hand, Monahans airport offered easy walking to a diner. The day was ending, the choice easy. I turned around, arriving at Monahans with thousands of feet to spare. It is painful, almost psychologically scarring, to spoiler it away after nursing it carefully for hours, but I was on the quiet ramp at 5 pm and that is a good full day of soaring. Two nice gentlemen gave me tie downs, door and gate codes, and a key to a courtesy car before they quickly left. I was lucky, as no one else visited the airport for the rest of the evening.

Unfortunately for Burt, my designated crew, he had social obligations this day that prevented him from leaving home, so his re-enactment of teenage efforts went unrealized. He will have other chances. Robert Barlow (Libelle) and Rich Kraemer (1-36), also flying at Oktoberfest, took on the task of retrieval. They had flights of their own that day and were not able to leave Marfa until 6 pm. They arrived at 10 pm, parked near a security light on top of a hangar where we loaded and by 11 pm we were heading home. They had lived on snacks enroute, while I had dined in town at a nice restaurant with my courtesy car. These are the oddities of cross-country soaring. At 2:30 am we were in our beds with a fine feeling of accomplishment. My flight covered 130 miles, their drive was quite a bit farther. I will start earlier next time and with more supplies. It hurts to throw away those thousands in altitude when I am still progressing nicely toward the horizon.

My other flights included ridge lift and thermal climbs into wave. Burt has a dedicated wave window at Marfa which the FAA opens promptly. Those flights deserve their own stories. They helped mark a terrific meet. Oktoberfest 2021 netted ten straight days of wonderful soaring and the best personal connection to U.S. gliding history I have had in my 40 years.

Chad Wille

Rusty Lowry is a power and glider pilot with an extensive background in aircraft flight testing. He has flown more than 100 different types of aircraft, is a member of the Society of Experimental Test Pilots, and is a retired Technical Director of the United States Naval Test Pilot School.

Minimoa vs Petrel -Take II

I read Scott Gifford's article in the Winter 2021 issue of *Bungee Cord* where he compared his pilot impressions of the Minimoa and Petrel and felt compelled that I should offer a slightly different assessment.

I, too, had the magnificent opportunity to fly both aircraft at IVSM 2021 in addition to my own 1938 Slingsby Gull. While I absolutely shared Scott's appreciation of the significance of being allowed the rare privilege to fly these historical "works of art," I diverge from his comparison in that I liked the Minimoa better!



Let me begin by stating that I have had the opportunity to fly a fairly large number of aircraft, many of them old and perhaps a bit quirky, which may alter my outlook on gliders like these. Designed in the 1930s, they do not typically meet modern concepts of control feedback nor pilot accommodations. With these factors in mind, I typically try to take a few minutes before flight to simply look at the aircraft and start to build a mental picture of how I think it might fly based on things like control surfaces, fuselage length, wing placement, etc. I also sit in the aircraft to make sure I will fit!

In the case of these gliders the two major differences that struck me (once I stopped staring at the beautiful gull wings of both) were the Minimoa's huge rudder and the Petrel's all-flying or pendulum



The rudder of the Minimoa, coupled with



the underslung pedal design mentioned by Scott and, even more so, the lack of a fixed vertical fin encouraged me to overcontrol the rudder on my initial takeoff. This resulted in two or three pretty lurid yaw excursions shortly after becoming airborne – easily corrected when I recalled my pre-flight inspection and thought, "The rudder is really big. Don't push the pedals so much!" Immediately the glider became simpler to fly and behaved well throughout the tow with predictable and reliable control responses.

In free flight I continued to enjoy the aircraft's fairly well harmonized flight controls, meaning that a similar amount of stick force produced a similar level of aircraft response in both lateral and longitudinal axes. This meant the pilot did not need to think too much about the direction of stick input, just the feel of it, to point the nose where one wished to go. Speed stability was good and I found thermaling a straightforward affair with the airspeed remaining pretty constant without an undue amount of pilot attention. This feature also was present at pattern speeds with very little tendency to lose or gain excessive airspeed during landing.

The Petrel also lived up to its pre-flight inspection in that the pendulum tail dominated my impression of its flight characteristics. This first attempt at such a control surface on a Slingsby glider (my Gull from the prior year had a "normal" horizontal tail and elevator as I believe did the prototype Petrel) provided very positive and effective pitch control but very low stick forces and little pitch stability. I did not find its controls as well harmonized as those of



Guerry Howard photo.

the Minimoa's and needed to pay more attention to airspeed control and stick inputs to coordinate turns, needing moderate amounts of lateral/aileron control force, but very light fore-andaft force for required pitch. Not hard, but not as easy as the more "classic" configuration of the Minimoa.

Overall flight performance was quite similar, and the Petrel compared well with Jim Short's SGS 1-21 when we overflew Harris Hill in a loose lineabreast formation (4 to 5 minutes of unforgettable enjoyment!).

As far as cockpit accommodations are concerned, I am 6 feet 4 inches tall and fit in both sailplanes as long as I do not use cushions.

So what is the bottom line? Both gliders flew remarkably well for 1930s designs, better than a number of power planes from that era that I have flown. Both gliders performed about equally in





Magnus Einarsson photo.

terms of overall performance and both are absolutely beautiful restorations. I personally liked flying the Minimoa better based on its flight control harmony and did not find the rudder pedal arrangement awkward – at least after I stopped overcontrolling them.

As with many comparisons, your findings may be different – as were mine and Scott's. The wonderful thing about VSA and meets such as IVSM is that we have the chance to fly these aircraft that would usually be hanging in a museum, out of reach for such assessments.

Thank you, Jerry Wenger and IVSM, for making this happen and opening the debate as to "which old gull wing glider is better?" Truth be known, the answer is my Slingsby Gull ... but that is another story.

Rusty Lowry

Member Projects

Do you like the challenge of skinning leading edges? Tips from Harry Clayton

When a band clamp is required, I prefer using the Wolfcraft clamp. I have used several different types of band clamp in the past and this is the best I have found. To extend the band, just press the trigger and pull. Releasing the trigger will lock the band and pressing the trigger will retract the band. Since the band is not a continuous loop you can position it easily and the bar you hook the band on is magnetic so it will stay once hooked. To tighten the clamp, just squeeze the handles.

When using this (or any) band clamp, I use blocks to distribute the load on the spar and to prevent the



clamp from deforming the edge of the skin. Since the base is flat this clamp can be positioned on any reasonably flat surface (Photo 1). As with any band clamp, flat or concave surfaces may not pull in tight. So, on these areas I pull the skin tight and then

mechanically clamp the area before moving the clamp over the area (Photo 2).

Photo 3 shows the finished K-7 wing. You can see the extent of the leading edge repair. The aft portion of the wing was replaced from the inboard aileron to the tips.

Ten years ago Sears sold the Wolfcraft ratchet strap clamp, but they are now available from several online sellers.



Cont'd from Summer 2021: ASK-14 Restoration in Oregon

Here is an update on our ASK-14 project.

We put a primer coat of PPG Envirobase ECP11 on the fuselage, sanded it and then added another coat. We used a portable paint booth. It measures 30×15 feet, so fitting the wings should be no problem. The portable booth is made by Mobile Environmental Solutions and seems to work quite well.

Trying to decide on either spraying the inside of the cockpit or brushing the paint, we chose to brush the paint. Using a foam brush, we applied Benjamin Moore Advance Paint in matte gray. I am extremely impressed with this paint. It dries quickly with few brush marks and can be sanded easily after it is dried.

We sandblasted all the flight controls, painted them with PPG DP 40 and finished them with PPG Concept. We removed the bearings before sandblasting and cleaned/inspected them before they were lubricated and reinstalled.

A new instrument panel was made out of 2024T3 aluminum. Using a fly cutter on a drill press makes it quite easy to cut out the holes. Just make very sure that the panel is clamped solidly to the drill press table before cutting.

With weather improving, our plan for this spring is to get the wings and empennage covered and paint everything with the finish color.

We still have quite a few things on our "to do" list, but getting past the covering and painting is

definitely the biggest hurdle.

Paul Gradwell

Photo Captions:

 (1) The fuselage in the booth is ready for primer.
(2) Rudder pedal assembly and new floor panel.

(3) Another view of the fuselage out of the booth.

(4) The cockpit is coming together.









Jeffrey Stringer and his Ross R-3 Project

Yes, I promised some kind of write-up a few years ago after coming back from California with the elements of the Ross R-3 in tow. But other things came in between.

Here is a "teaser" report on my little project to rebuild the Ross R-3 and fly it.

I really have not done much to the fuselage. A photo of it hanging on the garage wall is below. As you can see, it is safe and sound. Though I have not yet started to build the wings, we actually did start the re-design and re-engineering process.

When I came back home to New York from retrieving the R-3, my fellow club member Bill Webster offered to help me get started. We kicked ideas around for a while, but his health deteriorated and unfortunately, he passed away. I frequently looked at the fuselage hanging in the garage, but the more I looked into the history of the design the more I knew that this project needed more input. While I was getting ready for IVSM 2021, another club member and friend, Lee Harrison, ventured that he would like





to contribute/collaborate toward this restoration. With Lee having many of the same credentials as Bill, I eagerly accepted his input. However, in a passing conversation with Neal Pfeiffer and Steve Leonard during IVSM 21, the topic turned to airfoil selection and spar choice. They convinced me that it was a safe and important project. But I needed some aerodynamic assistance.

Neal offered, and I accepted his help; we now have

an airfoil, a Ka-6 variation. With the airfoil chosen, one needs a spar to hang it on. As of this writing, Neal has enlisted Harry Clayton as the "spar man." They are now deep in conversation about the intricacies of this melding of spar to airfoil. Too many cooks can spoil the broth, so I am not interfering.

I will be returning home soon and, with the wing form settled, I expect to start building the wings soon.

Jeff Stringer

J. J. Sinclair reports that just before the holidays, he received a call from Bob Hudson from the Southwest Soaring Museum in Moriarty, NM, informing him that someone would pick up the **Zanonia replica** on New Year's Day.

What a pleasant surprise, but we now wonder if J.J.'s nicely written article in the last *Bungee Cord* triggered the next move? We were told that a photo of the Zanonia replica on display in Moriarty will come soon.





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Gene Cope from Union Gap, WA, has started a new project, **a Schweizer 1-26A scale model**, now that his Cherokee and LK-10 have garnered many prizes in the vintage model glider flying community. But he thinks that progress will be slower than anticipated. "It may not be finished for a while due to the extent of detail work that needs to be applied. Things like panel lines, rivet detail, fabric screws on the wing ribs and tail surfaces and of course the pinking tape. This project will not be like the building of the Hall Cherokee or the LK-10A."





wo verv special Santa helpers were busy updating Jim Short's 1-19, hoping that it could fly at Lawrenceville on the New Year's weekend.



Chad Wille cleverly created and installed a new windshield made from Lexan plastic material, and Ron Elpers made two new steel wingtip hoop-shaped skids (see Schweizer drawing 19D431) at his home workshop, painted them black to match the aesthetics of the glider, and installed them.

Unfortunately, the weather did not cooperate either on 31 December 2021 or on 1 January 2022, and the glider reluctantly could not leave the hangar.

Comment on World War I Biplanes used in *Lafayette Escadrille* Documentary

Boom Powell wrote that he was a bit surprised to read in the Winter 2021 *Bungee Cord* that the Golden Age Air Museum "... owns the only (?) flying two-seat German WWI observation plane in the world." Boom pointed out that the Virginia Beach Military Aviation Museum is the proud owner of a



regularly flying replica Halberstadt CL IV.

Gerry Wild responded that the statement of their Rumpler being "the only flying two-seat German WWI observation plane in the world" was made by the creators of the *Lafayette Escadrille* documentary. The Golden Age Air Museum never made that claim, and that is why he put a question mark after it.

The reason why Slingsby built the two Rumpler CV replicas and designated them as T58, is still a mystery. The Golden Age Air Museum was told of the connection with the *Lawrence of Arabia* movie, but also heard of a different movie they were made for. So far, they have not been able to verify the true story.

Regardless of all that, it was a fun experience for Gerry to fly the air-to-air scenes for the *Lafayette Escadrille* documentary!



Jeff Byard reports on his T21

For the past 22 years I have worked on restoring my Slingsby T21b. Thanks to

Colin Hen-

derson and Christin Brodie and their beautiful T21 Sedbergh at IVSM 2021 last summer, I started feeling guilty about dragging my feet for so long on the restoration. Josh Knerr was also inspired by Colin and Brodie's T21 and asked if he could finish the restoration. I said sure, when do you want to start? The next morning, Josh had his pick-up truck out in front of my hanger. We loaded the T21 into the big trailer, and he towed it to his hangar at Shafter Airport. Over the next several months Josh finished varnishing the open bays of the wings, installed and rigged the spoilers, rigged the ailerons, repaired a cracked tow release bracket, repaired the keel beam where the release is mounted, weighted the glider, completed a new weight and balance, and attended to countless other details. Oh yeah! Josh is now an A&P Mechanic. Congrats!

In early November, we assembled and annualed the glider. Later that day we made two autotows and one 3,000-foot aerotow at Shafter. A week or two later we trailered the T21 back to Tehachapi



and gave several very chilly winter rides to some of the locals. We are now looking forward to the Western Regatta this coming Memorial Day, with some warmer spring weather.



With the weather turning nicer, **Neal Pfeiffer** reports good progress with **his Ka-2 wings** project:



I have been working on a pair of Ka-2 wings in my shop this winter on days when the air temperature

is above about 45° F. With help from the propane furnace and a sunny day, I can bring the temperature up to about 55° or 60° F and turn the furnace off for the afternoon. This is a reasonable temperature for working, but for painting I want the outside temperature above 50° , preferably even 55° F. There were enough warm days in January to finish the paint on the fabric behind the spars. On 8 February the temperature reached 62° F, so I finished the yellow one-part urethane paint on the leading edge and root. On 11 February, I painted the Bahama Blue strip over the spars using Polytone. The photo shows the final color scheme.

For the record, Dennis Barton owned this glider before me, and I hope to have it ready to fly this summer. This will allow me to get back to work on one, or both, ASK-14 gliders waiting in the shop.

Stanley Corcoran, the Frankfort Sailplane Company and the Cinema II / TG-1 glider

Stanley Corcoran was an early pioneer in the soaring movement in the United States, who is largely forgotten today. He started building sailplanes in Frankfort, MI, in 1938, established the Frankfort Sailplane Company in 1939, then relocated to Joliet, IL, in 1940. He designed the single-seat utility glider "Cinema" in 1938 which evolved into the two place "Cinema II" in 1940. While flying the original Cinema in the 1938 National Soaring Competition at Elmira, NY, he had a flight of 183 miles and ended up in 10th place overall. He became a director of the SSA in 1945 and assisted in running the 1947 National Soaring Competition at Wichita Falls, TX.

During the late 1930s and early 1940s, the U.S. Army decided that it needed an airborne assault force based on the German Army's successful use of gliders and airborne troops during the early campaigns of WW II. The German Army used troop and cargo carrying gliders in the invasion of Poland in 1939. The following year German combat gliders were towed into Belgium, and German glider-borne troops overran Crete in May 1941. The history of gliding suddenly became overshadowed by the hard facts of glider invasions.

The U.S. Army placed orders with several manufacturers who simply continued building existing two-seat sailplanes. The Frankfort Sailplane Company received its first order for 40 ships in May 1942 and completed the order in November 1942. Unfortunately, the company lacked the resources to capitalize on the military contracts and was unable to quickly produce large numbers with an adequate quality. Multiple problems with structural and handling issues delayed the final delivery. Part of the problem was that the original TG-1 gliders were designed and built for soaring flight, but the Army needed basic trainers. The TG-1s could not handle rough conditions very well. The improved TG-1s received the designation TG-1A.



Joe Steinhauser (LH) and Stan Corcoran (RH) in 1942.

While the Frankfort Company struggled with its TG-1, Schweizer Aircraft cranked out the TG-2 and TG-3 and Laister-Kauffman was building the TG-4. As these ships entered Army service, the training program was re-evaluated. Problem one: even with three companies building four designs, the quantity did not meet the demand. Problem two: people in charge realized the trainers did not properly prepare the pilots for their assignment. It was like pilots learning to drive in sports cars, so they could drive buses! The brilliant idea to take powered light two-seat aircraft and replace the engine with a seat for a second student resulted in increased student turnout in an aircraft that better mimicked the assault gliders' handling and performance. Aeronca, Piper and Taylorcraft were able to modify their respective observation aircraft (L-2, L-3, and L-4 designs) to meet the demand. Constructing these modified airframes was much simpler and quicker then producing sailplanes. So the Aeronca TG-5, Taylorcraft TG-6, and Piper TG-8 performed the majority of the training. The earlier training gliders were then used primarily by the instructors for "currency," as they flew in search of thermals!

The TG-1A that is being restored by the Western Antique Aeroplane and Automobile Museum (WAAAM) in Hood River, OR, was built and registered on 30 June 1942 as number 2-11, USAAC



Elevator: before and after



s/n AF42-52892 under Order W535-AC-28131. After the war, this was one of several gliders that entered civilian service. Flown for a short time, she was then placed in storage.

The majority of the airframe (fuselage frames and stringers, wings, control surfaces, and stabilizers) is wood, which was mostly in poor condition. The rudder and vertical stabilizer were the only wood pieces in good condition. All steel parts were cleaned, inspected, repaired as necessary, primed and painted. The aircraft is recovered using the PolyFiber process. Currently the wings and ailerons are in final yellow color with appropriate Army markings. Fuselage and vertical fin are covered and are in final blue and yellow. The rudder is ready for fabric covering. The horizontal stabilizer and elevator are ready for plywood sheething and fabric covering.

Once completed, the TG-1 will join WAAAM's unique flying collection of military training gliders: the Schweizer TG-3, Laister-Kauffman TG-4, Taylorcraft TG-6 and Piper TG-8. The ultimate goal is to acquire a Schweizer TG-2 and an Aeronca TG-5 to preserve the entire series.

Scott Gifford



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Engineering Plans from the VSA Drawing Archive

The VSA Drawing Archive team continues to be on the lookout for engineering drawings, parts lists, assembly instructions, and other pertinent documents and material on vintage gliders.

The Drawing Archive team has collected quite a few complete sets of plans for important gliders from the United States and Europe. Considerable effort has been made to digitally scan and catalog these drawings. Using skilled volunteer help, many of these drawings have been cleaned to remove decades of background noise, tears, and other disfigurement, so that they may be more easily read and used.

Many other sets are in the archive, but they may not be complete or be fully cleaned. If you have a specific interest for your glider or project, feel free to inquire.

Questions about the VSA Drawing Archive, including drawing availability for other glider types, can be sent to Jeffrey Stringer <jhstringer.jhs@gmail.com> or Neal Pfeiffer <nealpfeiffer@sbcglobal.net>.

Note that our volunteer archivists also work with modelers to assist them with specific drawings from a particular set so they can create their subscale replicas of vintage gliders as accurately as possible.

These drawings are available to VSA members for a donation to VSA to support this continued effort. General information on suggested donation levels can be found on the VSA website <vintagesailplane.org>. Drawing Sets for Basic Vintage Wood Gliders Include:

 Denver Pioneer Utility (drawings plus excellent assembly manual) • Hütter 17 (drawings in German and English) Grunau Baby II and IIb (the IIb drawings are a nice, clean collection) Kaiser Ka-1 (this set has been assembled from various sources and cleaned) Drawing Sets for Vintage Wood-Wing Gliders with Steel-Tube **Fuselages Include:** Briegleb BG-6 Utility (9.8-meter span, drawings plus assembly instructions) • Briegleb BG-7 (12.3-meter wing for BG-6, drawings plus instructions) Kaiser Ka-3 (a good set that has been used for a very nice model) Drawings for more **Complex Gliders Include:** Bowlus BA-100 Baby Albatross (drawings plus assembly instructions) Olympia Meise (very complete nice set in German) Beveled 14th / 4a Rhönbussard (good German & Danish sets) • Hütter 28 (gull-wing glider, nice set in German)

SVS-nytt over enter SVS-nyt over enter SVS-nytt over enter SVS-nytt over enter SVS-nyt

The Christmas holidays are history, but we thought you might like to see the cover of the latest newsletter of the **Swedish Vintage Glider group, SVS-nytt**. The figure caption (translated) says it best: *Father Christmas checks out our*

Schweizer 2-22 before it is used for his reindeer tow on Christmas. You may

remember that Bernt Hall had submitted a nice report to *Bungee Cord* (see Summer 2020), describing the group's trials and errors during the restoration process. With the help of K&L Soaring and several VSA members, they were able to restore their 2-22E, and it is now flying regularly.



2022 Calendar of Events

March 26-April 9 • Marfa Spring Fling

Annual Vintage/Classic Sailplane Rally at historic Marfa, in far southwest Texas. Information: Burton Compton (800) 667-94648 or <marfagliders@aol.com>.

May 27-30 (Memorial Day Weekend) • Western Vintage/Classic Regatta

Mountain Valley Airport (L94) Tehachapi, CA. Tows, flying operations and camping facility provided by Skylark North (661) 822-5267. Information: Jeff Byard (661) 609-4848 or <jgbyard@gmail.com>.

June 10-13 • Hood River 2nd Saturday Glider Weekend

Ken Jernstedt Airport (4S2), Western Antique Aeroplane and Automobile Museum (WAAAM), Hood River, OR. Set-up and de-rig on June 9 and 14. Tows available. Camping on request. Information: (541) 308-1600 or <info@waaamuseum.org>.

June 13-19 (Father's Day Weeklong Event) • Midwest Vintage/Classic Regatta

Wabash Valley Soaring Association at Lawrenceville-Vincennes International Airport (LWV), Lawrenceville, IL. Camping on field, motels and lodging nearby. Hangar space is available by prior arrangement. Bring your own vintage glider or join WVSA and fly their ASK-13, Ka-8, Ka-6E or Astir CS. Information: Jim Croce (270) 823-3394 or <b407flyer@yahoo.com>.

June 18 • VSA Annual Meeting

Mid-American Air Center, Lawrenceville-Vincennes Airport (LWV), Lawrenceville, IL. Information: Jim Short (708) 624-3576 or <simajim121@gmail.com>.

July 1-4 • Vintage & Classic Sailplane Regatta

New Castle International Gliderport (VA85). Come fly the ridges and thermals at the historic and beautiful Blue Ridge Soaring Society field. Tows, flying operations and camping facility provided. Information: Bruce Patton (813) 892-7134 or <pattoninfl@aol.com>.

July 21-August 12 • 49th Vintage Glider Club (VGC) Rendezvous and Rally

VGC Rendezvous (July 21-30) at the Aeroclub Mario Naldini in Ferrara, Italy, followed by the VGC Rally (August 1-12) at the Aeroklub Celje in Celje, Slovenia https://vintagegliderclub.org/event/>.

September 2-5 (Labor Day Weekend) • Vintage & Classic Sailplane Regatta

Mountain Valley Airport (L94), Tehachapi, CA. Tows, flying operations and camping facility provided by Skylark North (661) 822-5267. Information: Jeff Byard (661) 609-4848 or <jgbyard@gmail.com>.

September 15-18 • Great Plains Vintage/Classic Regatta

Wichita Gliderport, two miles east of Jabara Airport in Wichita, KS. Potential extra days to fly on request. Information: Neal Pfeiffer <nealpfeiffer@sbcglobal.net>

October 16-30 • Oktoberfest and Vintage/Classic Rally

Fly autumn Texas thermals at Marfa, TX. Dual available in Burt's "cabriolet" ASK-13. FAA checkrides by prior arrangement. Bring your own crew. RSVP required. Information: (800) 667-9464 or <www.flygliders.com>.

October 21-23 • Oktoberfest at Chilhowee Gliderport

Although not an official vintage glider event, the Oktoberfest at Chilhowee Gliderport is an autumn sport soaring delight for all, at which vintage and classic sailplanes and their pilots are also invited to participate. Grass runway, scenic ridge, smooth fall thermals. Contact Sarah and Jason Arnold at (423) 338-2000 or go to <www.chilhowee.com>.

Looking ahead to 2023 and 2024

July 20-August 8, 2023 • 50th Anniversary Vintage Glider Club (VGC) Rendezvous and Rally

VGC Rendezvous at Nympsfield, England, followed by the International Rally in Ashton Downs, England.

July 6-13, 2024 • 50th Anniversary of the Vintage Sailplane Association at IVSM 2024. Harris Hill, Elmira, NY

National Soaring Museum, Harris Hill Soaring Corporation and VSA welcome you to Harris Hill for a weeklong gathering of some of the world's most significant and beautiful vintage and classic gliders. Help us celebrate 50 years of VSA!

The Vintage Sailplane Association is pleased to print notices of events and meets that it receives from its members. VSA does not sanction or sponsor events or meets or accept any liability for them. VSA urges event sponsors to provide information as accurately as possible and to indicate any restrictions or special requirements regarding participation in their events. <u>Please contact the event sponsor with any questions</u>.

Visit the 15th National Landmark of Soaring at Marfa

in southwest Texas

Flying year-round with "slow tows" available for your classic or vintage sailplane!

Marfa Gliders Soaring Center: <www.flygliders.com>

Call in advance: Burt Compton (800) 667-9464 or <marfagliders@aol.com>

VSA / VGC / OSC / NSM member



Only the Wing: Reimar Horten's Epic Quest to Stabilize and Control the All-Wing Aircraft. Reissued in paperback by Smithsonian Institution Press. ISBN 9781944466381.

In the late 1920s, Reimar Horten began experimenting with flying models equipped with fuselages, stabilizers, rudders, and elevators, but his life's work involved systematically removing these components from models until he could achieve flight with only the wing. Not only were pure wings more difficult to design with the stability and controls needed to fly, they were harder to place in practical roles not already filled by conventional aircraft operating for less support and lower operational costs. Always seeking to increase performance and efficiency, Horten adopted a multidisciplinary approach after flying his first piloted wing in 1933, eventually breaking new ground in cockpit design and construction materials. His most important innovation was the unique pattern he developed to distribute lift over his wings, the result of his





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efforts to refine the aerodynamic control of all-wing aircraft, often while working alone and in difficult circumstances. Two days after Horten passed away in 1993, the Royal Aeronautical Society awarded him the

British Gold Medal for Outstanding Achievement in Aeronautics.

The new edition of my book, published in 2020, has a revised and expanded introduction with information on new research conducted and discoveries made about Horten aircraft since the first edition was published in 2011. I discuss the work of Al Bowers and others at NASA and elsewhere to build and fly a series of experimental flying models equipped with the Bell-Shape Lift Distribution. The NASM Horten 229 V3 all-wing jet was studied by conservators at NASM to determine whether the Germans had applied any substances to the aircraft to make it "stealthy." I also compare the NASM team's findings with the results of a study made by a group of stealth experts from Northrop.

Russell E. Lee



Classifieds



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