# NSM

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# A Conversation With Martin Simons and Chris Wills at the 1995 International Vintage Sailplane Meet

The July 16-25 I.V.S.M. at Harris Hill and the National Soaring Museum offered an unprecedented opportunity to visit with some of the world's outstanding professional aero-historians, writers, photographers and sailplane pilots.

Martin Simons, Stepney, S. Australia, and Chris Wills, Oxom, England are all of these. Several of Simons' articles have appeared in soaring and aviation publications. He is the author of *"World's Vintage Sailplanes 1908-1945,"* a comprehensive work on historically significant gliders of that era.

Chris Wills is a prime mover of the world vintage glider restoration movement. He is an author, president and founder of the European Glider Club and editor of the VGC News. Chris Wills is the son of British world soaring champion and soaring trailblazer, Phillip Wills.

Both took time out from I.V.S.M. activities to answer questions and give their views on the present state of soaring:

*What do you find to be the main differences between the soaring movement here and in Europe and Australia?*

WILLS: I think that American gliding is much more thought out than ours. The sailplanes are well-produced and very practical, whereas ours have to be lifted and pushed and are a lot more work. I've only been to this club (Harris Hill Soaring Corporation) in the U. S. Many of our clubs do not have the support from the councils and the government; we're on our own. The governing council in Great Britain is the British Gliding Association."

SIMONS: I would say that the big difference in both countries, the U.K. and Australia, is that we rely almost entirely on amateur clubs and have very, very few commercial operations as you do here. I was flying in Texas last weekend at Southwest Soaring, Caddo Mills; quite small but a very efficient commercial operation with a manager and instructor. There is no club. I called the day before, booked a time, and when I arrived the glider was towed out onto the field by the kids who were employed by the center. All the work is done for you. You call, schedule your time, go out soaring, pay, and go home...

In British and Australian gliding clubs, all the work is done by members. Occasionally, you will find a large club that can employ a full-time instructor or maybe a secretary and a manager. But the average British and Australian club is an amateur operation A to Zed. You have to start early in the day, get the gliders inspected and ready for flight and tow them out yourself. Then, when you take off, you have to reckon that there are three other club members waiting to fly that aircraft and they will take it as soon as you land.

**Aero-historians and writers Martin Simons, Stepney, S. Australia, left, and Chris Wills, Oxom, England, exchange views at the I.V.S.M.**

*And the future?*

WILLS: It's going to get much more costly; the gliders are really expensive to buy now. Many more triangles; previously it was free distance cross-country. Now it's mostly triangles and races. In Britain the movement has been growing, with more gliding clubs being formed all the time. Father always said that if there was no government assistance or any help from councils, it would be a very strong, virile movement.

SIMONS: I can speak a little bit about future trends because I was at the New Zealand World Championships; not flying, observing. The biggest change in recent years has been the introduction of the GPS navigation system; a box the same size as your recorder, which you plug into the aircraft. You set the coordinates of the flight that you want to make, the location of each turning point, then you don't need to see the ground again until you land. The people in New Zealand were flying at very great heights with clouds beneath them, so they couldn't see the ground anyway. When they completed the task, crossed the finish line, landed and had the black box taken out of the cockpit, the organizers fed the results into a computer. It recorded speed, checked that the pilot went round the turning points and then worked out the pilot's score from that position. All accomplished in a matter of minutes, whereas previously, it had to be worked out with pencil and paper.

Some of the pilots complained that it ruined the sport. In fact it has changed things so dramatically in the last year or so that it's no longer the same sport any more. Of course there's always something regretful in that. On the other hand, I wouldn't want to fly without the GPS in New Zealand because the country is so dangerous. In the high mountains they get these enormous waves that quite commonly reach 20,000 to 30,000 feet...In fact, Chris' father, Phillip, was one of the people who broke records in those New Zealand waves.

WILLS: Yes, he flew with an old glider, a Weihe built during the war. It had very little speaking ability, but did very well getting to 30,000 feet. There weren't many days like that. The wind is often very strong in New Zealand."

*Favorite soaring location and best flight?*

SIMONS: Well, all my best flights in terms of shear distances would have been done in Australia because the weather there is good for racing and for flying long distances cross-country. I'm not

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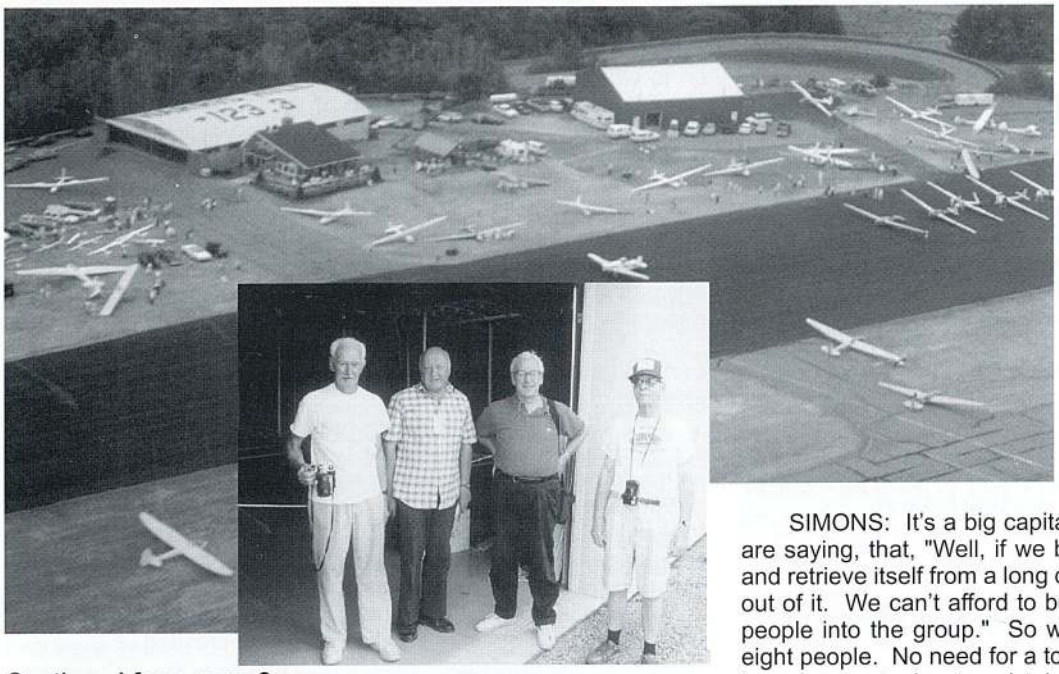
## ON THE COVER

**Bill Batesole, Ludlow, VT, in his Schweizer 1-26, Serial #003, on tow off Harris Hill during the 1995 International Vintage Sailplane Meet. Chris Wills' Kranich II B-1 is in the foreground.**

## ...At the First International Vintage Sailplane Meet Ever Held in the U.S.



**An overview of vintage sailplane activity at Harris Hill during the July 16-25 I.V.S.M.**

**Inset: Left to Right: Robert Fronius, El Cajon, CA, Chris Wills, Martin Simons and the late Walter Setz, Upper Darby, PA, discussing glider restoration at the NSM.**

**Continued from page 2**

going to say that my most enjoyable flings were there. I learned to fly in England at Dunstable, which is a famous English site. I used to enjoy 20 minutes ridge soaring in marginal conditions...Doesn't match racing a 500 kilometer triangle in Australia though. It's good fun wherever you go.

WILLS: We've had so many rallies in bad weather, that I have a dreadful feeling that if we could somehow get a long way from the Atlantic climate at the end of an autobahn, with an open hangar, we'd have a really good meet.

SIMONS: We have a belief in Australia that if you want to break a drought, the best way is to hold a gliding meet.

WILLS: Even in Poland they do have bad weather. I was there in 1968 for the world championships, and that's quite a long way from the Atlantic. They've held quite a few meetings in France and for the last four years they have had a cross-country ballad between gliding clubs, about 100 kilometers apart, or less. And maybe, just once, on any of these ballads have they managed to do the tasks. So, even in France the weather isn't reliable.

SIMONS: We've had some interesting things in the U.S.A. They had the Smirnoff Derby some years ago where they flew (sailplanes) right across the country. They've been doing the same sort of thing in Australia lately, with trans-Australia flights. They're doing it increasingly with motorcycle planes (motorgliders), another big sailplane trend. We were talking about costing money. If you want one of these self-launching planes with a motor and good performance, in Australia you're up for anything like $300,000 Aus.(approx. $1.31 Aus. to $1.00 U.S., 10/95). They are the very best and you can come down to the sort of $100,000 Aus. mark...15-meter span, put a motor on it...another $10,000 Aus. The German manufacturers, I'm told, are not now building very many pure sailplanes. Nearly all production of modern sailplanes in some sense have added board motors, some of them more powerful.

WILLS: A reflection of the prosperity of Germany. They can actually afford to buy somewhat expensive motorgliders rather than pure sailplanes.

SIMONS: It's a big capital outlay. But my friends in Australia are saying, that, "Well, if we buy a sailplane that will launch itself and retrieve itself from a long distance flight, we shall get more use out of it. We can't afford to buy it, but we will bring in three other people into the group." So we may see a syndicate of seven or eight people. No need for a tow plane, no need to wait in line for a launch; you taxi out and take off. We can even keep it at the general aviation airdrome.

There are no special rules for these sailplanes; the same is happening here. Down in Texas I was told that they are introducing a new category for pilots to be licensed to fly motor sailplanes which will not be the full power license, but will not be a gliding license either. It will be a special license for motor sailplanes.

WILLS: In Britain, I think that it is developing along these lines. Normally, there are not that many of us who have that sort of money.

*Both of you write extensively for publication; what are some of your current projects?*

SIMONS: I was just mentioning to Chris about a book I'm writing about Slingsby sailplanes. It deals with the whole history of Slingsby and it includes drawings, texts and photographs of all sailplanes they produced. And I was giving Chris a rundown of the last ten years of that company when they built sailplanes, because they went through a very bad period. They went bankrupt, twice actually, in effect. But now they've given up sailplane production altogether, which makes it easy for me, in a way, because now I can finish the book. They're producing little single seat trainers which have been sold to the American Air Force. They are building quite a large number of those, but no more gliders... "*Fiberglass Fireflies*"; that's the name of the book I've just finished.

WILLS: Well, I spend most of my time writing The Vintage Glider Club Newsletter, *VGC NEWS*. I try to get it out fairly often; it is really most important to keep our members enthusiastic. We've been reduced to three issues a year, which isn't enough. I think we ought to have four. It's lately improved, I hope, through using colored photos for the cover.

I have a little staff. I have to write and three greyhounds keep me fit. All the rest of the time I'm working on vintage gliders. But, we've got a lot of enthusiasm in Britain for vintage gliders. Quite a number are being restored at the moment, including three or four Eon Olympias and two Hutter 28's. We've 700 members spread

**Continued on page 4**

Pratt-Read LNE-1

Polish Orlik

Schweizer 1-23E

**Continued from page 3**

all over the world. We've tried to get Germany going along with us. We'll find out how well they've done when we go there next month for the international meet. The young Germans are becoming interested.

There are problems. They didn't want to have their own vintage gliding club because of their pre-WW II and wartime affiliations; but they will be members of our Vintage Club. If they build what they say they are going to build, it will be very exciting. We're trying to orientate the *Vintage Glider Club News* to the whole world."

*Anything you would like to add?*

SIMONS: Yes. I do think that we should say thanks to the Soaring Society of America and to the people who've organized the International Meet here. I think that they've done a great job and I know how much work was involved. They deserve everybody's gratitude.

WILLS: I've never imagined that America would be like this. It's a most beautiful country and everybody is absolutely charming. They think of doing everything in a very big way.

SIMONS: The really big problem is when you go into an American McDonald's or something and order a sandwich, you don't get a sandwich - you get a meal about this big (gesturing plate-size with his hands)...And I'm used to sort of delicate cucumber quartered slices. That's what I mean by a sandwich and I get more than I can eat.

*Where to next?*

WILLS: I have to go first to England, and then almost at once to Germany for meetings there, Oberschleissheim, near Munich. It is a storage facility for the German Museum in Munich and they've got a lot of their aircraft there. Our meeting will embellish this museum. The one at the Wasserkuppe will be first, before going on to Oberschleissheim.

SIMONS: I'm going to both of these meetings in Germany with a friend from England who's taking an old glider. I'm going to pick him up in London and take him to the meeting.

*What do you fly now?*

SIMONS: At home, I fly a Nimbus 2 and a Discus sailplane.

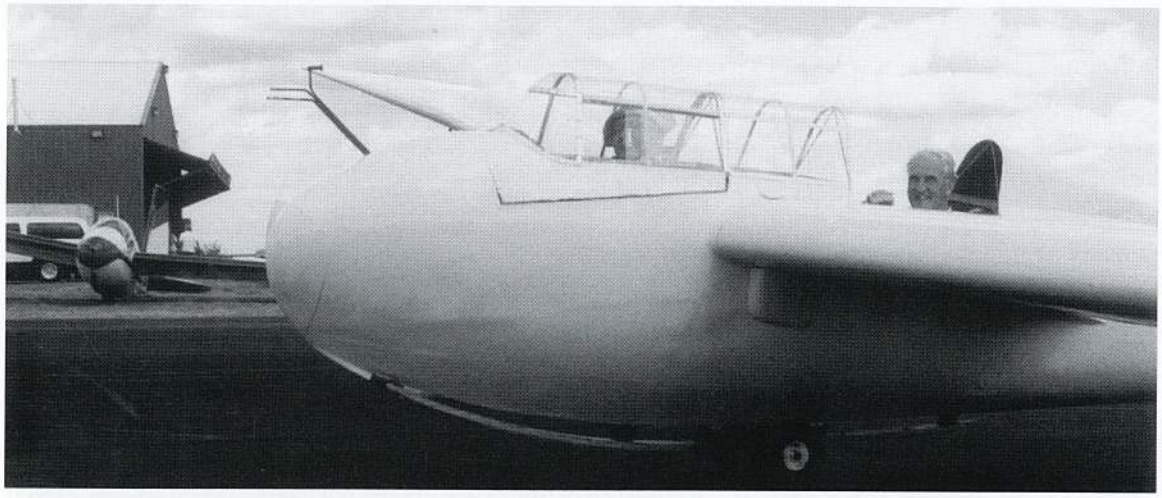
WILLS: I'm afraid I don't manage to fly my own vintage gliders very, very occasionally, because there's always work to do on one of them. The Kranach II, a 1936 two-seater, was built in Sweden under license during the war, from pre-war drawings.

*Is it true, that during the war, the Kranach was to be used to transport ammunition and fuel for Operation Sea Lion, the proposed invasion of Britain?*

WILLS: Eighty were quickly modified for this. Eventually, they went to Russia; none ever came back. The Ju87, Stuka was used as the tow plane, with a towing speed of 150 kilometers per hour, or 90 miles per hour. The release height was 2,000 meters and I hate to think of what speed the Kranach flew at. Supposedly it had 500 pounds in the rear seat. And if they were the pre-war version, which I have a suspicion the Germans didn't mind losing; they would only have had spoilers, like mine. Spot landing might have been a bit of a problem, but they didn't mind if they crashed.

At this point Simons and Wills were approached by a gaggle of old friends and vintage sailplane buffs and all were quickly engaged in unfinished conversations from the morning's briefing or last vintage sailplane meet.

## MAKING THE BEST OF IT: CHRIS WILLS' "ACCIDENTAL" TROPHY-WINNING RIDGE FLIGHT AT THE I.V.S.M.



**Chris Wills, front cockpit, David Jones, Coventry, England, rear, in Wills' Kranich II ready to launch on their winning IVSM ridge flight.**

The beautifully prepared two-place Kranich II was eased out to the starting grid. The releasable wheel dolly was in place and British pilot/owner Chris Wills, along with his fellow countryman and passenger David Jones, were strapped in. There didn't seem to be much lift at the time, so Chris would probably make a few passes over the Chemung Valley and return to Harris Hill. The Kranich started its liftoff. Then about 150 yards down the runway things began to happen.

Let Chris Wills tell it: "I must say, right from the very beginning, that it was my 2,000th flight and I shall never, ever, ever forget it--releasing the cable (tow rope) instead of the wheels and going over the edge!"

"I couldn't see very quickly where the emergency field (in the

**Continued on Page 5**

Standard Austria

Dutch Slingsby T-31b Cadet III

Schleicher Ka-7

**Continued from Page 4**

valley) was. We seemed to be staying up along the slope, more or less."

He explained that the Kranich is a wonderful glider and "as long as you didn't let it down, it wouldn't let you down, even though it is very old."

When Wills was in Ireland for a Vintage Glider Club meeting recently, he noticed that the Kranich had a tendency to ground loop into the wind on takeoff. So, during this launch he was concerned that it might do the same here at the I.V.S.M.

"It did, a little," he said. "I had my hand on the cable release. I'm afraid that when I got over the grass I managed to release the tow cable instead of the wheels. Then I thought, 'must release the wheels too,' so I let them go; then we were over the edge."

He was so low that the wheels bounced up and just seemed to touch the glider. He thought that perhaps there was a slight sound, "but not of splintering wood. It was just of impact. Then we turned along the ridge and appeared to be in slight ridge lift. I was absolutely amazed."

Back on Harris Hill viewers gasped, watching the takeoff, skipping wheels and a snapping towline as Wills, Jones, and the Kranich just cleared the runway and disappeared over the brow of the hill. Then, minutes later as concerned watchers moved toward the brink, they were treated to the sight of just a tan wingtip skimming along the ridge. A whiff of lift had saved them. Next pass the whole ship was in view, and an instant cheer went up.

"David kept shouting what his variometer was saying; he had the canopy off, so I couldn't hear him very well." Wills said that they did seem to be staying up, although they had been told earlier that it would be unlikely that the ridge would be working.

Now they could easily make the emergency landing field but beguiled by the optimism that is inherent in all sailplaners, they kept figure-eighting in front of the ridge. Wills reported Jones as yelling over the slipstream, "Come on Chris, you're doing wonderfully. Don't stop now." At one point they were 600 feet above the field.

With each pass the considerably larger crowd on Harris Hill would send up a volley yell and wave their arms as the Kranich wafted by. One wag put it this way, "Hey, this is better than a TV cliff-hanger, a real one."

With Churchillian doggedness, they hung on, Wills, Jones, and the elegant gull-winged Kranich, only now they sank below the brow. "Gotta land now," chorused the assembly of hilltop observers. Then, to everyone's surprise, the Kranich would skate by.

"Come on, we must continue this flight, we're doing better," Wills remembered saying, adding, "That was a big mistake, really. At that moment we could have gotten into the wind and made it back to the airfield. Very often a downwind landing would have been possible. But I didn't want to try a very fast downwind landing, in case we worried anybody."

I.V.S.M. pilots had been briefed earlier, that the emergency landing strip had been prepared for them in case they couldn't make it back to the hill.

"So I thought well, that's it. If there's any problem at all, we're going to the emergency strip. The one thing that I was determined was that the Kranich must not get broken."

The pilot later said that the speed had to be kept up. The 630-pound ship climbed well at 35 knots and had a 23 1/2 to one glide ratio. All up weight for that flight was about 1000 pounds.

Wills said that he didn't know what was going to happen. "At one time there were an awful lot of trees between me and that landing field. But she just plowed on and we began to get there." He approached the emergency field, "with a good side slip, because the Kranich slips like anything, I got it lined up and landed. Everything worked."

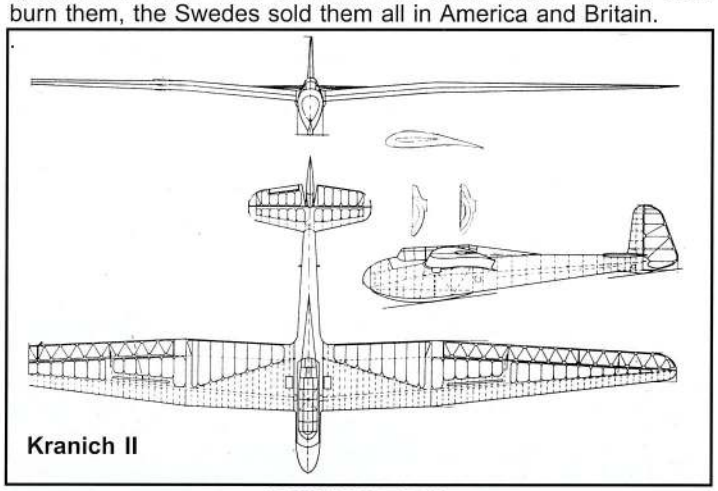
Wills commented on returning to the field after his one hour and ten minute flight, "I still, one day, want to catch a proper American thermal. So far it's all been minus 100 feet or plus 600."

THE GENEOLOGY OF WILLS' KRANICH II:

Chris Wills' Kranich was built in Sweden to pre-WWII drawings in 1943, entering service with the Swedish Air Force in January, 1944. He said that the Germans had allowed the pre-war drawings to go to Sweden. "Although I don't know, they could have been copied; they were prints."

He said that a later version was built during the war in Bohemia, Czechoslavakia. It had bigger air brakes outboard of the gull (wing section), an elevator trim, a larger cockpit, adjustable rudder pedals and expanding wing pins. Wills thought that this prototype flew in 1939.

The Air Force sold their Kranich gliders to Swedish civilian clubs after the war. Following an unfortunate accident in which a Swedish Weihe broke up, all wooden sailplanes were banned from flying in Sweden. Wills said that was about 1963. "Rather than burn them, the Swedes sold them all in America and Britain.



Kranich II

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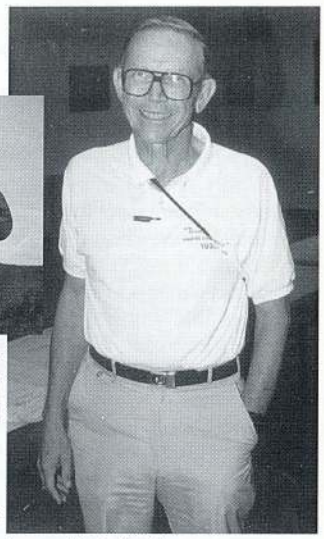
Kranich II B-1

Muller Moswey III

Italian M-100

# Dick Johnson at the International Vintage Sailplane Meet on Harris Hill

**17-year-old Dick Johnson in his homebuilt Baby Albatross taking off during the 1940 Nationals at Elmira.**



**Dick Johnson at the 1995 I.V.S.M.**

"It's fantastic! I think that a lot of these vintage sailplanes are in better condition than when they were new."

Dick Johnson, renowned championship soaring pilot, stood admiring the colorful array of oldtime sailplanes that splashed the flight line of the International Vintage Sailplane Meet at Harris Hill last July.

"The varnish, fabric and clear dopes they put on them...they're really very pretty. A lot of them date back to before I came on Harris Hill in 1940," the Dallas, TX soaring pioneer said.

That year the August-September *SOARING* magazine reported the 17-year-old Dick Johnson and his brother, Dave, as arriving on Harris Hill for the 11th National Soaring Contest with "a Baby Bowlus glider, plenty of enthusiasm and no licenses." Johnson passed his CAA(1) private glider pilot test, won his "C" early in the meet, and won a Silver "C" with a flight to Lewisburg, PA., finishing third in the contest.

Johnson recalled some of the vintage types that he had flown, including all the WWII TG trainers and the British T-21 Slingsby.

He instructed Army pilot trainees, almost 2,000 of them, at Twenty-Nine Palms, CA during 1942 through March of 1943. "The last half of the year we trained, not with the conventional Schweizer TG-2's and Laister-Kauffmann TG-4's, but with TG-5's, 6's and 8's, which were light planes converted to gliders. They had about a 12-to-1 glide ratio. (The TG-5 was a modified Army Aeronca L-5, the TG-6 was a modified Army Taylorcraft L-2, and the TG-8 was a modified Army Piper L-4,-Ed.)

Johnson said that the engines were removed from the light planes, the fuselages were stretched, a cockpit was added, and a shorter landing gear was fitted. "...More like the Waco CG-4A cargo glider the trainees would eventually be flying."

"We gave them 30-32 hours of basic training in gliders," he said. "We ran four shifts-a 24-hour day there, two daytime shifts and two night shifts. The towplanes never cooled down; all they did was add more fuel and change instructors."

He said that he was gratified to see so many young people getting interested in glider restorations within the last ten years. "It is just amazing how they will take any old glider, especially one dating back to the pre-war years and put it all back together with such tender loving care. Even if they don't have all the parts, they'll build it from plans."

Scanning the Harris Hill flightline, the 1956 Hall of Famer, former national soaring champion, aerodynamicist, test pilot and writer, commented that the last time he had flown here was during the 1982 15 Meter Nationals. "For one day I led the contest," he said, with a bemused grin, "Then I landed out. Doug Jacobs (Hall of Fame-1990) won that year; his first, I think. He's a really good pilot; in fact Doug won the 15 Meter at Hobbs, NM, last month."

His sentimental favorite of the vintage ships at the NSM? The Weihe.

"I flew that one here in 1959. It's a slow, gentle old glider built in 1938, I think...One of the three that Phillip Wills brought back to Britain from Germany and restored into Hopperidge aircraft.

"One went to the United States to Shelly Charles, who donated it to our club, The Texas Soaring Association. I was able to fly it in the 1959 Nationals here. Nobody believed that I had a chance, but the weather turned out so weak that the fast gliders had trouble staying up. You could keep that Weihe up on anything."

Johnson said that the Ventus A is his favorite, the same ship that he flew the last time he was here in 1982. He has 2,300 hours in it over the last 14 years.

His most exciting flight?

"Well, it's embarrassing, but it was when I was trying to set an altitude record and the wings came off my Baby Bowlus," he said. "...The Summer of '42 and we had a rare day off from glider instruction. We did some auto tows with the Baby Albatross. It had no electric instruments, no air brakes, a 65-mile-per-hour placard speed and the venturi (2) acted as the turn indicator. Bob Stanley (Hall of Fame 1976), had the record of something like 17,000 feet at the time...I got up to about 16,000 feet when the venturi iced up and the glider went out of control. I was about 5,000 feet in the cloud, and before I could get out, one of the wings had pulled off. So, at around 10,000 feet, I was headed straight down at about 150 miles per hour."

Then the second wing disintegrated! "The first wing pulled out at the strut, but the second wing shattered from high dynamic pressure; it was in pieces six inches square." Dick managed to squeeze out of the Baby's tumbling cockpit/pod, and cleared the whirling glider wreckage. Then the terminal question; he wondered if the chute would really work.

"So," he said, "instead of waiting like I should have, I thought, 'I'll try it.' I pulled the rip cord and 'wang!' The parachute worked, but I was still at 10,000 feet. I should have waited. I had black and blue marks on my shoulders and groin when I finally got down."

He didn't crack the altitude record that year, but in 1951 he flew the RJ-5, a ship he designed and built, to a world distance record of 545 miles in a straight line from Odessa, TX. (He also won the 1950, '52 and '54 Nationals, and flew with the US team at the 1952 first International Meet in Carabanchel, Spain.)

When asked if he was going to fly at the meet, he said, "I'm sure they'd let me if I asked them, but I'm comfortable in my Ventus. I know it so well. I'll fly when I go back to Texas."

1.) Civil Aeronautics Administration, forerunner of the FAA, Federal Aviation Administration.
2.) Venturi used to measure flow of air to operate instruments such as Air Speed Indicator.

Austrian Oberlechner


Schweizer TG-2

Schweizer SGU 2-22

# After Nearly A Half Century Clarence See Meets An Old Friend, The Orlik II

**Clarence See in the Orlik at the I.V.S.M.**

There it was: the gull-winged Orlik II, on the starting grid of the United States' first International Vintage Sailplane Meet, looking as sleek as anything on the runway. The Polish beauty and Clarence See, I.V.S.M. chief tow pilot, were old friends, dating back to the end of WWII.

It was then that the XTG-7 Army training sailplane was declared surplus and put up for sale. Test pilot, Clarence See recognized a race horse hitched to a milk wagon when he saw one, and snapped up the blueblood. The Army designated XTG-7, the Orlik II, designed by Antoni Kocjan, was among the most advanced of pre-war competition sailplanes and was the Polish entry in the 1940 Helsinki Olympic sailplane competition. Americans first saw it on exhibit at the Polish Pavilion at the 1939 New York World's Fair. On America's entry into WWII, it was taken over by the Army for glider pilot training. *(See NSM Historical Journal, Vol. 16, #2, 1994, pg.14.)*

Unfortunately, under the Army's tutorial, the sleek motorless thoroughbred suffered extensively from ham-handed pilot trainees and neglect. But with his extensive maintenance and flight experience, See knew that the shabby aristocrat could be salvaged. He restored and refitted the derelict Orlik II to serious competition status. Subsequent owner, Paul B. MacCready, flew it to national championships 1948 and '49 and to an unofficial altitude record of 29,000 feet.

Fast forward to last July's Vintage Sailplane Meet: Clarence See, Whitney Point, NY, strapped into the brilliantly prepared soaring icon and took off as John Serafin and George Kulesza, who brought the Orlik II to the I.V.S.M., watched.

After the flight, See said, "It flies better than in its original state. It used to have two sections of aileron. Ray Parker (Hall of Fame 1964) removed the inner section and just brought the wing out to the outer section." The result is that it has a much greater rate of roll and it almost eliminated the adverse yaw, resulting in increased performance. With some canopy sealing it is as quiet as a modern glass sailplane. He said that he would judge the performance as having increased 10 or 15 percent, adding that "it has good penetration, and probably would outclimb anything that was on the field...It, today, is an acceptable glider."

See said that after he sold the Orlik II he had flown a lot of sailplanes that disappointed him. "The long-winged Schweizer 1-23 may have been equal to it; but I doubt that in any given thermal the 1-23 would outclimb it." He said that the Orlik II probably had the lowest sink rate of any sailplane he had ever flown.

Asked whether it would last another 50 years, See chuckled and said, "The way John Serafin takes care of it, yes."

**Right, U.S. Congressman Amory Houghton, left, N.Y. Assemblyman George Winner, center, and Chemung County Executive Thomas Tranter, welcomed the first International Vintage Sailplane Meet to be held in America to Harris Hill during the opening ceremonies.**

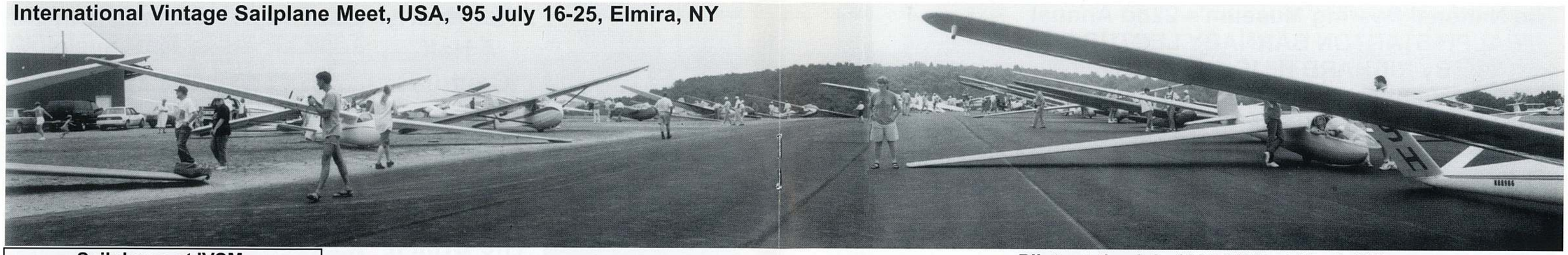
**Left, W-O-O-O-S-S-H-H-H-H! Chris Wills, Oxom, England, left, Linn Buell, Herndon, VA, president of the Vintage Sailplane Association, and NSM President Jan Scott, Lovettsville, VA, watch as Oscar Boesch, Toronto, Canada, wheels his ASW-15 sailplane in precision maneuvers at the opening I.V.S.M. ceremonies.**

Grunau Baby

Schweizer SGS 1-21

Eon Olympia

# International Vintage Sailplane Meet, USA, '95 July 16-25, Elmira, NY



## Sailplanes at IVSM

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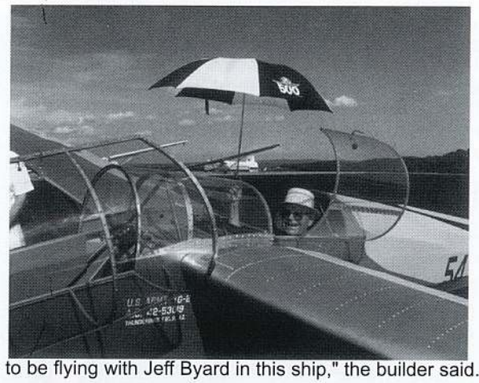
|---|---|
| Scheibe Bergfalke II/55 | Orlik II |
| Laister-Kauffmann TG-4A | Oberlerchner MG-23 |
| Schweizer SGU 1-19 | Slingsby Skylark 4 |
| Schliecher Ka-6CR | Schweizer SGS 1-23H |
| Schweizer SGS 1-26A | Briegleb BG-12A |
| Schleicher Ka-4 Rhonlecher | Grunau Baby |
| Schweizer SGS 1-26A | Schleicher Ka-6BR |
| Schweizer TG-2 | Schliecher Ka-6E |
| Pratt-Read PRG-1 | Schweizer SGS 1-26B |
| Schweizer SGS 1-21 | Laister-Kauffmann TG-4A |
| Slingsby T-21B Sedbergh | Breguet 905 Fauvette |
| Franklin PS-2 | Slingsby T-38 Grasshopper |
| Slingsby T-31 Tandem Tutor | Goppingen 3 Minimoa |
| Laister-Kauffmann TG-4A | Goppingen 4 Govier |
| Standard Austria | Schweizer SGS 1-23G |
| Schleicher Ka-3 | Schleicher Ka-8 |
| EoN Olympia | Bowlus Baby Albatross |
| M-100S | Scheibe L-Spatz 55 |
| Pratt-Read PRG-1 (LNE-1) | Laister-Kauffmann TG-4 |
| Schweizer SGS 1-23E | Muller Moswey III |
| Schweizer SGU 2-22 | Nord 2000 |
| Slingsby King Kite | Ab Fliegindustrie Kranich II |
| | Schliecher Ka-7 |

## International Vintage Sailplane Meet 1995 Awards

| | |
|---|---|
| IVSM-95 Exceptional Service Award | Paul & Virginia Schweizer |
| VSA Award for Best Restoration | Franklin PS-2, Joe Feather, Charles Franklin, Jack Wyman |
| VSA Trophy for Best Foreign Glider | Goppingen 4 Govier, Paul Serries |
| VSA Trophy for Best Military Glider | Laister-Kauffmann TG-4A, Douglas Fronius |
| VSA Trophy for Best Ridge Flight | Christopher Wills, Kranich II |
| HHSC Trophy for Longest Distance | Dan Olsen, Ka-6E |
| HHSC Trophy for Longest Duration | George Kulesza, Orlik II |
| HHSC Trophy for Best Altitude | Bruce Barrett, Ka-6CR |
| Schweizer Trophy for Favorite Schweizer | SGS 1-21, Walter Cannon |



**Paul Schweizer with "auxillary umbrella canopy" in Jeff Byard's Schweizer TG-2. They were awaiting the towplane during I.V.S.M. opening ceremonies.**

**Which ones are real? The seven model radio-controlled sailplanes in the foreground are exact reproductions of some of their full-sized grandfathers flying in the IVSM. Radio controlled power towplanes launched some of the model sailplanes in a coordinated flight demonstration over Harris Hill.**

"I'm happy to be flying with Jeff Byard in this ship," the builder said. "It reminds me of 53 years ago."

Paul Schweizer said that they used to test these ships on Harris Hill when the ridge was working. At that time Emil Lehecka, 1938 soaring champion, was the Schweizer Aircraft Corp. test pilot.

He added laughing, "I, or one of my brothers, would always go along to show we had confidence in these ships."

Schweizer said that work started in 1990 with the Vintage Sailplane Association, the Harris Hill Soaring Corporation and the National Soaring Museum in bringing the I.V.S.M. to Harris Hill.

Olympia N-2000

Franklin PS-2



## Pilots at the July 1995 IVSM at Harris Hill

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Rolf Algotson | Sweden | | Jan Forster | Netherlands | | Peter McLean | USA | MA |
| Colin Anson | England | | Charles Franklin | USA | MI | Marilyn Meline | USA | |
| Volker Appel | Germany | | Lasse Fredriksson | Sweden | | Thomas Mellies | USA | MD |
| George Applebay | USA | NM | Douglas Fronius | USA | CA | Klaus Mende | Germany | |
| C Harold Armstrong | USA | PA | Jim Furlong | USA | VA | Nilor Mendez | Brazil | |
| Robert K Armstrong | USA | PA | Robert Gaines | USA | GA | Malcolm Morrison | USA | PA |
| Bruce Barrett | USA | MD | Robert Gaines | USA | GA | Shane Neitzey | USA | |
| William Batesole | USA | VT | Walter Hansson | Sweden | | Kirby Nelson | USA | |
| Raul Blacksten | USA | CA | David Harper | Canada | ON | George Nuse | USA | GA |
| John Boyce | USA | CT | Fred Hefty | USA | CA | Ralf Nussing | Germany | |
| Lee Buell | USA | VA | Klaus Heyn | Germany | | David Ochsner | USA | MI |
| Linn Buell | USA | VA | Jack Hilton | USA | VA | Daniel Olson | USA | NY |
| Jeff Byard | USA | CA | Don Hobel | USA | NY | Neelco Osinga | Netherlands | |
| George Byard | USA | NV | Bill Holbrook | USA | | Bill Park | USA | |
| Michael Campbell | USA | MI | Marvin Holland | USA | | Sue Pennington | USA | |
| Walter Campbell | USA | CA | Martyn Hoogenbosch | Netherlands | | Marita Jean Rea | USA | VA |
| Dean Carswell | USA | TX | Lewis Hull | USA | PA | Gregg Reynolds | USA | VA |
| Tim Cislo | USA | HI | Lars Johannesen | Norway | | Gerard Rijerse | Netherlands | |
| Burt Compton | USA | FL | David Jones | England | | Alcide Santilli | USA | NM |
| Seth Coulter | USA | | James Kellett | USA | VA | Leopold Schober | Canada | ONT |
| Bob Dart | USA | NY | Josh Knerr | USA | CA | Jan Scott | USA | VA |
| Peter Deege | Netherlands | | George Kulesza | USA | AZ | Willi Schwarzenbach | Switzerland | |
| Hans Dijkstra | Netherlands | | Allene Lindstrom | USA | NM | Jocki Selinger | Germany | |
| Gino DiNucci | USA | NY | David Long | USA | | John Serafin | USA | AZ |
| Hans Disma | Netherlands | | Tim Mara | USA | NY | Paul Serries | Germany | |
| Joe Feather | USA | MI | Duncan Marshall | Canada | QUE | Jim Short | USA | IL |
| | | | | | | Martin Simons | Australia | |
| | | | | | | Sharon Smith | USA | |
| | | | | | | Tim Sobol | USA | VA |
| | | | | | | Wayne Spani | USA | CA |
| | | | | | | Jim Stoia | USA | SC |
| | | | | | | Herrie ten Cate | Canada | ON |
| | | | | | | Larry Travers | USA | |
| | | | | | | Albert Uster | USA | MD |
| | | | | | | Albert Uster Jr | Switzerland | |
| | | | | | | Astrid van Lieshout | Netherlands | |
| | | | | | | Camilla van Beugen | Netherlands | |
| | | | | | | Chris Wills | England | |
| | | | | | | Jack Wyman | USA | MI |
| | | | | | | Peter Zawadski | USA | MD |
| | | | | | | Jorg Ziller | Germany | |

**IVSM glidermail - Schweizer SGS 2-32 pilot and Harris Hill Soaring Corp. president Nick McKinney with passenger Elmira Postmaster Dominick Falank on the flight line ready to launch. Postmaster Falank carried a pouch containing about 1,000 pieces of mail that was processed later that day and sent to countries all over the world.**

Schweizer SGS 1-26 #3

Schweizer SGU 1-19

Schweizer SGS 1-26A

# The National Soaring Museum's 22nd Annual RALPH STANTON BARNABY LECTURE By RICHARD H. JOHNSON: "The Evolution of U.S. National Soaring Contests"

Above, E. Gene Hammond, Minooka, IL, SSA President-elect and NSM trustee introduced the 1995 Barnaby lecturer.

Left, 1995 Ralph Stanton Barnaby lecturer Richard H. Johnson, Dallas, TX.

The 22nd Annual Ralph S. Barnaby Lecture by Richard H. Johnson was delivered at the Saturday, November 4th, banquet at the Chicago O'Hare Airport, Wyndham Garden Hotel. The talk was co-hosted by The National Soaring Museum and The Chicagoland Glider Council.

"These things are always a pleasure, because we hear people who have dedicated their lives to soaring," said E. Gene Hammond, Minooka, IL, in introducing his longtime friend. "...I've watched Dick Johnson and all the things he's done, things that we wish we could have done." Hammond is president-elect of the Soaring Society of America and a trustee of the National Soaring Museum.

These lectures, named in honor of Capt. Ralph S. Barnaby (1893-1986), are delivered by distinguished leaders in the field of motorless flight. Barnaby, who earned U.S. Gliding Certificate #1 signed by Orville Wright, was a member of "The Early Birds," American pilots who flew before 1916. He was one of the founders of the National Glider Association, the precedent of the present governing body of soaring in the United States, the Soaring Society of America. He is also a founding father of the SSA. Author, sculptor, artist, aerodynamicist, airman and Naval officer, Barnaby had a lifelong commitment to the development of flight. He was an avid supporter of the National Soaring Museum and in 1973 set up these lectures to insure that the experiences, accomplishments and ideas of distinguished personalities in soaring could be passed on to succeeding generations. They are held annually in various sites throughout the nation.

Gene Hammond mentioned the breadth of Johnson's soaring career, his championships, his world and national records, his sailplane tests, evaluations and his writings. "Most of us wish that we could be at least one tenth as knowledgeable as he is," he said.

Hammond added, "I'm as excited as you are to hear what Dick has to say about the seven decades of soaring that he has witnessed and participated in."

Dick Johnson opened by paying tribute to his late brother, Dave, who he said helped him and supported many people at Black Forrest where they received their soaring diamonds; "I can't find anybody that didn't think he was great," he said.

He then proceeded with a historical review of the development of soaring. "If any of you think I have it wrong," he said with typical modesty, "write it down on a piece of paper, because I want to get the final draft of this thing right."

**Dick Johnson standing alongside his Skylark 4 that he flew to First Place during the 1963 Nationals at Elmira.**

THE EARLY DAYS

Johnson, always the precise engineer/pilot/writer, interspersed his talk with a series of charts, graphs and illustrations. He took his audience back to the early days of motorless flight. He reminded them that the U.S. was not the first country to conduct a national glider meet/contest. "They apparently started in Germany at the famous Wasserkuppe during the summer of 1920. National contests followed in France and Britain shortly thereafter," he said.

The U.S. somehow was not able to do the same until considerably later during 1930. That appears to have occurred with the encouragement of the German pilots, who throughout the 1930's played a large part in helping us to learn about the many facets of sailplane design and pilotage. "Some of the great names were Martin Schempp, Wolf Hirth and Peter Riedel. Many German immigrants such as Wolfgang Klemperer, Frank Gross, Gus Scheurer and Joe Steinhauser also contributed heavily to the development of gliding and soaring in the U.S. during that period," Johnson said.

Automobile towing was the most widely used method of launching gliders in the U.S. but that required large, relatively smooth areas upon which to tow. At the 1930's level of art, only ridge soaring was appreciated as the reliable source of lift. Launching with a bungee cord was a popular method of hill launching at that time. The rubber bungee cords operated like a giant sling shot in a V-formation, with three to six pullers on either leg of the V. The launch could only provide gliders with nominal flying speed and a few feet of altitude. Therefore, to soar it was usually necessary to launch from a hill or a mountain that faced into the wind.

The Wasserkuppe in Germany was chosen because it is part of a moderately steep and high mountain facing into their predominantly Western winds. "It is still actively in use today, though bungee launches are only occasionally demonstrated there now," the lecturer said.

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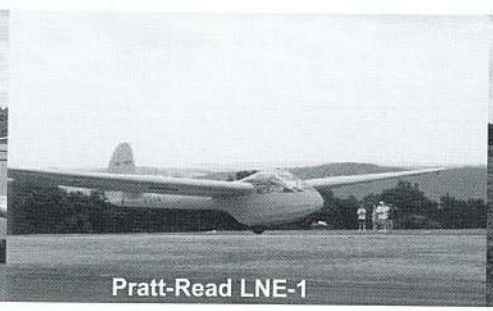
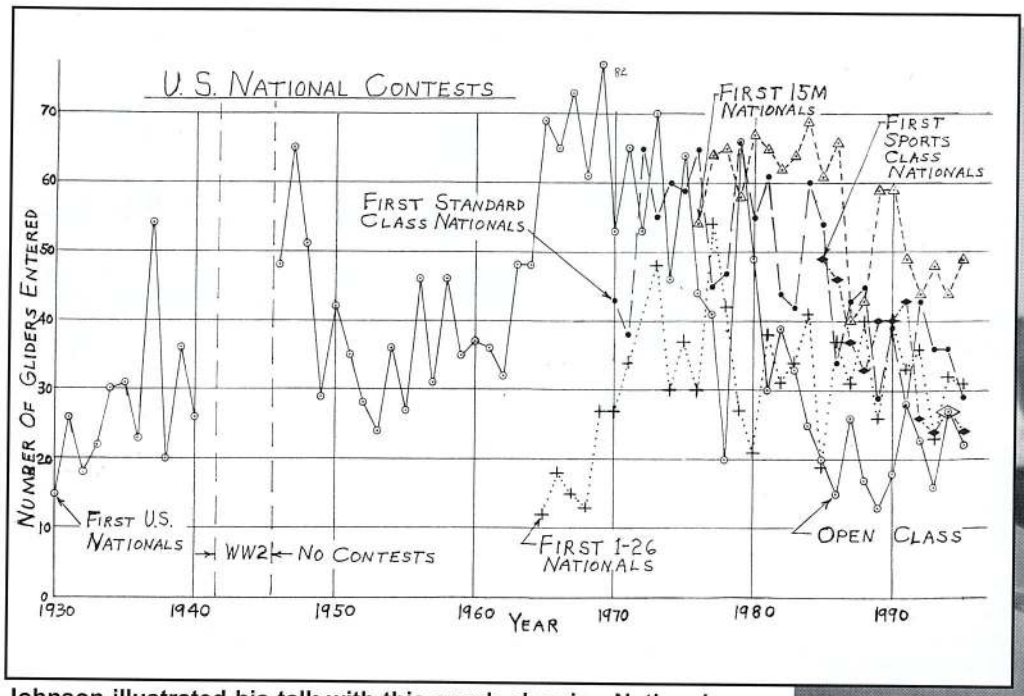
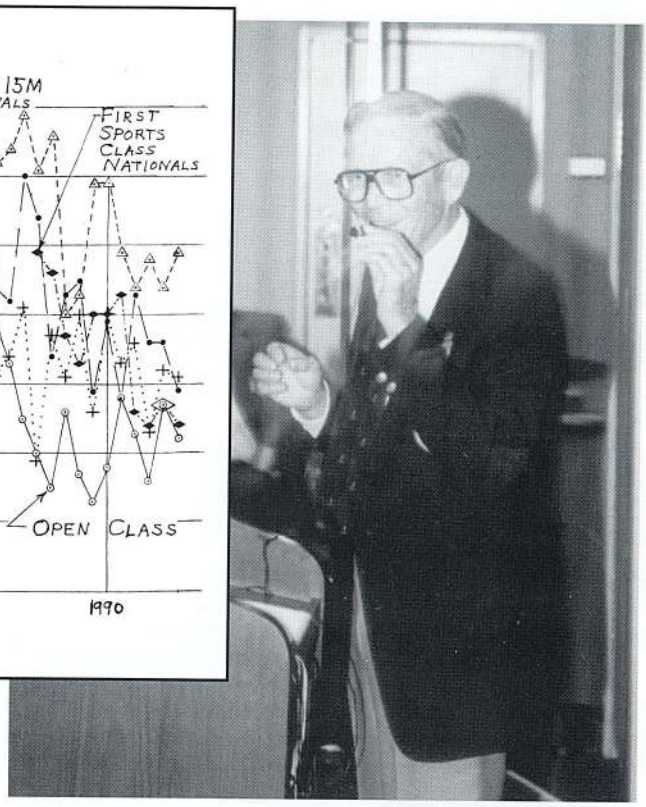
Bowlus Baby Albatross



Pratt-Read LNE-1

Slingsby T-38 Grasshopper



**Johnson illustrated his talk with this graph showing National contest participation 1930 to present.**

**Continued from Page 10**

ELMIRA

The following is Johnson's prepared narrative for delivery at the Barnaby Lecture.

A search was made over the U.S. for a similar ridge or mountain soaring site. Elmira, NY was chosen not only because it was surrounded by suitable steep hills, but also because it had the support of the local populace. Elmira was not endowed with a single site that would allow much variety of wind direction. Therefore, about five separate hill sites were developed to accomodate a wide variety of wind directions. During the early contests the director would meet with the pilots and crews mornings at the in-town Caton Avenue airport and the day's site or sites would be chosen.

About 1934 the airplane tow, auto and winch launch systems began to supplement the bungee cord method at the nationals. It was during that year that the present Harris Hill Airport, then called No. 6 launching site, was developed into a facility large enough to accomodate auto, winch and aero towing. The American Airways Airport, located three miles north in the (Chemung) valley, was also used for three types of launches. Additionally, level ground bungee ground skims were made there for qualification for hill site bungee launches. That valley site is now known as The Elmira-Corning Regional Airport, and is where the Schweizer Soaring School is located. The Schweizer Aircraft Corporation factory is also located there. Only experienced pilots flying gliders and sailplanes certified for airplane towing were allowed to do so. The majority of the pilots had to be content with auto, winch or bungee launches.

By 1934 the use of thermal currents was beginning to be recognized, and a winch tow of several hundred feet over Harris Hill, even without wind would enable a pilot to briefly search for these rising columns of air. From there the pilots could briefly search and finding none, could safely land back on the Hill; or they could continue a wider search over the valley, some 800 feet below the launching site. A freshly mowed farm field at the base of Harris Hill was a designated landing spot for those unable to stay aloft. If they were able, they could reach the valley airport three miles distant to the north. There they could land and retrieve by trailer, or make a contest relaunch, if they wanted to. A pilot was allowed to make as many flight attempts as he wished each day, but only the best flight counted for the contest points.

PURPOSE OF THE NATIONALS

It appears that the initial purpose of the earliest contests was to provide a national arena for competitive soaring and thereby declare a national champion yearly. Actually a great deal more was being accomplished. It brought forth the best designers and pilots in this country and elsewhere. It was fertile ground for the exchange of ideas and the comparison of both air vehicle and pilot flying techniques and performances. Both improved safety and performance were efficiently achieved, benefitting everyone involved.

By the mid-30's it appears that the purpose of the national contests had been broadened somewhat to include record setting and badge achievement. Pilots received extra points for each Silver and Gold "C" badge legs made at the Nationals. That caused some pilots not to apply for advanced badge legs before the contest, hoping to repeat the flight during the Nationals, thereby gain-

**Continued on Page 12**

Swedish Scheibe Bergfalke II/55


Briegleb BG-12

Schweizer 1-23

**Continued from Page 11**

ing extra points. It also became apparent during this period that too many of the entrants lacked sufficient flight experience to safely compete in a national contest. The result was the formation of regional contests in different parts of the country.

CHRONOLOGY OF THE U.S. NATIONALS.

For the first 40 years of U.S. National Contests, from 1930 through 1969, only one national contest was sanctioned by the SSA each year. There a single National Champion was determined. However, subclasses such as the Utility Class, were recognized even in the earliest competitions. Two-place and Standard Classes were recognized in later national meets of that period.

THE 1930'S

The Utility Class actually made up the majority of entries during the early 30's and their pilots were typically college students, professors and instructors. The Franklin PS-2(1), and the Baker-McMillen Cadet were lightly loaded utility trainers that were prominent during that period. They had glide ratios of 12 or 14 to 1. They could ridge soar and climb well but had limited cross-country capability.

**Johnson installing wings of the RJ-5 at Odessa, TX, 1951.**

EARLY CONTEST SCORING AND SAILPLANES.

Early 1930's contest points were given for duration, altitude gain and distance. Most gliders carried a sealed barograph to record duration and altitude gain. That gave everybody a chance to accrue contest points, even if they could not achieve much distance. The higher performance sailplanes were entered in the sailplane category during that period. They consisted of a smattering of U.S. built ships along with the then-modern German-made sailplanes. The large-spanned Bowlus-duPont Albatross models were prominent during the early and mid-30's, along with the smaller Baby Albatross model that came in 1938. German ships varied from Wolf Hirth's Musterle, Martin Schempp's 1931 Schloss-Mainberg, Rhon Bussards, to the Rhon Sperbers and the beautiful Minimoas of the mid and latter decade.

The earlier German sailplanes probably achieved L/D's(2) of about 16 to 18, whereas the later models likely achieved about 20 to 24 to 1. Cloud flying was not only permitted, it was a significant part of the scoring in those days.

The rules for point awards changed during the latter half of the 1930's. The 1937 through 1941 contest rules were presented in *SOARING* magazine, which began publication in January 1937.

**Dick Johnson, second from left at the 1949 Harris Hill Nationals alongside his trailer. Left to right Paul Bikle, Johnson, Fred Walters (Johnson's co-pilot), Floyd Sweet, three unidentified, and John Nowak, right.**

For '37, the contest board decided to try a performance equalizing logarithmic scoring system where the number of points was computed by reference to a semi-logarithmic chart. The rate of increase of points with respect to performance tapered off sharply. This represented a handicap for experienced pilots and pilots with higher-performance sailplanes. That point equalization scheme was not as severe as it might first appear. Points were awarded only for achievement beyond a minimum one-hour duration, 1,000 foot gain and seven miles of distance. Duration points were still being given, also on the logarithmic handicap scale. An additional 25 points were awarded for bettering a national record, 50 points for exceeding an international record. For carrying a passenger that year, the pilot's score was increased one-third.

The logarithmic system did not find much favor among the participants because it was not used during the 1938 Nationals. Instead, the new system gave the longest daily flight 100 points, and lesser flights received points in direct proportion. The same for altitude gained. The individual daily score was the sum of distance and altitude points. Silver "C" pilots only garnered points beyond the Silver "C" minimum of 3,280 feet altitude gain and 32 miles distance. For "C" pilots the minimums were 1,000 feet gain and five miles distance. A basic "C" badge was required for entry in the nationals but that required only a five-minute-above-release soaring flight. An additional 50 points were added for exceeding national records and 100 points for international records. It appeared that no duration points were given during that and all subsequent yearly nationals. These same rules appear to have been used with only little change from the 1939 through 1941 nationals.

THE 1940'S

By the late 1930's the American builders were beginning to take a lead in sailplane design. Most notable was Harland Ross', Ross-Stephens RS-1. Ross competed well in 1937 through 1939, but it was in John Robinson's superb hands that it won the U.S. Nationals three times in a row- 1940, 1941 and 1946. Robinson was obviously a very capable pilot, and his sailplane's performance was excellent for those times. The RS-1 had a glide ratio of about 24 to 1 and its clean aerodynamic lines and higher than average

**Continued on Page 13**

Slingsby T-21 Sedbergh

Laister-Kauffmann TG-4A

Sheibe L-Spatz/55

**Johnson, center, at the 1956 Nationals, Grand Prairie, TX. Person at left unidentified, at right in front of Weihe Sailplane, Jack Forbes.**

**Continued from Page 12**

wing loading gave it an edge in speed. (3) The U.S. was really justified in feeling proud of its sailplanes during that period.

There were no U.S. Nationals during the WW II years, 1942 through 1945, but they resumed in 1946 at Elmira's Harris Hill. 1947 was the first time that they were held away from Elmira, when the U.S. Nationals were moved to Wichita Falls, TX.

As with all previous Nationals, every day was an "open" day where pilots launched when they chose and flew any task they desired to maximize their distance and altitude-gained points. It was a 17-day contest in good soaring conditions, with no rest days. Needless to say, fatigue became a problem. Dick Comey outlasted everyone there and flew the new all-metal Schweizer 1-21 sailplane to victory. Its advanced design included water ballast tanks in its wings, the first in the U.S. E.J. Reeves, the newly elected SSA president, declared that the chief purpose of the nationals is to select an American Soaring Champion; record-breaking, although highly desirable, is merely an adjunct. Thereafter, no additional points were awarded for breaking records.

1948--MAJOR CONTEST RULE CHANGES

During 1948, there were major changes in the National Contest rules. For the first time, altitude points would no longer be given. The contest was shortened to 12 days and only the pilot's five best flights would be counted. Each day was still an "open" day where the pilot selected his own distance task and took off at his selected time. Paul MacCready won the 1948, hosted in Elmira. He also won the next year's contest, in a wooden, pre-war Polish Orlik sailplane that was slightly better performing than Robinson's RS-1.

1949-SET COURSE TASKS INTRODUCED

Though the majority of the contest tasks were pilot selected "open" days distance flights that year, the contest director was allowed to call an "Assigned Goal Distance Task," with a 25 percent bonus to the distance points for those completing the task. That assigned task was flown for the first time in 1949, from Harris Hill. It consisted of a straight flight to a designated goal and a 25 percent mileage bonus was awarded to those completing the flight. Pilots who failed to reach the goal were awarded mileage points for their achieved distances along the course. The new task was well received by pilots and contest organizers alike, but failed to provide any score differential for speed attained. The following year's contest allowed goal and return flights that included a 50 percent mileage bonus and a triangle race that awarded distance points only, plus a 50 percent mileage bonus.

1950's - THE START OF SAILPLANE RACING

Since it was now clear that long cross-country flights to outlandings were no longer in favor by either the pilots or their crews, the racing speed task along a contest specified designated course came gradually into use. The low 2.5 to 4 psf (pounds per square foot) wing loading wooden "floater" sailplanes, such as the Kirby Kite, Weihe and Orlik, gradually gave way to the 5 to 6 psf metal, "lead sleds," but not without an occasional win by the "floaters."

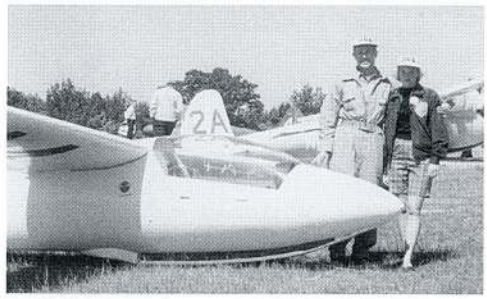
In 1950, the first of the "lead sled" wins was accomplished by the author in his new 5 psf, Ross-Johnson-5, the first of the new technology low-drag, laminar-winged sailplanes.(4)

The Grand Prairie, TX, Nationals included many contest set tasks, all but one being races to an assigned goal. For the open day tasks, one point/mile was awarded, with a 20 percent bonus for completing a pre-declared goal or goal-and-return flight. Still, no speed points were awarded.

1951--RULE CHANGE-DISCARD WORST DAY

The recent rules that required that the total sum of each pilot's daily score be counted for the contest final ranking. This year the rules were changed to allow the pilots to discard their worst days' scores, in both the assigned and open task categories.

The 1951 returned to Elmira and again a mixture of pilot-selected "open" day and contest specified assigned task days were flown. The pilots continued to select their take off times. With strong post-frontal thermal conditions existing in the contest, the RJ-5 was luckily able to attain its second win, much to the dismay of the "floaters." After 1951, the sites for the Nationals alternated each year for 10 years, among Elmira, California, or Texas.



**Dick and wife Alice Johnson with the Skylark at the 1963 Harris Hill Nationals.**

1956-1000 POINTS/DAY SYSTEM STARTED

From 1948 through 1955, the contestants received only 1 point/mile for the distances achieved, plus any goal, or goal and return bonuses, for each day's flight. That ended in 1956 when the mileages and/or closed course speeds were normalized to provide the daily winners with 1,000 points, essentially the same as we do today.

1956-CLOSED COURSE RACING

Added points for speed started this year. The timing of these early speed tasks started at takeoff and ended at landing. That was crude by today's 5,000 foot high timing gate standards, but it

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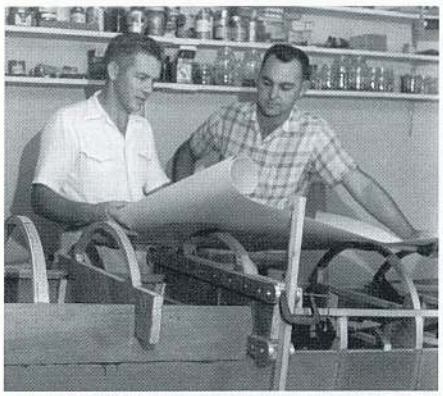
Schweizer SGS 1-23G

Olympia M-2000

Goppingen Govier



**Dick Johnson, left, explains how the construction of his 2-place Adastra is going to Bob Brown.**

**Continued from Page 13**

was a good beginning. That also explains the relatively low speeds recorded in those days. The following year the timing started at low releases and ended when the pilot flew across a designated finish line.

1958-TURNPOINT IDENTIFICATION PANELS

Heretofore only official observers on the ground could verify that a pilot had arrived at a turnpoint. Also, the pilots were required to make the turns at not more than 3,280 feet above the ground. Under hazy conditions it was difficult for the ground observers to identify the sailplanes. The SSA Contest Board devised a system of large, white cloth panels that were placed on the ground behind buildings or trees, such that the pilot had to fly almost directly over the turnpoint to identify their shape and orientation. The panel shape and orientation was changed several times each hour and logged by the ground observer. That new system relieved the ground observer from much eyestrain and allowed the pilots to make their turns at less limited altitudes. For turn credit, the pilots had to mark their flight cards with the correct orientation and pattern of the panels, and the time of their turning.

1963-PARTIAL RECOGNITION FOR STANDARD CLASS

For the first time the F.A.I. Standard Class was recognized, but only as a sub class in a U.S. National Contest. Of the 19 Standard Class entries, most were various wooden Ka-6 models.

1964-FIRST USE OF A START GATE

Rather than using the tow release times for timing of speed tasks, a three thousand foot high start and finish gate was implemented for the first time. That allowed the pilots much more freedom in planning and optimizing their racing flights, which now accounted for about half of the contest flights. Jim and Gerry Rine operated that first gate and it worked well.

1965 - FIRST 1-26 NATIONAL

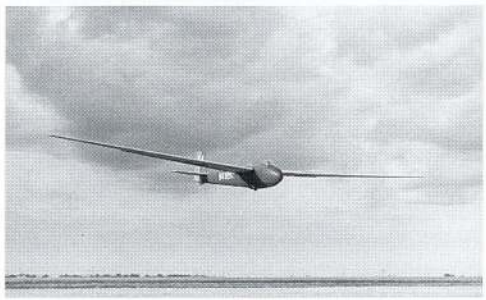
Since the small, low cost Schweizer sailplane was introduced in 1954, several hundred of that popular model were now flying. The Schweizer Aircraft Company, especially Paul A. Schweizer, considered that there were enough 1-26 sailplanes and interested pilots to hold a One-Design 1-26 National Contest. That was initiated at Harris Hill in the summer of 1965. Although a prior nearby 1-26 Regatta diluted the nationals entries to only 12, it was considered to be successful and the start of an increasingly popular event. The first 1-26 Nationals was won by Bud Briggs.

1967-PRESCRIBED AREA DISTANCE TASK INITIATED

With the long retrieves associated with free distance tasks losing popularity, then Contest Board Chairman, Paul Bikle, came up with a more sensible distance task that avoided long retrieves. It was called a "prescribed area distance task." The pilot was free to fly as far as possible, but was limited to contest specified turning points. The pilot also had to stay within a specified flying area. The specified contest areas were usually within a 90 mile radius of the contest site. The 1967 contest was held in quite good conditions in Marfa, TX. There, five speed, 2 PAFT, and one free distance tasks were flown with great success. The PADT had successfully replaced the now onerous Free Distance tasks. Only a few more Free Distance tasks would be flown during the following years. Since the turnpoint camera had not yet been introduced, it was necessary for organizers to place personnel and turn point panels at each of the designated locations. For that reason they limited the allowable turnpoints to about four, including the contest site.

1969-TURNPOINT CAMERAS INTRODUCED

The introduction of turnpoint cameras to verify that sailplanes were indeed over the designated turns was one of the biggest steps forward in sailplane racing. By the pilot's simply taking a photograph of a start board just before takeoff, then shots of one or more designated targets near the turnpoints, they could verifiably prove that they had been there. That permitted organizers a great deal more flexibility in setting tasks, because they did not have to transport ground observers and identification panels to each turnpoint as they had to do previously.



**Johnson's 2-place Adastra as it appeared in the 1961 Nationals at Wichita, Kansas. This ship is now part of the NSM collection.**

1970-FIRST SEPARATE STANDARD CLASS NATIONALS

Since 1959, the F.A.I. Standard Class had been recognized as a sub-class within the U.S. Nationals and an award had been given each year to the highest placing contestant who had flown a Standard Class sailplane there. The first year there were only five entries. The count increased in succeeding years for several reasons, one of which was the cost and weight of the increasingly large Open Class sailplanes. Another reason was the difference in performance that was beginning to develop between the two classes. The SSA opted to hold a completely separate Standard Class National Contest each year. The first was hosted by Elmira's Harris Hill and proved to be very successful, attracting 43 entries. It was won by George Moffat in a new Cirrus sailplane. Except for sailplane dimensional and wing flap limitations, the contest rules remained the same as those used in the open class. The remaining portion of the U.S. Nationals was now named the Open Class, although some thought it should be named Unlimited Class.

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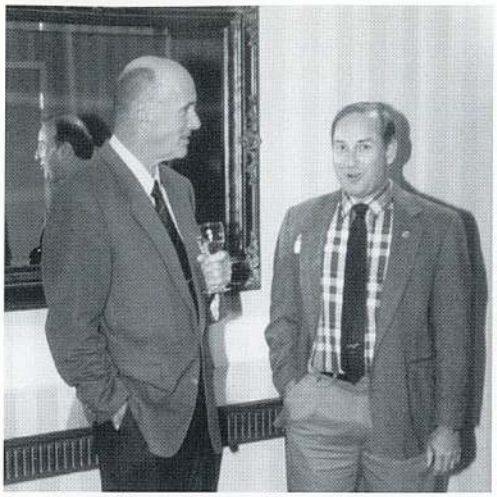
Oberlerchner MG-23

Laister-Kauffmann LK-10

Goppingen Minimoa



**Jan Scott, Lovettsville, VA, NSM President and Jeff Byard, Atascadero, CA, NSM President-elect at the Chicago 1995 Barnaby Lecture.**

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1976 - FIRST SEPARATE 15-METER CLASS NATIONALS

Although the emerging F.A.I. 15 Meter Class sailplanes had also been previously recognized as a sub-class in the Open Class Nationals, it was opted now by the S.S.A. to hold a completely separate contest for that class each year. The first was held at Bryan, OH. It was also very successful with 54 entries, and won by Joe Emmons in a Libelle 301.

1977 - FIRST USE OF DESIGNATED TIME STARTING

Heretofore pilots each selected their take off times. During the latter portion of that period, those takeoff times were placed on a large launching order board at the end of the morning task briefings. Once through the start gate when a sailplane first took off, the pilots were free to proceed on their tasks whenever they wished. That worked well and did keep the sailplane congestion (gaggle) to a minimum. However, many considered that an unfair advantage for those pilots who happened to "be in the right place at the right time." Therefore the designated start was adopted. Nobody was permitted to start a task until the last sailplane was launched. That did reduce the luck factor to a minimum, but it generated a serious gaggle problem. Congested start gates sometimes lead to mid-air collisions, and the less experienced pilots tended to leach upon the higher scoring pilots as they went through the start gate. Because of that, gaggles, sometimes numbering twenty, often flew the task as a group, much to the dismay of the leaders. Needless to say, mid-air collisions did, and do occur each year since that rule was adopted.

1984 - WEIGHING OF SAILPLANES INITIATED

As sailplane racing developed during the previous 10 years or so, it was perceived that some of the competing sailplanes were ballasted well above their certified gross weights, giving their pilots an unfair advantage in strong conditions. In the interest of fairness, the S.S.A. said that overballasting should not be allowed in any of the sanctioned contests. It then became the practice to weigh each sailplane at least once per contest, with the top five winners being weighed each contest day.

1985 - SPORTS CLASS NATIONALS START

The racing sailplanes were becoming more refined than ever now, and their costs were approaching two to four times that of an automobile. That prevented most people, outside the remarkable Schweizer 1-26 group, from engaging in sailplane racing. The earlier racing sailplanes were being retired from racing competition because they were becoming outmoded performance-wise. A sailplane handicapping was devised to try to equalize the sailplane performances. Sports Class, as it is called, was born.

The first Sports Class Nationals, with 49 entrants, was conducted in 1985 in Minden, NV. Nelson Funston won it in an LS-4. It was so successful that it also became part of the U.S. Regional contests.

1987 - PILOT OPTION SPEED TASK INTRODUCED

By now there was a consensus among the pilots, crews, and organizers that the sailplane contests should be conducted in such manner that few, if any landings would be made at other than the contest site. The sailplanes were heavier now and had much higher stalling speeds than those of earlier times. They were much more prone to being damaged when landing away from airports. Through the introduction of POST, the Prescribed Area Distance Task was neatly combined with the Speed Task. That required pilots to finish their flights back at the contest site if they were to receive any points.

The POST rules allowed a set time period, usually two to four hours, within which each pilot flew as far as possible within a prescribed area. Photos were taken at turn points verified distances, and finishing back at the contest site provided the timing for speed.

**Dick Johnson, right, with wife, Alice and Brad Ruda, president of the Chicagoland Glider Council, co-host of the 1995 Ralph S. Barnaby Lecture.**

Points were given for both speed and distance. This was another big step forward for sailplane racing and reduced the need for pilots to be provided with crews.

1988 - FIRST MOTOR GLIDER NATIONAL

The auxiliary-powered airplanes, which were becoming very popular in Europe, were also attracting a following in the U.S. This year saw the first Motor Glider Nationals to be held here. Since it still did not have a very large following, it was held in conjunction with the Open Class at Uvalde, TX, and was won by David Stevenson in a DG-400. The MG Nationals continues to be a national soaring event that attracts those who prefer not to ever make off-airport landings. Their rules permit engine restarts during a

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Schleicher Ka-8

Oscar Boesch's Aerobatic ASW15

Schweizer SGS 1-26A with sport canopy - SGS 1-23 on tow

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task, but extracts a per minute penalty for such use.

1995 - PILOT SELECTED SPEED TASK INTRODUCED

This newest task merely updated the Pilot Option Speed Task (POST) that was successfully introduced in 1987. The prior task divided the daily contest points almost equally between speed and distance performances. However speed and distance amounted to much the same thing. Therefore the task was simplified to count speed only. For those who do not complete the task, a lesser number of points are awarded.

CONTEST PARTICIPATION SUMMARY

The graph on page 11 is a chronological summary plot showing the number of gliders entered in each of our foremost national contests. From 1930 to 1969, there existed only one National Contest each year. The participation gradually increased from about 20 gliders in the early '30's to a whopping 82 in 1969. That was too many for most sponsors to handle. Relief came in 1970, when the first Standard Class Nationals was conducted. That brought the remaining Open Class nationals down to about a 60 sailplane level, which was manageable and about equal to the Standard Class participation for the next ten years.

The F.A.I. 15 Meter Class was introduced to the U.S. Nationals as a separate contest in 1976. During the following years it has generally attracted the largest following of any of the national contests. It has maintained about 65 entries per year for the first eleven years, but settled down to about 46 entries per year during the 1990's. With the introduction of the U.S. Sports Class in 1980, with 49 entries, the participation in other classes generally declined. Open Class participation in other classes generally declined. Open Class participation suffered the most during the 1980's, and since 1985 it has attracted only about 20 contestants each year. The 1-26 Nationals continue to be popular with about 30 to 40 of various models being entered each year.

CONCLUSIONS

The interest in U.S. sailplane contests continues to be high, although now divided into no less than six each year, including 1-26 and motor glider. The total participation now appears to be close to ten times that of the early thirties contests.

Whether recognized by everyone or not, it is quite clear that the U.S. National Contests have played a major part in the development of gliding and soaring in the United States, and they continue to do so today. Without them our sailplane development would have been much slower and the sport would have attracted far fewer participants. We would have been relegated to a secondary international role in the sport. The U.S. and all the SSA members can justifiably feel proud of our pioneers and overseas friends who started us so well on the right path.

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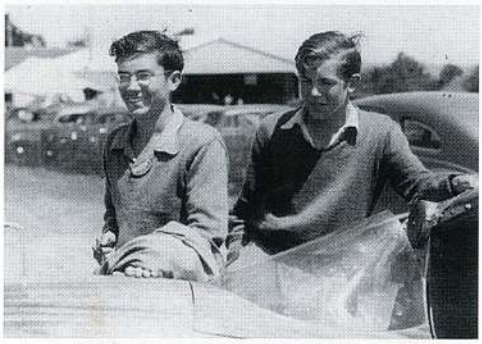
3. 7th National Contest File. Arthur L. Lawrence. NSM Files for 1936.

4.8th National Soaring Contest Rules. S.S.A. Contest Board, Soaring Magazine. May/June 1937.

## ...ABOUT DICK JOHNSON



**Dick Johnson, right, at the 1940 Elmira Nationals, with brother David and the Baby Bowlus they built.**

The 17-year-old Dick Johnson, along with his brother Dave, arrived at the 1940 Eleventh Annual National Soaring Contest in Elmira "with a glider, plenty of enthusiasm and no license," reported the August-September 1940 Soaring magazine.

The article continued, "He successfully passed his CAA (1) private glider test, won his Silver 'C' early in the meet and finished third in the contest." Not only did he build the Bowlus Baby Glider but he and Dave towed it behind a 1937 Hudson Terraplane in a huge homemade plywood-covered trailer, all the way from California.

It was just the beginning of one of the most outstanding careers in motorless flight. Dick Johnson, with brother, Dave, started flying in 1938, "staggering around in a 1938 Northrup Primary." In 1946, taking a five-week vacation from his Pan American Airways job, he and Bob Sparling towed aloft from Prescott, AZ behind Dave's Waco towplane in a Schweizer TG-2. Three hundred and fourteen miles and 7 hours and 33 minutes later, they landed in the northeastern corner of New Mexico. They had set a new national multi-place distance record. In those days desert flying wasn't easy. According to reports the TG-2 was loaded with water (for drinking, not ballast) flares, pistol, ammunition, jackets, maps, a signal mirror, parachutes and barograph.

In 1950, Johnson won the national championship at Grand Prairie, TX and set a national goal record of 317 miles flying the new RJ-5 that he and Harland Ross designed and built. He flew it 545 miles for a world distance record in 1951 and won the 1951, 1952 and 1954 nationals in it. He flew the RJ-5 at the 1952 World Soaring championships in Spain. Fuselage damage in a difficult landing the first day cost Johnson two days and possibly the meet. On the last day however, he outclassed the field in the repaired RJ-5, with a 66.9 mile per hour dash to Torresavinan.

His 11 National Championships included the Richard C. duPont Memorial Open Class Trophy for the following wins: the 1959 Harris Hill 29th Nationals in a pre-war Weihe; 1963, at McCook, NE, in a Skylark 4, 1975; at Hobbs, NM, in a Nimbus II; 1981; at Ionia, MI in the Nimbus II; and 1985, at Hutchinson, KS, in a Nimbus III.

In 1956, he was named to the U.S. Soaring Hall of Fame. He was awarded the Warren E. Eaton Memorial Trophy in 1967 "for making an outstanding contribution to the art, sport or science of soaring flight in the United States," as determined by the SSA Awards Committee, with the approval of the SSA Directors. The Eaton Trophy is the SSA's highest award. (in 1984 brother David C. Johnson was posthumously given the SSA Exceptional Service Award.)

He won The Larrisa Stroukoff Memorial Trophy in 1975, 1981 and 1985 for best speed around a triangle task during the United States Open Class Championships.

The Paul Tissandier Diploma of the Federation Aeronautique Internationale was presented to Johnson in 1976, "To those persons who have served the cause of aviation, and private and sporting aviation in particular, by their work, initiative and devotion." 1983 saw Johnson win the Paul E. Tuntland Memorial Award for "making an important contribution to the science of soaring flight as disclosed in a published article or paper discussing the results of a soaring flight made by himself during the year."

The Lilienthal Medal of The Federation Aeronautique Internationale, regarded as the highest soaring award in the world, was presented to Johnson in 1985 by the F.A.I. The citation reads, "Richard H. Johnson (USA) for his outstanding achievements and contributions to soaring: 11 time U.S. National Champion, 90 published articles and test reports."

1) CAA: Civil Aeronautics Administration, forerunner of today's Federal Aviation Administration.