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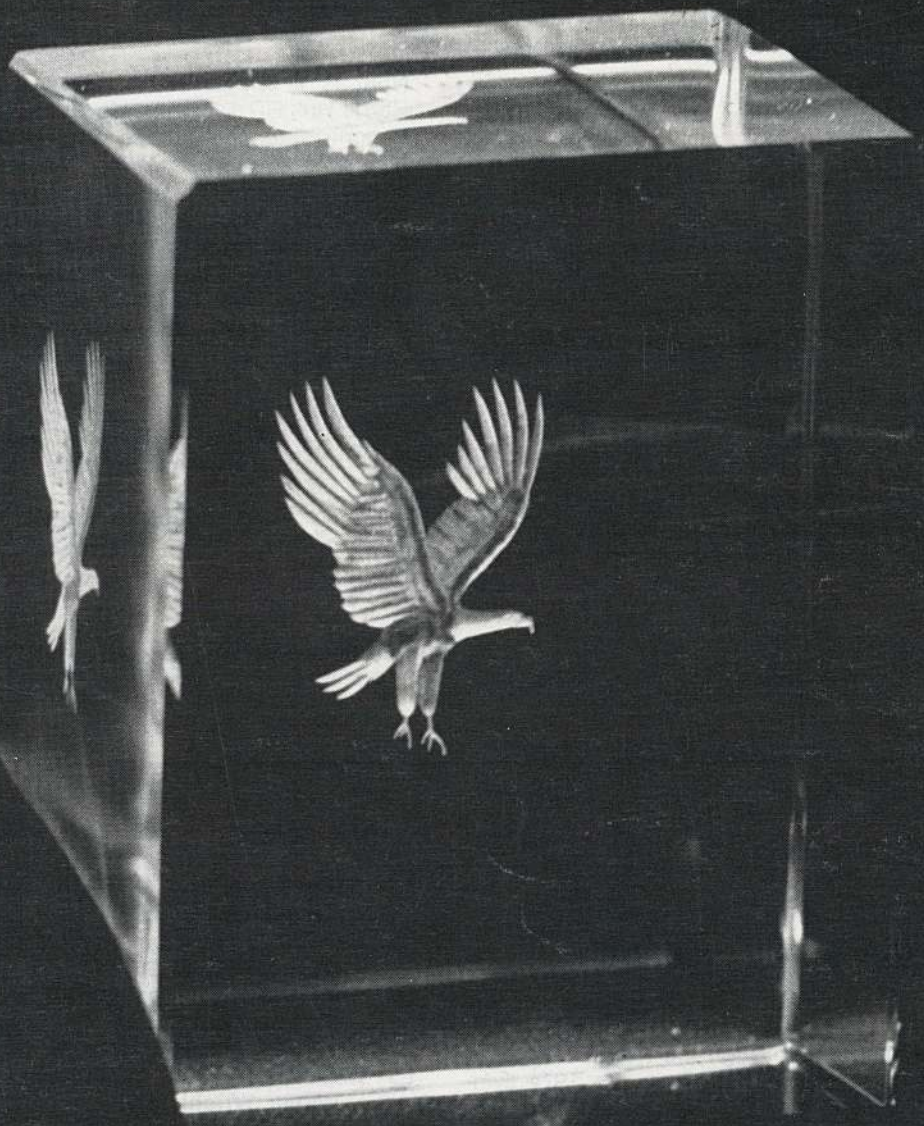

A Quarterly Journal
of the National Soaring Museum

Summer, 1976 Vol. 1, Number 4

Filling Needs

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

Soaring Issues Needed to Complete Set for National Soaring Museum

1937: January through June, October, December
1938: All except January and February
1939: January, February, March, May, September, October, November, December
1940: All except January, February, March
1941: July-August
1942: All
1943: All except November-December
1944: January-February
1945: All
1946: March-April, May-June
1947: Jan.-Feb., March-April, July-August
1948: January-February, May-June, July-August
1949: January-February, September-October, November-December
1950: January-February, July-August
1951: January-February
1952: November-December
1953: March-April, May-June
1954: May-June, September-October
1955: March-April, July-August, September-October
1956: January-February, March-April, July-August, November-December

P.J. Baugh

I need plans for the Hutter H-17.
Samo Jenko
R.D. 8,
Mansfield, Ohio 44904

* * *

The Vintage Sailplane Association is seeking plans for various vintage aircraft including the Grunau Baby II A and B, and the Hutter 17. It is believed that SSA at one time had sets of these plans.
Geoff Steele
6053 25th Road
North Arlington, Va. 22207

NSM is a publication of the National Soaring Museum, Harris Hill, RD 1, Elmira, New York 14903. Anyone is invited to contribute material and pictures with identification about historical soaring activities, renovation of old sailplanes, soaring pioneers, unusual uses of sailplanes, etc. Manuscripts are subject to whatever revisions, additions or deletions are necessary to make the material conform to the space limitations and standards of NSM. Material that is to be returned must be accompanied by a stamped, self addressed envelope. No compensation other than credit will be made.

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

Editor — Meta L. Levin

On the cover: The Lincoln Award Trophy. See page 15.

Papers Available

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

1. Some Light and Ultralight Sailplane Designs, Carmichael.
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4. Experiments and Observations in Soaring Flight, Wilber Wright

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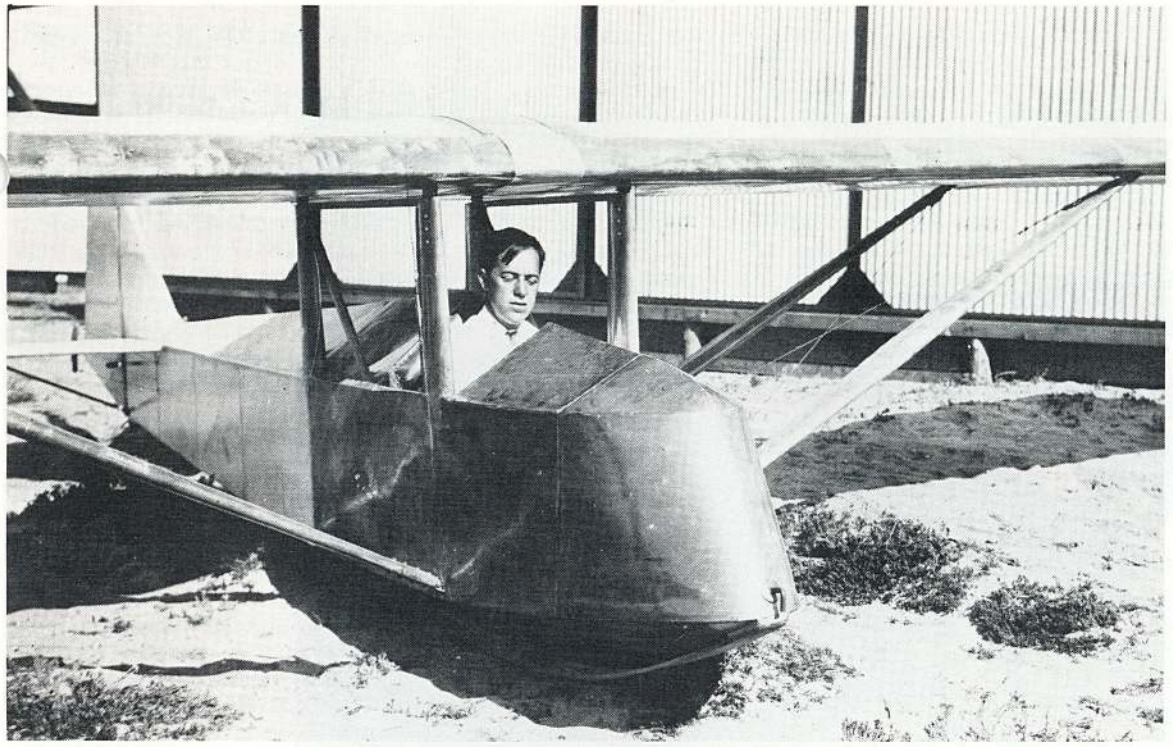

Ready to go: Ralph Barnaby in 1929 in the Pruefling in which he made his historic "C" flight as well as the one recounted here.

Ridge Soaring Then

Updrafts Along A Freight Train

Editor's Note: Originally written in 1929 by then, Lt. Ralph S. Barnaby, this account of some unorthodox early ridge soaring is quite a contrast to the Striedieck attempt elsewhere in this issue.

by
Ralph S. Barnaby (Capt., USN, Ret.)

You've heard about the postman who always went for a walk on his day off. Well, "Me and the postman," as the saying goes. With three weeks leave approved, I voted to spend two at the Cape Cod Glider School and one at the Cleveland Air Races.

The thought of soaring has always stimulated my imagination as motor flight never can. Its realization was beyond even my wildest dreams. My flying experience has been spread out over a period of twenty years — rather thinly at the first, and more thickly in recent years. Nevertheless, soaring flight heads the list.

Each morning since that wonderful Sunday, August 18th, when I passed my soaring test with a fifteen minute flight, I awoke at daybreak and eagly studied the wind direction and velocity, hoping for more soaring weather. Finally, on Thursday, August 22nd, conditions were such as to at least warrant a visit to Corn Hill on the west side of the Cape, to study them more carefully. The wind was found to be coming from the southwest with a velocity of about thirty-five feet per second. A wonderful breeze, but the wind direction, not so good. Since the bluffs at this point run approximately north and south, west winds are desired. Of course, a certain deviation from absolutely normal winds is permissable, but oblique winds, for some reason or other, would rather scoot along the face of the bluffs than rise over them. Consequently the up-current falls off rapidly with moderate variations of wind directions. After much head-shaking, Herr Knott, the chief instructor, smiled and said, "All right, we'll try."

The "Pruefling", or secondary type glider, is quickly assembled. At about 4:30 p.m. we are ready, and I take my place in the cockpit. In the meanwhile the wind has crept gradually toward the south, so that it now appears to be making an angle of only about thirty degrees with the coastline. However, the crowd is all assembled — many sightseers, friends, new pupils, and officials of the glider school. One must try at least!

Twelve men on the shock cord, six to the side, — three more holding back on the tail. "Pull out!" "Run!!" "Let go!!!" In a flash I am out over the edge of the bluff and about thirty feet higher than my starting point. A right bank and hard right rudder, and I was skimming along above the edge of the hill at a tremendous speed with the wind almost on my tail. I seem to be losing some altitude, though. That won't do, for I am coming to the first cut in the bluffs, and must get turned around. Gosh, what a short half mile! I pull back on the stick,

(Continued on page 4)

Relite: Launching the Pruefling at North Truro, Cape Cod for the return flight to Corn Hill.

listening carefully to the pitch of the swish of the wind by the wings. I realized that with the feeble up-current today it will be necessary to hang close to the edge of a stall if I am to stay aloft — the only airspeed meter, my ears. Who'd have thought music would have anything to do with soaring? Good! I've gained a few feet. Now for the turn. Hard left aileron and the stick well back — a flipper turn — and we're around, but dangerously close to the brow of the hill. Again I tuned to my proper note, and we begin to climb slowly and even more slowly start to advance along the bluff, back toward the starting point. We're just creeping along, the nose within fifteen degrees of being directly into the wind — about halfway between the wind direction and the bluff line. I pass over my starting point about fifty feet up. The crowd is shouting and waving. Knott is calling directions. "Go further north. The coastline turns a little. You will get better up-currents." "Okay."

I pass in front of the cottages and feel that exhilarating rising sensation and an increase in speed. Good, I used it to turn on. Back in the right corner with the stick. As I live, a chandelle! Yes, I'll admit it is a rather feeble one in the eyes of the power plane pilot, but we are around again, and once more racing northward before the wind. Now for the first real exploration.

Corn Hill where the start was made is about one hundred feet high. It extends north for a half mile at approximately the same height, and then dips down into a gully clear to the beach level. There are no up-currents there; just a torrent of air sweeping around the edge of the hill and through the gully. Beyond this the bluff rises again to Corn Hill height for a while and then sinks again to become a measly railroad embankment only about twenty feet high, and extending, it seems, for miles — but really a little less than a half mile. It doesn't seem good to me, but Knott said "Go north." He also yelled as I made my turn that I'd find the up-currents well inland from the embankment.

I crossed the gully with a surprisingly small loss of altitude, and I pulled back as much as I dared as we climbed the next rise. We needed all the altitude we could get. Knott may be right, but that railroad looked darned small to me. At least we have a good start, a hundred feet above the tracks, I should judge. We'll see about this up-current on the land side of the railroad. Yes, there's a little — but very little. I'm losing altitude. I look ahead and try to estimate whether I will make the next bluffs which begin where the railroad turns i from the shore. Maybe. At any rate I'd better edge over to th windward side of the railroad while I still have altitude enough to clear the poles and wires. We slide over the wires with a good ten feet to spare. Hooray! Here are the bluffs again. These are only about fifty feet high, but they seemed mountains after the railroad embankment. There is another cut not far ahead, but thank goodness, it is about dammed up with the buildings of the bayberry candle factory. This is North Truro. I should turn around here, but I do not dare. I haven't enough altitude. Only a scant twenty feet above the edge of the bluff, skimming right through front yards. "Hello folks!" Our swift approach caused many amusing surprises.

There is only one way to turn around under these conditions. That is to swing inland, come about and shoot out over the edge into the wind, diving for the edge to gain as much speed as possible. But with only twenty feet and a one hundred and eighty degree turn to make, there isn't going to be much left for the dive. Even then it will mean a flipper turn around one of these cottages. No. I'll keep on.

Here we go over the roof of the candle factory. It seems to give almost as much lift as the bluffs. The coast begins to swing westward now. That should give us more lift. It is our last chance to turn. About a mile of forty to fifty foot hills, then a clump of houses, and finis! It is a case of turn this time or land.

I'm almost to the houses and still have only been able to get thirty feet. Here goes nothing! I certainly wrapped myself around that time. Duck, you folks on the edge. I'm going to need every inch to get over. Whew! The tall weeds brushed the runner on the bottom of my fuselage that time. And worst of all, I have shot out too far over the edge. There is no u current here. I swing in till my left wing seems to be almo scraping the bluff. They are only about thirty feet high nere, and I'm below the top.

No luck. I'm losing steadily. Might as well swing out and set her down on the beach. A swish of the skid on the sand and — Hell's Bells! here we are, down, three miles or more

from home. That was a long seven minutes and fifty seconds! I wonder how far back the road is from the shore at this point. I hoped they saw me land from Corn Hill and were not so excited or in such a hurry to get to me that they forget to bring the rubber cord. I flew here and I'm going to fly back!

A half hour wait, answering the questions of a throng of interested spectators. The whole bunch came — Ned with the rubber cord, and Smitty with the rope to haul the glider up the hill for the take off. In the meantime I have been up on top to locate a satisfactory site. The bluffs were about forty feet high here. However, on the top, back about a hundred feet from the edge, is a knob perhaps ten feet higher, and covered with weeds. We will set the glider right on the knob and let the boys pull on the level stretch. How about it, Mr. Knott? "Okay, however the wind is still shifting further to the south. Try and get it to the candle factory at least, for at that point the road runs right down to the beach, and we can dis-assemble and truck the glider from there." I have my doubts, but "here goes!" Eight men on each rope. "Pull out!" "Run!!" "Let go!!!"

Man, what a start we got that time! We're a good ten feet above that tall range pole on the brow of the hill. I'd been wondering whether to go to the right or the left of it. But what a snail's pace! I'm certainly close hauled on this tack, within ten degrees of the wind, I should judge. The glider can't be making much over fifteen miles an hour over the ground, and worse luck, seems to be losing altitude slightly. I'm sailing right through front yards now. I'm glad they don't use fences here. No swift approach this time. I can hail people well in advance, and hold quite a conversation with them before I get by. Here is the candle factory. I may get by it, but that is the end, I'm sure. Wow! I certainly shaved that roof! I had to lift my left wing over a chimney. And what is this? As I live — an up-current! The factory buildings, protruding out beyond the bluffs, make a corner which trapped the wind and forces it upward. Come on "Prufling", we're rooting for you! I try to relax a bit. I keep finding myself sitting on the edge of the seat, lifting up on the gunwale with my left hand, and trying to pull the stick up by the roots with the right, as if my main strength could keep us going. I thought I knew what bumps were before, but I've been using full aileron and rudder control constantly. I see a split in the plywood cockpit side, and my knuckle is bleeding a bit where I bashed in the side in my enthusiasm! But I'm getting home. Here is the railroad again. This time I approached it with a scant twenty feet to spare. But luck is with me. Here comes a long freight train. That will increase the effective hill height another ten or twelve feet. I hang my right wing over the edge of the train, and about ten feet above the car tops. Thank goodness, the poles are on the other side of the tracks. The trains crew is waving: "Cheerio!"

A brakeman, standing atop one of the freight cars, obligingly laid down prone on the footwalk, and waved a hand at me as my left wing swept over him.

I may not be holding myself up by the boot-straps, but it sure feels like it!

Here comes the first high bluff. I'll cut right out across the edge of it as it rises up. Feel that puff. A gift of the Gods! Up we go. This is "duck soup." There ahead of me is Corn Hill. Only the one deep gully left to cross. I must go high this time, for, bucking the wind, it will be a longer trip across. I'm up about twenty feet above the top now, which should give me a good hundred feet total. Here goes nothing!

I hold my altitude pretty well, but how slowly I advance. Wow! Down we go! The wind comes boiling over the edge of Corn Hill and drives us down. It's time to cut for the beach. I'd sure hate to hang up in the bushes after coming this far. Will I make it? Will I? Won't I? She loves me. She loves me not. Another close one. My left wing brushed the bushes that time as I swept out over the edge.

The wind is now within ten or fifteen degrees of the coastline. No up-currents in that! All I can do is to stretch the glide as long as possible. I skim down along the face of the bluff, keeping my eyes glued on that left wing tip and its shadow on the face of the bluff. They are only six feet apart! My ears are atune to the best glide speed. Here is the beach. Swish — the landing.

Corn Hill, look down! Here we are!

Return trip, ten minutes fifteen seconds. Impossible! It must have been hours at least. I'm limp as a rag, and trembling. The sweat streamed down my fact — but I'm back!

Airplane pilots, until you've felt the thrill of a cross-country soaring flight, you ain't felt nothin' yet!

Use Your Film Library

For information contact:
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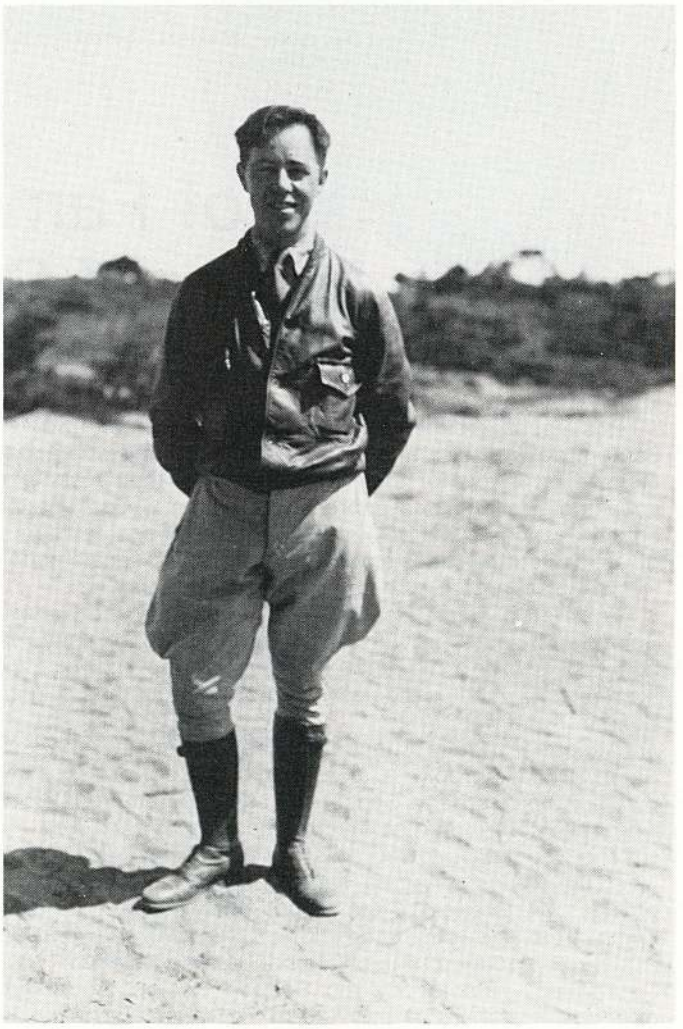

Ralph S. Barnaby in 1929.

New Museum president, Bernald Smith addressed the Spring Weekend Banquet.

Hall of Fame Transferred To National Soaring Museum

It is a special experience to meet great men and women. Seldom do we get a chance to learn first hand about their achievements, or, for that matter, observe their manner of speaking, walking and expressions. When we do get that chance, we can measure ourselves a little bit against them. It gives the younger ones among us a chance to set a standard to live up to, a goal.

The Hall of Fame Banquet held May 22 by the National Soaring Museum provided just such an opportunity. We honored new and old United States Soaring Hall of Fame members — most especially its newst inductees, Gustav Scheurer and Tom Page.

Attendees had a chance to chat informally with Stan Smith, Bill Holbrook, A. J. Smith, the Schweizers, Floyd Sweet, Ralph Barnaby, Scheurer, Page and numerous others who have contributed so much to soaring.

The Banquet followed an afternoon of hanger, kite and, when the clouds permitted, sailplane flying, and featured the official transference of the United States Soaring Hall of Fame from the custodianship of the Citizen's Savings Athletic Foundation to the National Soaring Museum.

Annually selected by the Soaring Society of America directors, members of the Hall of Fame are the most distinguished and elite group in soaring. They number 55 right now.

As Awards Chairman, Floyd Sweet served as the master of ceremonies, supervising the issuance of new certificates to members and initiating the two newest ones.

Gus Scheurer has been active in soaring since 1920, when he was an active participant in the early Wasserkuppe meets in Germany. After coming to the United States in 1925, he was instrumental in forming Aero Club Albatross, the oldest continuously operating soaring club in the United States. A sailplane designer and builder, Scheurer has most recently been active in restoring sailplanes destined for display in the National Soaring Museum.

Among his many achievements was the design and construction of the first glider launching winch used in the United States for which he cannibalized a 1917 model T Ford for most of its components. Scheurer is a former Director of SSA.

Tom Page, Political Science Professor Emeritus at the University of Illinois in Urbana began soaring in 1930 and r[e]mains an active competition pilot, flying a standard Cirru[s]. He holds two Illinois sailplane speed records.

During World War II he served as glider pilot instructor.

An SSA Director since 1961, he has distinguished himself by his ability to define and solve problems. In 1973, he was awarded the Warren E. Eaton Award for his outstanding contributions to soaring flight in the United States by the SSA.

The Eaton Award is considered to be the SSA's highest.

Following the Hall of Fame induction, Mike Teter, treasurer of the Harris Hill Soaring Corporation, awarded in absentia the Joseph C. Lincoln Award for excellence in writing to James George, author of "Two Long Final Glides", which appeared in Arizona Air Currents. The award, given annually by the Harriy Hill Soaring Corporation, consists of a monetary stipend, a certificate, and an engraved block of Steuben Crystal. Dorothy Lincoln-Smith, Joe Lincoln's widow, attended and was given a pendant replica of the trophy. New museum president Bernald S. Smith accepted the award on behalf of his friend, Jim George. A duplicate trophy is displayed in the museum.

A museum friend, P. J. Baugh, Lexington, Ky. was on hand to formally present Joe Lincoln's Schweizer 2-32, "Cibola" to the museum. This gift by Mr. Baugh was described in the last issue of NSM. Museum members will be interested to learn that the Board of Trustees has appointed A. J. Smith to supervise the development of a research program utilizing this significant craft.

For many, the highlight of the evening was the chance to listen to a presentation on ridge soaring by Tom Knauff, operator of Ridge Soaring, Incorporated. Roy McMaster, and Karl Striedieck. McMaster and Striedieck jointly hold the world's out and return for an 806 mile flight which they made March 17 in their standard and open class ships, respectively. To make the talk even more electrifying, Striedieck had three days before flown the world's first 1,000 mile flight in his ASW-17. Excerpts from his description of this flight are reprinted elsewhere in this issue.

The evening was a never to be forgotten event, a fitting climax to National Soaring Week — a week that saw the conclusion of the Smirnoff Transcontinental Sailplane Race, the world's first 1,000 mile sailplane flight, several regional soaring competitions, and, of course, the transfer of the United States Soaring Hall of Fame.

High fliers: Two kite contestants and their entries in the Spring Weekend Kite Contest.

Cibola: P. J. Baugh told banquet goers of his gift to the National Soaring Museum.

TEXT OF OFFICIAL CIBOLA PRESENTATION

This aircraft, Schweizer 2-32, Serial Number 11, has been known by many Flight Service Stations, and other soaring pilots, as well as many unicom stations, as N2757Z. It also is known as Cibola by thousands who have read Joe Lincoln's writings and/or who have seen Cibola themselves; but mostly I think this aircraft is known as "Joe Lincoln's 2-32."

This is a great aircraft — built by soaring's great friends, the Schweizers, and flown to world records by Joe Lincoln. It is presented to what we hope and think will become a great institution — and to those who are part of the soaring movement, but mostly to those who are yet to become part of soaring through the National Soaring Museum.

Museum Gifts For Santa's Bag

SANTA

One day as Santa began his trip,
One side of reindeer did a flip.
An experienced pilot, he began to circle —
Exhalting all the while, "I've got me a thermal."
Now while Santa works to stay in green air
We'll apologize to poets everywhere,
And introduce to you — below —
The museum's answer to seasonal woe.
What better gifts than these we ask,
To ease your soaring holiday task?

America's Soaring Book $12.95
A comprehensive illustrated guide by the editors of Flying Magazine.

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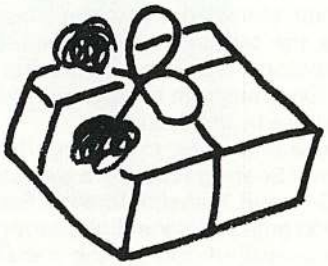
A historical novel about the World War II airborne troop carriers, by Dr. Albert F. Perna.



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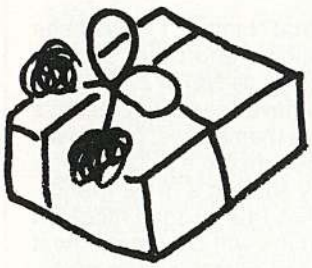

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Ridge Soaring Now

1000 Miles Along The Alleghenies

Editor's Note: Karl Striedieck had completed his 1,000 mile out and return record attempt just three days before the National Soaring Museum's Spring Weekend. This is his account, as told to the museum banquet audience. The accompanying maps are reprinted with permission from **Ridge Soaring the Alleghenys' Bald Eagle Ridge** by Thomas Knauff.

As everybody knows, the best time to do a world record flight is June 21st, but the weather often doesn't cooperate. Anything that gets near June 21st has a lot of advantages: daylight, thermals, weather, temperature and everything else. I've been pessimistic on the idea of doing a flight in May, when you have to go all the way past Knoxville, Tennessee. Usually the cold fronts go less and less far south as the year progresses, and they have less vigor down there.

Well, May 19, 1976 was an unusual situation. A cold front passed through State College on Tuesday morning and I actually saw a wind shift. I was looking out the kitchen window and it shifted around and I said 'Well, my luck, the wind shifted at 9:00. That ruins Tuesday and then it'll blow itself out by night, no chance for tomorrow.'

I had a lot of work to do in town and I happened to stop by the weather bureau. A really great weather facility is at Penn State: it's a good meteorology school. I stopped by to look at the maps and it looked to me like the high pressure was going to be further west than any I'd seen for quite a while; in western Tennessee, instead of right on top of the Appalachian mountains.

Then there were more isobars on the weather map between the low and the high which means you have more winds, stronger winds, better pressure gradients. It looked as if there would be more winds and the direction would be good all along the 500 mile flight path.

What I usually do is, in the final analysis, it's the thing that anybody can do; call flight service and ask them what the winds and the weather are going to be.

There are about four or five flight service stations that are good for wind forecasts but Roanoke, Virginia is the best one of all. Tri-City Tennessee, near Bristol, Knoxville, and Philipsburg also are good. The flight service wind forecast for the next day made me kind of pessimistic.

For instance, at Tri-City, which is 100 miles short of where I had to turn, the forecast was clear and no wind. Bluefield, about 150 miles from the end of the ridge at Knoxville, was calling for clear with winds from 340 at 12. The turnpoint at Oak Ridge was calling for winds from 030 at 9.

The optimum winds are 300° or 310° so it looked pretty pessimistic down there. Then I asked about the winds aloft. Of course you're not flying up there at 6,000 feet and the lowest reported winds you can get at the southern end of the ridge are for 6,000 feet. They said 350° at 36 for the next day. I got a later forecast and it was 320° at 30.

So, I thought, 'well, heck, if there is a north west wind at 6,000 feet maybe, in the best heating part of the day when everything gets all mixed up, some of that wind will come down and we'll get a northwest wind at ridge level for a couple of hours. So it's worth a try.'

I have been guilty of a lot of dithering around — whether to go, or not to go, and whether to call the observer and all that stuff. I said 'This time I'm not going to do that, I'm going to set the alarm at 4:10, get up, walk outside and if the wind's blowing in the trees well enough to fly I'm going to go.'

I got up at 4:10 and went out, and the wind was blowing. I called up the SSA observer, Bob McLaughlin. I called my very competent brother who's good on mechanical things. He knows just what has to be done.

There are only two ways of remote start that the SSA or maybe the FAI allows: either an air tow release where you release at your beginning point and land a kilometer from where you release; or you use a start gate thing where you have to land a kilometer from the start gate. Both of them are totally inefficient and impractical for us.

We had to do one or the other. This time we tried the start gate.

We launched with the jeep. It took me 20 minutes to get the 30 miles to Lock Haven and the start point. I took off at 5:35 a.m. and got to Lock Haven at 5:55. I started about 6:00 a.m. going south.

As far as the weather was concerned, it was totally overcast and there was a little bit of frozen something hitting the canopy. I could hear it, but couldn't see it. I just proceeded down the ridge, straight ridge running to the Altoona Gap. Altoona's about 4 miles wide. With a big heavy airplane, you just go right across. I usually figure I need 3,500 feet to get across the 10 mile wide Bedford gap. I didn't want to turn in thermals if I didn't have to. I hate to turn. I'm like A. J. — go straight across. I did that at Bedford, it's about nine or ten miles wide. I turned straight northwest into the wind and climbed like an elevator, because there was some combination of ridge lift going up a good ways above the ridge. There was a little wave there — to 3,100 feet. I turned south and started across. I got across at about 2,300. I was kind of lucky. If I'd have gotten any sink I would have been hurting.

Then I went down the east ridge of that double mountain south of the Bedford gap. You can go down the east or west. The east is rougher but it's higher and safer. I got to Cumberland. In Cumberland there were no showers, no snow, nothing. The clouds were generally getting thinner as I went southwest and I saw the sun for the first time in Bedford. The clouds weren't very thick. I'd say the bases were about 4,000. I never did get up to them.

All the clouds or weather there were at Cumberland

(Continued on page 10)

amounted to pretty heavy clouds up over the west on the Appalachian plateau. However, you know how it works with the mountain wave: the air just goes down over that darn mountain and it dries out something fierce. Then it starts going up again and you've got a lot of Cu's and stuff. That really helps you find the lift. If I had no water ballast going through there it would have really been hard for me, finding those darn knoblies. These are very poor mountains to ridge soar on. When you've got all your life savings tied up in too much sailplane you hate to go down there 40 feet off the ground, ridge soaring, you know. When the ridge is 40 feet high, and that's about all it amounts to around Keyser, West Virginia.

I got down just about to the top of the ridge at Keyser, but that was the only time I got low. Mostly I was able to just blip along and yank on the flaps when I got a little bit of squeek out of the vario.

At that time you could just about go as fast as you wanted to without tearing the airplane to pieces. You could indicate 120 knots, 130 knots, when the lift was smooth between the Altoona and Bedford gaps.

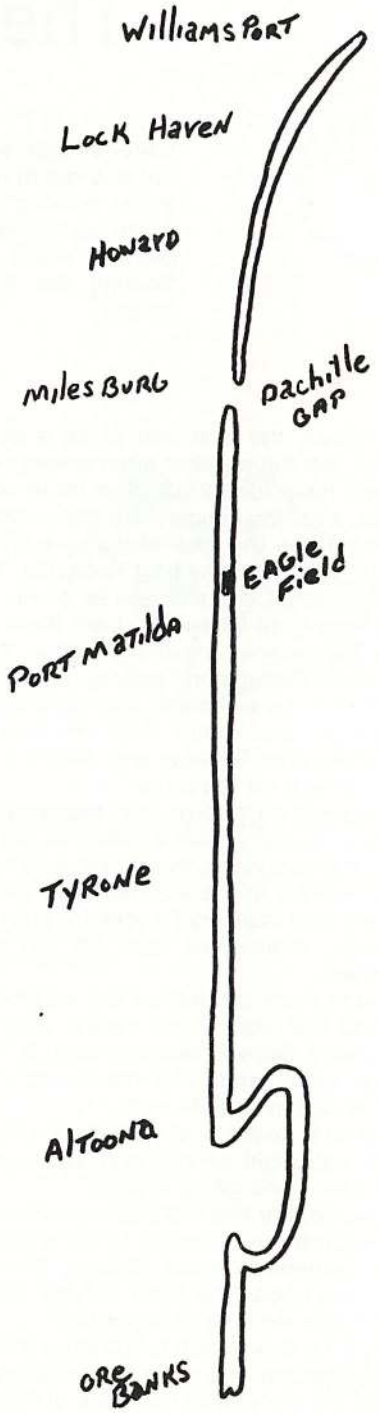
There are a lot of little flood control dams and farm ponds all the way down that valley and everyone had waves on it, not white caps, but they were all stirred up. I was pretty lucky — a lot of times the air's all inverted. I've seen clouds blowing over Cumberland at 40 mph and it's just completely stagnant down in the valley, nothing moving. Well it wasn't that way this day. There were clouds, not real nice puffy Cu's, you could thermal up and then turn under, but enough. They were bouncing up in a sort of line — you could line up and get more up than down. I got through the low places between Cumberland and Keyser, and into the good country. The ridge gets higher from near Petersberg south. It goes up to where you cruise along for a good bit of the time above 4,000 feet and you know what that does to wind speed. Of course the day was coming on stronger and so were the winds as the sun was coming up. The air started to get pretty rough.

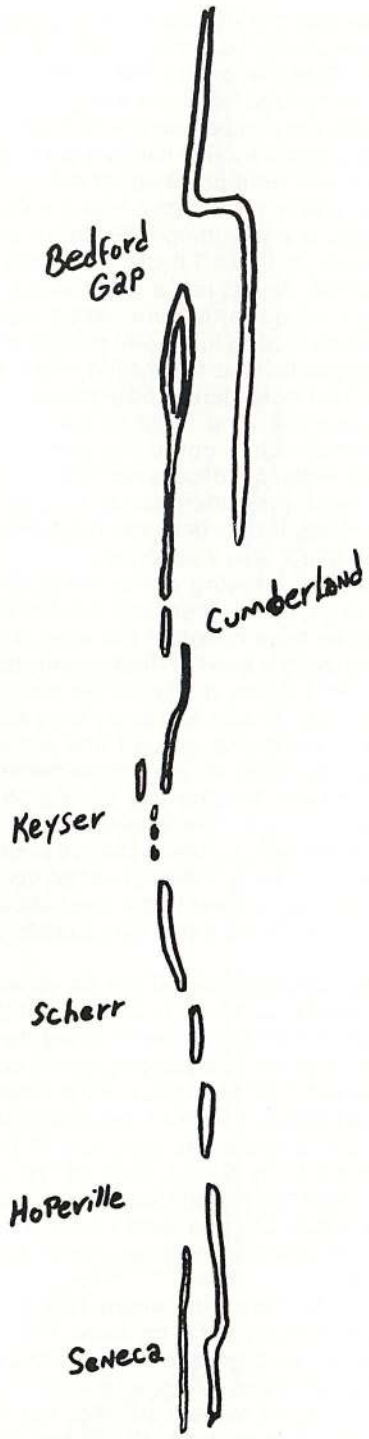
That was about the last time I saw the ridge all day as far as being right down looking at the trees, because I had to go higher. I was pulling three and four g's regularly. My airplane says 'Thou shalt not exceed 5.5 g's or thy wings shall separate.' I guess you get one or one and one-half times that until they really do fall off. Once I actually pulled 5 1/2 g's that day and 3 1/2 negative which is right on the limits. I just slowed up and flew with the air speed on yellow line a good bit of the time. When you fly at that speed, the airplane theoretically, can take any kind of gust.

The flight was fairly straight forward. There were still clouds and cu's looking a bit better as I went down toward and past Mountain Grove. I took a short-cut down there and darn near landed. There's an area near Mt. Grove where the wind comes spilling down over the mountain and whether you are in the first down as it comes over there, or whether it does a bounce and goes down again, I don't know. Anyway, I got down below the next ridge you have to get to, but I got back up, and pressed on south.

So then, zapping along, I got really in a panic; there's one little place that seems so harmless, there is just a little zig in the ridge. It's going like this and it just goes out maybe 1/4 of a mile. Matter of fact, that's where Will Schumann landed at Narrows. They said all you have to do is pull up to the right a little bit and go around it. When the winds decide to spill over that thing, you really get some severe sink. I went around the side of that spur and got way down below the ridge. It's not too far down where it starts going like this and you're done, there's no place to land down there anyway.

That scared me to death. It tends to kick some sense into you. You can get kind of complacent running the ridge sometimes, but I got back up okay. At Tazewell the clouds were kind of funny. I call them Alto-Stratus or something. Only about 1/10 of the sky was covered and I was getting wave effect. I believed if the sun really got going later on in the day, there would be beautiful cu's. Later, when I came back, it was





just like it is in West Texas — black bottom cu's all over the place. There was some wave effect under them and I was able to go across a bunch of jumps you have to make when the ridge doesn't work too well, and pressed right on south with really strong winds.

There's a reservoir near Rosedale, Va. that had white caps on it. I roared right past. Then you get a little bit of a "sticky-wicket" because at a place called Black Fork VOR near Hansonville the ridge goes from 4,600 feet down to about 3,000 and it just goes down from there. It's right near the Mendota, Va. turn point Roy and I went to in March on the 807 mile Out and Return record. What you're talking about there, especially if you're early in the morning, is less winds. If they are blowing with the big gale on top of the ridge, you figure it's probably okay along the lower ridges south of Hansonville. I was going away from the center of the low pressure and you know what that low looked like, it had been blowing all week up here, (in Elmira).

It was a strong low. I was going away from the source of the winds and getting into a lower and weaker pressure gradiant. I also was going down in altitude and getting to where there could be inversions and so forth. It worried me a little bit, but I went roaring through there and I tried to strain my eyes as much as I could to see how those trees were doing.

The trees were very good indications of what kind of winds you'll have. You almost have to be looking right at the trees head on to see what is happening. I got down within 500 feet of the ridge. I could see some tree motion down there and I figured it's probably good enough to fly. I just eased down there, but it was weak. It went from boomers to just marginal lift in a ten to twenty mile stretch there, mostly due to the altitude change. From there it was about 100 more miles to the turn point.

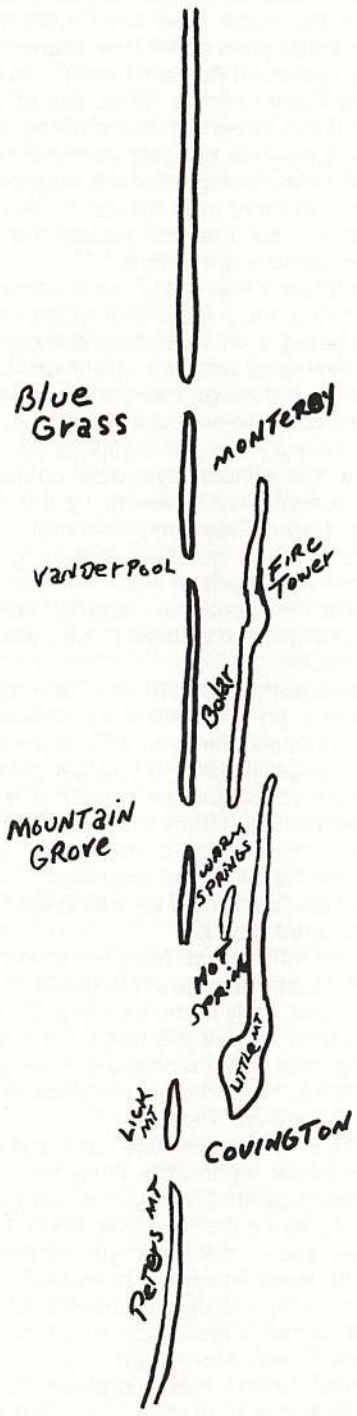
I declared a turn point at Oak Ridge, Tenn. What I did was figure out I wanted to go 1,000 miles. My attitude on previous records has always been when you don't have the record go for the minimum to get it back. If you get grabby then you have a flight where you could have made it but you didn't, and that would be my luck. I think the longest I have ever had this darn out-and-return record has been six months. I decided on this one I'd go for the thousand: the magic thousand miles — so I just put an arc for a thousand miles. I went to the first check point beyond.

I had about 100 miles to go from the Mendota, Va., turn point that Roy McMaster and I went to in March. The lift was weak there and it was early in the morning. By the time I got to Gate City, Virginia, where the ridge turns due west, the winds seemed like they were coming out of the west. I figured there was no ridge left and there's no place to land, so I've got to thermal. There were themals.

I bopped along and then the ridge turns and is more about 240. It goes southwest again and along there I must have been getting some ridge lift. The only indicator of winds that I could see were waves on the lake over there. It seemed like from what I could see — the trees, you can see the leaves when they blow in these trees, the branches point to where the wind is going — it seemed about 260. Maybe I got 20 degrees of wind on the ridge which isn't enough to fly on, either that, or else it was kicking off thermals in a line and concentrating them. I had a heavy airplane. I circled quite a bit but I didn't climb that high in the darn things. I just went along to the end of the ridge at Luttrell. Then there's obviously no more ridge lift.

The ridge ends. I had a 25 mile flight each way out to Oak Ridge, Tennessee. There's a railroad bridge over a lake I declared as my turn point. I said 'Should I try it or not?' As I thought about the end of the ridge, the night before I'd made a declaration for Luttrell, Tenn. For some reason I guess I was thinking, 'Well, if the winds are absolutely not going to go beyond Luttrell I'll just go for 880 miles, make the record

(Continued on page 12)



for something to do.' I got to thinking 'Gee, what did I do? Take a picture of the Luttrell declaration or the Oak Ridge, the one for a thousand? I don't know what to do.' Then I remembered the observer had said, 'What is this turn point here, this railroad bridge? Show me this.' I said 'Ah ha, railroad bridge. At Luttrell it's a railroad bridge and a highway. The thousand mile one is a railroad bridge and a river.' I stepped away from the ridge and went thermaling out toward Oak Ridge.

It was a weak day but you could keep going along okay. No cu's now, completely blue sky. It looked milky and hazy over Knoxville. There were dry thermals. You could get maybe 200 feet a minute. I got one about 300 feet a minute half way out there and climbed up to 4,000 feet msl — maybe 4,300. The ground there is 2,000 feet so I got 2,500 feet above the ground once and went pressing on out.

There was a power plant about half a mile north of the turn at Oak Ridge. It was putting out a lot of smoke and the smoke was blowing so I said 'I'll just go in there. It looks like a nice easy thermal.' It was just a lot of smell. While the lift cycles, I thought, I'll go to the turn. When I got back there was still more smell. I got a turn point picture at 1:10. During that time I averaged for that thermaling flight about 60 mph which isn't too bad considering how crummy that lift was. The flight was into the wind. I did 60 mph from Gate City, where I started thermaling, out to the turn. I turned around and picked up a little speed because I had a bit of tailwind there. I got some crummy thermals and some good ones. I was about five miles from where the ridge starts at Luttrell and I sort of felt like it was a sanctuary.

When the wind is blowing out of the southwest there's kind of a bend in the ridge where you will get some ridge lift no matter what the heck direction the wind is coming from. You can figure there's a bowl in there somewhere. I was out there at 1,200 feet looking at these little red plowed fields looking for shopping centers and everything else. I got some zero sink, and I was going around and around saying to myself, 'Come on bubbles, recycle, do something, come on.' I was concerned here, landing this far out. Well about the 12th orbit I looked out. There were these three black buzzards 1/4 mile to the southeast. They're pretty heavy-pretty clunker birds for soaring. If they could go up, I could go up too. I went over there and I went right up at about 300 feet per minute and got up to 3,500-4,000 feet. I made it back to the ridge.

This time the wind had stirred the air up and I'd say the ridge lift came maybe within 20 or 25 miles of the end of the ridge. But I stil thermaled back north along the ridge. There were starting to be some cu's popping now. I could see them up to the Northwest over the high country. It was pretty clear air and you could see cu's where I was going, up in the Gate City area for sure. I could feel cu's sort of break over my head, so I climbed fairly high. I went up the ridge. I didn't really get back down to the ridge top until after that east-west stretch there at Gate City and then I went roaring along. It wasn't rough or that strong but it was good enough to hold 110, no problem.

I passed the Mendota turn where Roy and I turned at 2:28. I remember marking that in my mind. That's as far as the mileage strip on my map goes. It says 370 there so I wanted to figure out how fast I was going, what kind of average I was doing, to see if I could make it back or not. Anyway, with plenty of cu's, West Texas type, 10,000 foot base, I think, I never did get up to them but they were way the hell up there I'll tell you. I got up to 6,000 and thermaled up to the higher ridge at Hansonville without any problem. I got on to the ridge that goes from Tazewell to Covington, Virginia. It's 10 miles long and I did that in 40 minutes. I was up to 150 mph average speed, no problems at all. I got low and went fast. As a matter of fact from then on in this high country — this is the part where you get the initial 4,000 foot summits all the way

back to Hopeville — I got higher and higher above the ridges.

So then I got out, and roared into Covington, trying to decide what to do. On that stretch there was no ridge to take the short route and I figured if I get to 6,000 feet I can make it. I got up to about 4,000 and said 'Well, if I just go out a little ways there will be a thermal out there.' I went out a little ways and I went right down and I couldn't get back to the ridge I was coming from, so I turned straight east down wind to go to the alternative back route between Fallini Spring amd Montery.

There's a 4,000 foot mountain above Covington and I said 'I'm just going to head for the foot of that thing.' I could see the wind blowing right at the very foot of that mountain. The trees were white down down there and the winds were going right up the side, so I figured if I'd get in there eight to ten feet above the ground I'd be able to save it. But I got in at 500 to 1,000 feet above the valley and I just did "S" turns to the top of that mountain. Incidentally, that was the first call I could make back home then because my radio wasn't working.

You can't talk to anyone down there anyway. I tried 121.5, emergency, and said 'Anybody hear me on this frequency?' I wanted to check in and tell everybody where to look for me if I crashed. There is no use calling on the way out because you can still be anywhere on the whole route, so I normally don't make too many position reports until I come back. That eliminates some area where you can't possibly be.

Just out of curiosity, I wanted to see how fast that wind was blowing. I pointed the glider straight into the wind and just hovered over the top of the ridge. I stopped it at 55 mph — it wasn't moving. That's how fast the wind was going at 4,000 feet. You can see why, with that kind of sun, that kind of solar radiation, when we get 55 mph winds and unstable air there, it just tore the air all to pieces.

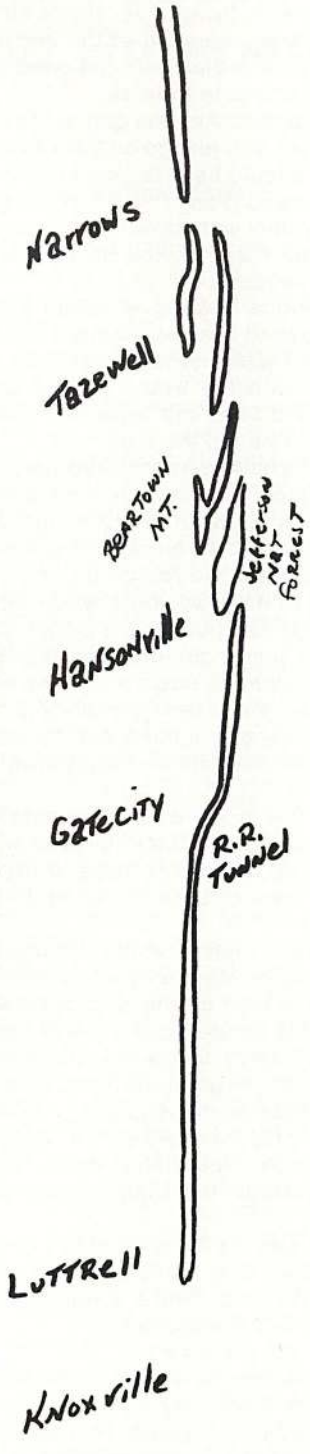
I rode up the ridge. I wanted to get back west to the front ridge — back to Mountain Grove — as soon as I could. I didn't want to mess around over George Washington National Forest any longer than I had to. The air was pretty dry in this area. There weren't half as many clouds as there were back at Tazwell. I found a string of whisps that went "whooooooosh" and died, I went out straight into the wind and made the front ridge. Then it was pretty much straight ridge running all the way back up to the high country past Bolar, Va. That's the highest I ever flew above the ridge there. It was 2,500 feet above the summit. Nice cu's up in that area. There were cu's all the way back to Cumberland but they were getting fragmented.

I think I got past Cumberland at 5:30 in the evening, so it was probably close to 4:30 when I got to Bolar. The cu's were there but you could never find a cloud base. It wasn't worth your time going to cloud base and I didn't have any particular sweat at all.

It was a continual descent from the high country over the low ridges. I'd circle in a good boomer. Incidentally, I'm sure I didn't time any, but I bet you $10 there were 2,000 foot per minute thermals that day. How long they lasted I don't know but my variometer is compensated pretty well. It's set for a 1,000 per minute on the zero variometer, you know, the Schumann so it tells you what the air is doing and it would go 'kerblewie' and you could hear the damn thing hit the needle, hit the peg, I'm sure it was going around to 2,000 feet a minute. I wish I had a rate of climb to just see it, you know, practically one turn and bag, 2,000 feet.

There was a continual descent. When I got to Cumberland I didn't have enough altitude to go straight to the west front ridge there and I had to settle for the back ridge. There's a bow where there is a railroad tunnel. I took a couple of tries at thermaling and got up to the front ridge. Back in Covington, you could see what looked like the back side of

(Continued on page 14)



a front all the way north, the way I was going home. It really was high, about 35,000 feet. It was a long way away. Then I started getting north into really thicker clouds especially right about Cumberland. It started becoming broken at Cumberland. I think there was still some sun there but it was getting thicker. When I ran up to Bedford the sky got just about overcast and I was really in a quandry: what to do?

You have a decision to make at Bedford, especially on the way back. Do you take the safe route, which is to go east one ridge, cost you a little extra time, or do you take the more direct route by jumping the Bedford gap and going directly up to Altoona?

When you are committed to Altoona you can't do anything else. You can talk about the Altoona gap lightly coming out but going back, it's a son of a gun because the actual course north across that gap is about 360. Going south you are getting a little bit of tailwind component going across. Going back you are hurting. You are going into the wind. You're going from a lower ridge to a higher one. It is late in the day, and the thermals aren't as good so you're locked in. Once you go across Bedford gap you are locked in to Altoona, unless you want to go all the back and try to get across Bedford.

I went roaring up there. Just as I got up to the Altoona gap the clouds were getting thicker and thicker and sprinkles started on the canopy. You know what that does to Laminar flow — it doesn't do any good at all, but there was definitely a wave working from about Bedford.

The sky was black. It was overcast. There was a black band right over that darn overcast. Probably at 4,000-5,000 feet I'd say and rain was coming out down the side, I think, or right underneath it somewhere. It was just a light sprinkle, and I figured 'Well, I'll just get out on the leading edge of that wave. Maybe two or three miles in front of the ridge I could get the lift to get up there.' I tried it once, but couldn't make it. I went up the ridge a little bit further, penetrated, got higher, about 3,500 feet, and went out and got under the leading edge of that wave. It wasn't moving.

I wasn't trying to get to Atoona at all. It's just that the more upwind at the gap you get, the shorter the crossing is. Even if you're not any closer distance wise you're getting effectively closer in air distance. You're getting closer because you are beating that wind. The more tailwind component you have the closer you are in flying time, that's all you care about. When I was definitely up wind to the north side of Altoona gap and I didn't have that in-to-the-wind component I got complacent and was able to relax.

Once you get across Altoona gap to the Bald Eagle Ridge there is no problem, you just go on back home. It was raining pretty hard and I should have dumped the water ballast there because I didn't need it any more. I should have stayed fat, dumb, and happy but I went down fairly close to the trees and went by my Eagle Field, pulled up to see if anybody was there. Nobody was home.

I went past Ridge Soaring at Julian and went up to the Howard Dam. Howard is about 10 miles out from the finish at Lock Haven and I was just relaxing when all of a sudden I was down even with the trees. The air speed dropped to about 51 knots and I had the flaps on. I said, 'Get rid of the water quick' and I pulled the cork.

It takes about a half an hour for the water to come out so it didn't do much good you know. Ten miles, I thought, 'Oh, no, I'm going to land this damn airplane right in Howard reservoir ten miles short.' You wouldn't mind landing in the reservoir if you made the world record but if you don't make the record and land in the reservoir anyway that's not so good.

So there I was fat, dumb, and happy going down Bald Eagle Ridge and just a straight shot home. Here it was all soaking wet, rain coming down and I was about to land but I just hung on. You have to be really ready to roll away from the ridge. You try to hang it in there and constantly be ready to stuff in that rudder and aileron to get away from the ridge if anything happens.

But it was a lull in the wind or something. I don't know what it was. I just blasted back up even with the ridge and wooooosh, I set up those darn flaps to flap three. I went 51 mph all the way back to Lock Haven and I got there at 7:00, no problem.

I might make a comment on the clothing I wore. It's a nice thing about flying in May. May does have some problems because when you take off the wind is blowing hard. You're going to have cold temperatures. It was about 36 degrees. I figured well, 'If I have to do any thermaling down there, which I surely will, I'm going to roast to death so what do I wear? Wear all these mucklucks and junk. No, I can't do that, I'll have to try to play it in between.' It worked out just right. The only time I was comfortable was in Covington, when I was half way through the flight. I was frozen more than roasted.

I landed and was on the ground at Lock Haven about 45 minutes. My brother, Eric, came up with a tow ship and towed me home to Eagle Field. That's about the end of the flight.

Can I answer any questions?

Q. What was the distance?

A. I don't know exactly what it is. We tried to figure it out down at Frederick when I was going down to see the Smirnoff people yesterday. Rudy Allen had his HP — whatever it is — that Hullett Packard Computer thing — that does everything. We put that great circle program in there and we got coordinates off the map and everything. I figured out 1,041. There was someone else there, I forget his name, who he said he'd go back and try it on his Hullett Packard. He came out with a different number. It depends on what radius of the earth you use. The SSA might have a different one but I think 1,014 is closer.

Karl Striedieck
(Photo by Glen Seibels, courtesy of Soaring Magazine)

From The Director

VSA Growing And Prospering

by William English

One of the great pleasures in being involved with a project from the beginning is in watching something grow and prosper. The recent Vintage Sailplane Regatta provided just such an experience for me.

Three years ago, the Vintage Sailplane Association did not exist. People who flew older aircraft often were looked upon as being either creatures to be pitied or mad. By their own testimony, such pilots spent nearly as much time apologizing for their aircraft as flying them.

Largely the result of Paul Schweizer's fertile imagination, the first Vintage Sailplane Regatta was held in August, 1974 under the banner of the National Soaring Museum. The Vintage Sailplane Association was formed during the pilot's meeting on the last day of that regatta and began to develop into what has become a pleasurable and fascinating aspect of the soaring movement.

A fuller report on the third Vintage Regatta will be in a later NSM issue. However, suffice it to say that the group that gathered at Harris Hill early this past August was larger and more enthusiastic than any group seen before.

The ships they brought ran the gamut from a TG-2 to a DFS Weihe. Despite a serious lack of cooperation from the weather — it rained cats and dogs most of the time — the group shared information and gained that quality vital to all successful groups: self-confidence.

With a newsletter, an effective leadership, a substantial membership, and a growing program of activities, the group has come into its own and promises to make significant contributions to the enjoyment of soaring for many people. We are pleased by this and proud of the role that the museum has played in helping get the group off the ground.

I often am asked, "What can I do to help the National Soaring Museum?" While I am tempted to say "send money," I know that is not the real answer.

What the museum needs above all else now is more people intimately involved with projects that will help preserve the rich traditions of our field of concern: motorless flight.

I am sad to say, there is no other institution in the world that I know of which displays much interest in gliders and sailplanes. To our sister avaiation museums, motorless aircraft appear to be regarded as primitive or products of some avaiation backwater.

While the staff here has made substantial progress in collecting and recording data and sailplanes, it is not enough. The museum needs help from its members and friends in developing information and sources of information. Research needs to be done on soaring greats like Montgomery, Raspet, duPont, Franklin, and others. Significant aircraft need to be restored. There is much work to be done to advance the goals of the museum. It is my hope that museum members and friends will become more involved in these museum activities. We live at a time when much first hand information and material is available to us. It will not be long before much important material and information will be lost forever.

If we at the museum can be of any help in support of efforts by volunteers to collect information, to write articles for this or any other publication, or to restore aircraft, I hope that they will let us know.

Jim George Wins Lincoln Award

Jim George, Prescott, Arizona, was given the first annual Lincoln Award for writing during ceremonies, May 22, 1976 at the Corning Hilton Inn, Corning, N.Y.

Established by Harris Hill Soaring Corporation, (HHSC), Big Flats, N.Y., in memory of Joseph C. Lincoln, Scottsdale, Arizona, the award honors significant published writing in English about soaring. Lincoln, a museum supporter, wrote and edited several books on the subject. He died in May, 1975.

The award, which carries a cash prize as well as an engraved trophy, was announced during the National Soaring Museum's annual spring weekend. A duplicate of the crystal trophy will be displayed in the museum.

George's article, "Two Long Final Glides", first appeared in the Spring, 1975 issue of Arizona Air Currents, a publication of the Arizona Soaring Association. It contrasts two "final glides" to the airport, one in a Diamont sailplane and one in an F-86E Sabre fighter plane during the Korean war.

Lincoln and George were friends, as well as fellow soaring pilots.

The Lincoln editorial selection committee included Archer Martin, HHSC president; Liam English, National Soaring Museum Director; Mike Teter, HHSC treasurer; Tom Mailey, Cornell University; Peg Gallagher, Elmira Star-Gazette reporter and HHSC member; and Meta Levin, editor of NSM, the museum's magazine, and HHSC member. Ten articles were considered for the award.

Entries were received from all over the United States.

Letters

German Museum Also Has Problems

To the editor:

Here's a little piece I found in the Jan 76 Flug Revue/Flugwelt which shows that other soaring museums have space problems.

The Soaring Museum on the Wasserkuppe

Visitors to the soaring site on the Wasserkuppe in the Rhon find exhibited in a little museum the early beginning, the florishing and the achievements of the soaring sport. Succinct placards and photoseries, beginning with the pioneering performances of Otto Lillienthal, depict the historical evolution — how Hans Gutermuth and the Darmstadt Aero Club made the first soaring flights from the Wasserkuppe in 1911 to distances of 330 meters; how the "Rhon-Father" Oskar Ursinius systematically led the pioneers in the development of soaring from 1919; they display pictures of the first contest on the Wasserkuppe which ran from July 15 to August 1, 1920 and in which many pioneers to emerge in later years took part.

(Continued on page 16)

Letters

Peter Riedel, Wolf Hirth, Gunter Groenhoff are names inseparable from the development of soaring, the meteorologist Prof. Georgii created the scientific basis — they are all enshrined through photos of their achievements on the Wasserkuppe.

A tabular overview of performances from 1920 to 1930 shows the advance from short air hops of a few minutes duration to the high-performance soaring flights of many hours, and which covered great distances.

As one of the great soaring training centers the Wasserkuppe Soaring School and its development is covered in picture and text.

The famous sailplanes are portrayed through models and pictures and span the period from the first gliders to the high-performance sailplanes of today. An 1899 ornithopter by August Frentzen is in the museum, although attempts to leave the ground with it were not successful. Nearby is a replica of a Lillienthal glider, an SG-38 primary trainer, and a Grunau Baby III; the last is displayed unassembled.

Lack of space hinders the exhibition of the collection of other types by Mr. H. Dette, but it is hoped that the expansion plans of the museum will become reality. The following types are available for display: Grunau Baby IIB, Baby III, Hutter 17A, DFS Meise (Olympia), Rhon-Bussard, Rhon-Sperber, Greif I, Condor IV, Kranich II, Kranich III, Ka 3, Horten III, of which several were seen at DELA 75 German Aviation Exposition in Essen.

The Museum is easiest to reach by bus, or from Gersfeld by taxi. It is open daily in Summer months, and the admission is two Marks.

— Fred Gutschow

translated 4/6/76 from January 1976 FLUG REVUE/flugwelt
Terry White

Soaring Museum Needs Darkroom Equipment

The National Soaring Museum wants to establish a photographic darkroom for use by NSM and museum staff. To do this economically the museum needs some donations: Enlarger (35 mm and 2 1/4 x 2 1/4 capacity at minimum), black and white and color; Timer; Developing tanks and reels; Tray;s Enlarging easels; Safe Lights; Paper safes; Negative files; Contact printer; Enlarging meter; 2 1/4 x 2 1/4, 35 mm, and 4x5 cameras; Flash units; Copy equipment; Tripods.

If you can help with any of these items please contact museum director, William D. English.

National Soaring Museum
Harris Hill, R.D. 1,
Elmira, N. Y. 14903