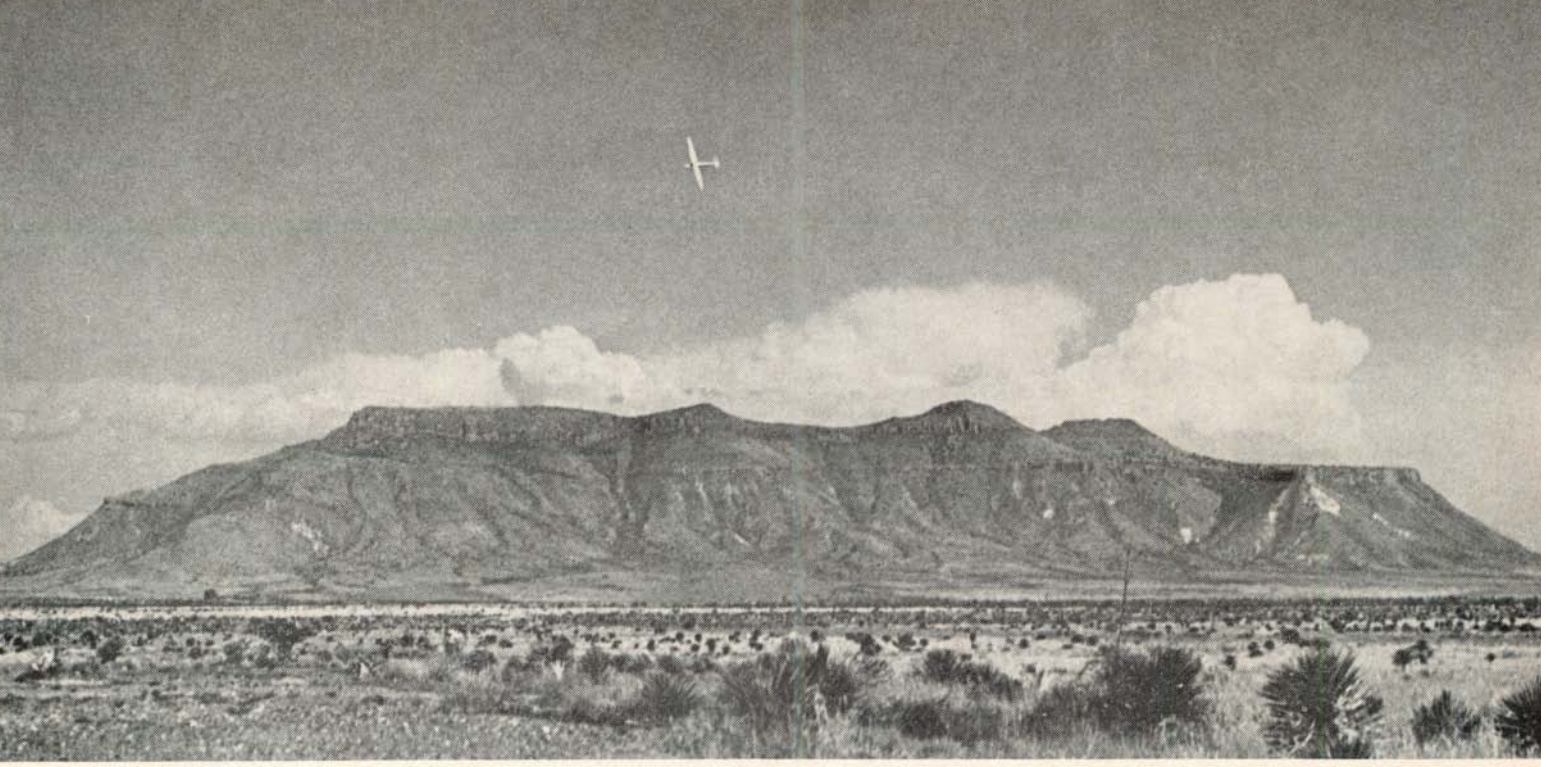


Dutton

36th Annual U. S. National Soaring Championships

By JOSEPH C. LINCOLN

Photography by Alex Aldott and Allen A. Dutton

Late Saturday afternoon, three days before the contest opened, a sailplane was beginning to pass over Marfa quite low. It sighed through the evening air as if longing for the runway and rest. At the same time, a training jet thundered over at treetop level, rattling windows and crockery. The barber who works in the block just south of the Paisano Hotel was on his way home when housewives and others rushed out into the street to see what was going on.

"What happened?" they asked excitedly.

The barber was a knowing sort. He looked up at the sailplane and pointed, "It was that sailplane up there. Ah guess he must have gone through the sound barrier.

"REALLY?!"

Late Sunday morning, the 22nd of June, 1969, I landed my new Cessna 180 at Presidio County Airport near Marfa, Texas. The 36th National Soaring Contest was scheduled to start here two days hence. There were more than 80 sailplanes tied down on the ramp and the place was alive with the feverish activity which always precedes a great soaring contest. A number of other sailplanes were in the hangar undergoing intensive work. And the following day I was to see Dick Schreder towed aloft on the second test flight ever made in his new HP-15.

FIRST CONTEST DAY

Four of the five available take-off lines are in use. Eighty-three sailplanes in those four lines. Dozens of towropes are laid out parallel to each other just beyond the outer rows of sailplanes. Two men handle the ropes, one at each end. They manage their work superbly, but still the operation is not up to the pace hoped for—one launch every 30 seconds.

There are sounds of scraping tailskids, row upon row of interlaced wings. Three world champions are in the take-off line, and this does not count another world champion who is the Polish team captain.

Heat reflection off the gleaming silver wing of Harro Wodl's new FK-3 sailplane throws unexpected warmth on the underside of the chin.

The languages and the accents! Australian, Swiss, Japanese, Polish, German, Belgian, French, Italian, South African, English, Canadian, Austrian, Texan.

There are empty film boxes on the ramps. Water jugs, rags, umbrellas of all colors; a sandy wind blows each time a towplane guns his engine; the sound of revved engines getting in position to hook up. Buckets and sponges, red tail dollies or saddle wheels for getting ships out on the line. Cameras—photographers searching, stooping, shooting.

Crews and pilots relaxing in the shade under the high tilted wings of their ships. Pilots getting on parachutes. Taking the "control" photographs on the line with the two Instamatic cameras attached to each canopy. Pilots ready for take-off being shaded by the crew—an umbrella, towels, any cloth.

"We're running late—40 minutes late—and we need every minute of it today."

The abrasive scraping of a wing tip on the ramp after the tip runner lets it go.

The BJ-4 with its lower fin like a seaplane, has come all the way from Africa. From their cockpits "Jacko" Jackson and Harro Wodl use the thumb-up sign, meaning "ready to go."

Three, four, sometimes even five towplanes with sailplanes on tow are seen rising, growing faint to the eye with distance before making the initial turn. Things are unbelievably well organized for the first day. Eighty-three sailplanes are

launched in one hundred minutes. The next day nearly half an hour is cut from this.

Two miles west a gaggle of 10 sailplanes is working under a cloud.

Then suddenly it is over. The line is bare, the towplanes land. The few remaining towropes are picked up, and people saunter back to the hangar to eat.

* * *

The task: a 262.5-mile speed triangle from Marfa to Van Horn to Fort Stockton and then back to Marfa.

A few miles out on the first leg, there is a windmill you can see flashing in the sun as the vanes turn. There are big patches of dark ground which give the illusion of cloud shadows to lure the unwary. The cattle tanks are empty—dry. By 11:00 a.m. there is already thermal activity. Much of the terrain is unlandable—closely strewn yucca, but here and there you see good open spots. A number of the open areas, however, have drainage channels—depth unknown, impossible to judge from altitude.

Up toward Van Horn, late morning. A slender lenticular cloud appears west of the Sierra Vieja Mountains. To the east of the Van Horn Mountains there is a wide, long strip of cultivated fields, green, earth-colored and stubble—landable here but irrigated, marginal soaring.

Culbertson County Airport: first turnpoint. Just northeast of the airport is a green wash and farther northeast are fields, but straight east, on course, is unlandable desolation. The road and railroad parallel each other as they run east—the road of broken asphalt repaired with tar, looking to the eye like ancient black leather cracked by sweat and wear.

Farther on, volcanic outcroppings emerge from the rich brown earth. At Kent the beds of rock have their relief graphically profiled by natural contour lines. The northernmost tip of the Davis Mountains nears the road at Kent. Farther east, construction is under way on a new double highway. At last, a place to land.

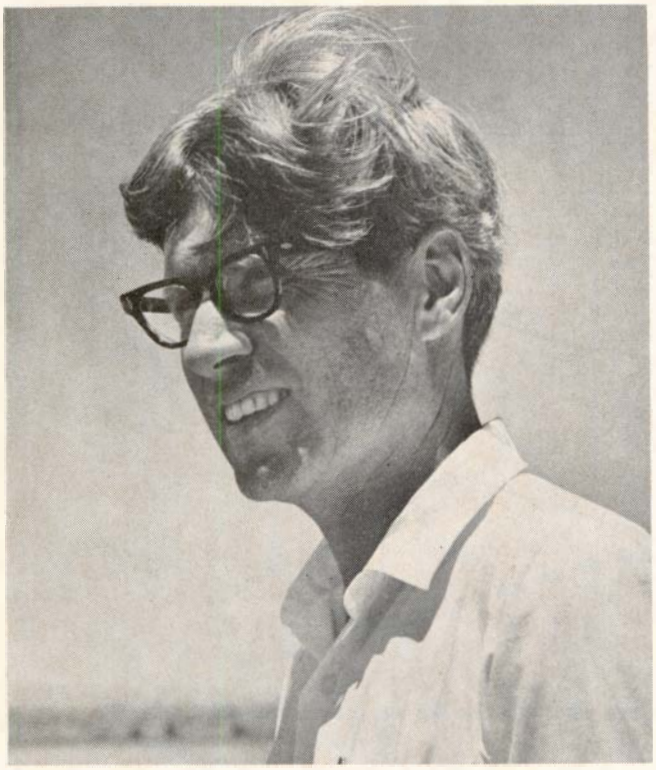
When you get to Balmorhea with its large reservoir, the farms begin again—green fields, other fields of earth, stubble. Another 10 or 15 miles and the fields again stop—marginal to unlandable terrain.

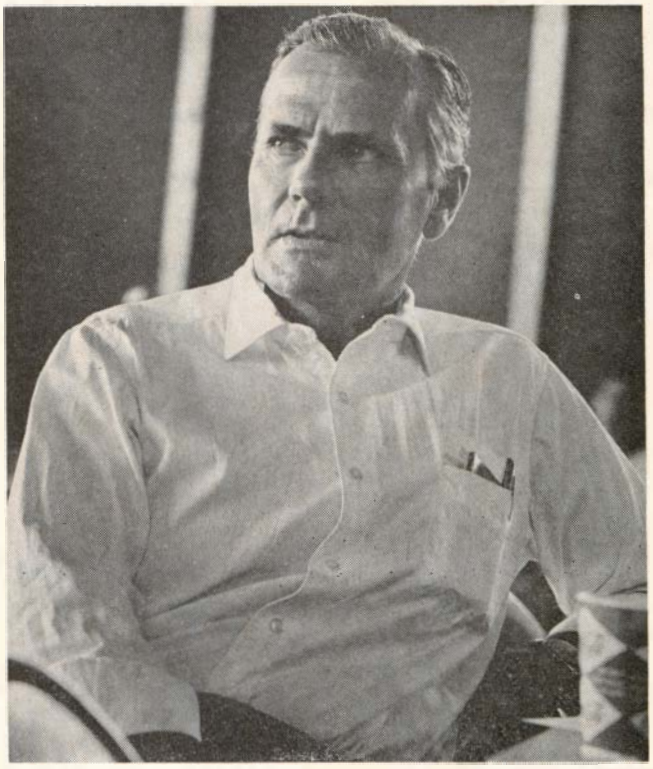
Nearing Fort Stockton, a big automotive test track appears left of the road. The shape of the track does not quite match the shape on your chart. Hunting for the big reservoir shown on the chart, just west of town, gives you a start. It is not there. Then you find it, a tiny pond behind a large dam, no help to a pilot circling in the distance, trying to nail down a sure checkpoint. At Fort Stockton the fields appear again.

Third leg. The fields run out. The Marfa Mountains and Mount Livermore are visible on the horizon as the terrain rises 1500 feet between Fort Stockton and Alpine, with the first real mountain just short of Alpine. Now, even before noon and clear up at 7000 feet, it is uncomfortably hot with the sun on your belly. How will it be this afternoon to those caught low in the heat of the day, lying on their backs under a clear lens of plexiglass?

Approaching Alpine, there is a vista of wild lunar mountains. Alpine itself is pale-green, mountain-meadow country. There are green trees and a long inviting airport. Presidio County Airport with its lone, landmark hangar can be seen even from low altitude from over the mountains east of Alpine.

The surface wind that afternoon will turn out to be half again as strong as it was forecast. On the third leg they will have to fly dead into it all the way home.





The two protagonists were George Moffat (left) and Wally Scott; between them they won seven of the eight contest days. Dutton

That was their battlefield on the first day.

* * *

At noon the sky was forecast to be clear, temperature 88 degrees, with a 12-knot wind from the southwest. By three o'clock there were supposed to be scattered clouds at 10,000 feet, a mile above terrain. The temperature was forecast to rise to 93 degrees, and the wind to increase two knots. By six in the evening the forecast called for scattered clouds at 11,000 feet and a temperature of 95. Thermals were to start between 12:30 and 1:30, rising only 1000 feet above ground, with a strength of 300 feet per minute. At five o'clock they were supposed to attain maximum strength and height: 700 feet per minute up to 11,000 feet, 6,000 feet above terrain. Last thermals were forecast between seven and seven-thirty in the evening, about an hour and a half before sunset in the strange time used at Marfa.

* * *

Three minutes before it landed, Mary Ann Allemann saw the first sailplane approach, very fast and very low. Something appeared to be wrong. It looked like smoke was trailing from the right engine of a twin.

"*My God, he's on fire,*" she exclaimed.

It was the water ballast draining from his wings.

XX flashed across the finish line 10 feet high at 17:50 in the afternoon, the first contest finish of the 1969 Nationals. Even at that hour he bucked a surface headwind that was running between 20 and 25 knots at 210 degrees. It was George Moffat in his Cirrus.

"I started 10 minutes too early and flew very carefully up to Mount Livermore, using gaggles to spot the lift. Once I got to the Mount Livermore area, I went from 9000 feet up to 11,000, then cruised back down to 9000, climbed up to 11, admiring those who went to 12 because it took so long. I looped west of the course to avoid downwash south of Van Horn, and also used local shear effect in that area.

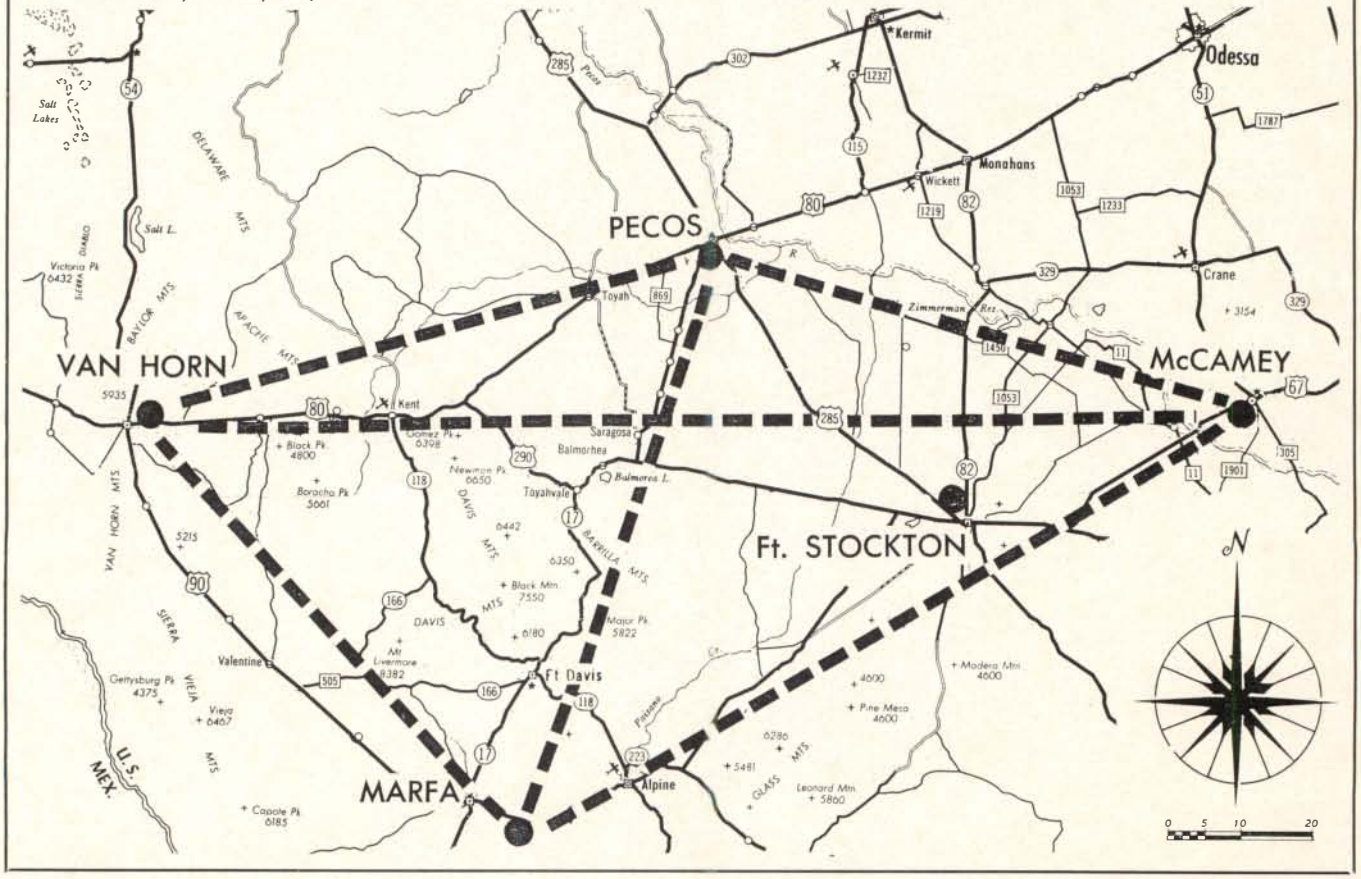
"There was a good thermal just short of Van Horn, and after making the turn, I climbed up to 12,000 feet and started blowing downwind. There was very heavy sink east of Balmorhea—miles and miles of it. I couldn't even make 18 to 1 downwind. Then finally I found a thermal with Jerry Robertson and went up to 12,500 feet for the second turn.

"I used a cloud street a little to the left of course to begin the third leg. With the headwind, this helped quite a little. When it ran out I flew on, then waited and waited at 90 miles per hour for the intersection of the road and railroad to come up. It seemed to be standing still, but I finally got over it.

"Before too long I had a 35 to 1 glide home, then I got a weak thermal and improved it to 33 to 1. I flew and climbed again. This time my angle on the field was 20 to 1. After another climb, I got it to 16 to 1 and left 1000 feet a minute to come home since I didn't want to arrive here 4 or 5000 feet high.

"I went on and sank in the downwash behind the mountains this side of Alpine. Things got bad enough that Marfa went out of sight behind the last hills. Finally

The battleground (for all but the free-distance day): The airports at Marfa, Van Horn, Pecos, and McCamey were used as the turnpoints for the prescribed-area distance tasks, the dashed lines indicating the optional legs that the pilots were free to fly. These turnpoints (plus Fort Stockton) were also used at various times on speed task days. Note that the large black dots show the locations of the airports, not the towns.



I got so low that I ridge soared. Then I got a thermal which gave me 3000 feet extra and from there I came home. I wasn't too fat even then. Just before landing I dumped 190 pounds of water ballast.

"That last mistake cost me about six miles per hour in overall speed. My glide angle in the sink went down to 9 to 1!"

It was the best flight of the day, 64.8 mph.

* * *

Rudy Allemann was the second pilot to finish on the first day. He went through the start gate at 1:40 p.m. and worked thermals of 500 to 600 fpm on the first leg. Near Van Horn he started picking up 1000-fpm lift and had an easy time of things on the back leg, during which he got up to 15,000 feet. He started his final glide some distance out at 90 mph, then due to sink on the far side of Alpine he slowed to 70 mph for maximum glide "until the airport was in proper position on the canopy instead of going up."

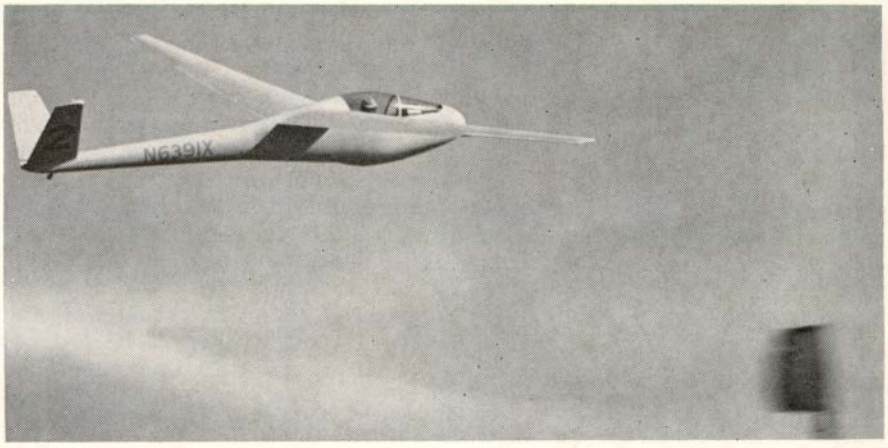
He put his speed up to 100 mph on the final part of the glide. "Then I landed and found a very worried wife who didn't want me to come in like Moffat did."

* * *

"Boy, what a workout. I don't think there will be 40 percent finishers," said A. J. Smith. He wore suede loafers, suntans, an off-white sportshirt, a blue fatigue hat, and sunglasses. He was tired.

He passed through the gate a little after 2:00 p.m. and found only moderate lift until he got past Mount Livermore. Up toward Van Horn he came to strong dust devils, which were arranged perpendicularly to the wind. His altitude went up to 14,000 feet, and his speed quickly began to increase. He found a tremendous dust devil right at the turn, which gave him a climb of 1000 fpm. Like Rudy Allemann, A. J. Smith also found the second leg easy. He deviated a little south of the course to stay over high country and got to the turnpoint at 13,000 feet above sea level. On the third leg he deviated five miles off course to hit the only cloud of the day.

It was his last time at 14,000 feet. Thermals got farther apart and weaker. "From there on everything was downhill." He went through the pass between Alpine and Marfa at 6000 feet, 1000 feet under the altitude he needed to complete the task. Then he worked a final thermal at only 200 fpm to gain the necessary altitude to fly home. "I had to come in at maximum glide angle. I took at least half an hour too long. It was a complete disaster." But only four pilots were able to do better.



Dutton

A. J. Smith blurs past the finish gate in his Sisu 1A. Smith (8th place overall) was just 97 points out of 3rd—flying a design whose prototype first flew more than a decade ago.

* * *

Wally Scott followed the high ground to the right of course on his first leg even though the wind was trying to blow him still farther right. Lift was moderate until he got to Van Horn, where he found a dust devil that gave him 800 fpm up to 12,500 feet. On his second leg he had a flat glide to a peak south of Kent. He was almost down to the level of this peak when he spotted two sailplanes and went toward them, but then he saw a buzzard off his left wing tip. The buzzard had a good thermal which took him back to 12,500 feet. From there he made a flat glide to east of Balmorhea Lake; and when he had gone clear down to 7000 feet, he got an 800-fpm thermal which took him up to 13,500. He worked and drifted at this high level to the second turn.

For his final leg he detoured 15 miles south of the course to get under the leading edge of a finger of cumulus. This finally took him up to 14,500 feet, then he glided straight to the railroad-highway intersection.

"I took a last thermal up to 13,500 feet at only 300 fpm. I could hear the guys ahead were having a little trouble with the wind, so I took the extra altitude to get home and from there I had a straight glide in at 90 mph indicated." Scott was the day's runner-up.

Jan Wroblewski: Late in the afternoon, the 1965 World Open Class Champion finished the triangle; but instead of diving through the finish gate, he went between the hangar and the north border of the finish gate, thus he did not complete the task and was given only distance points. Later on, at the request of competing American pilots, he was given credit for finishing the course "in view of the ambiguity of the rule and the language barrier."

* * *

"What happened on your flight?" I asked Dick Johnson, who finished 23rd.

"I pulled back on the stick when it said up and pushed forward when it said down."

There was a pause while I made notes.

"You aren't going to print *that* are you?" he asked.

"Well, you're the man who made the famous precept about getting high and staying high."

On the first leg he had gone over the high country to the right of course, up toward Mount Livermore. "It's generally better over there. It got moderately strong over the high ground."

On the second leg he also pulled right to get over high country again. He planned to stay south of Balmorhea and did so by 10 miles. He flew with Wroblewski and got photographs of him. A combination of wind and excellent thermals let him cover the 112 miles of the second leg in only one and a half hours.

On the third leg he faced the 20-knot headwind. He climbed up

to 14,000 feet in lift that got as high as 800 fpm and came home, alternately circling and gliding.

"It's awfully hard to get ahead of your glide-slope calculator with that much wind."

The Casualties

At eight in the evening, a Cirrus with the contest letters SJ passed over the finish line very low and slow. He angled over the line directly into the wind; then, instead of turning 90 degrees left for his landing, he started to come around 240 degrees to the right. He completed a 180-degree turn and was traveling straight downwind, straight toward the cyclone fence and the hangar. The sailplane was staggering. To miss the fence he

Dutton

steepened his turn—then his right wing tip caught. The sailplane cartwheeled, hit the concrete apron, and scraped, and suddenly the fuselage broke in two right aft of the trailing edge of the wing. The pilot was not hurt.

* * *

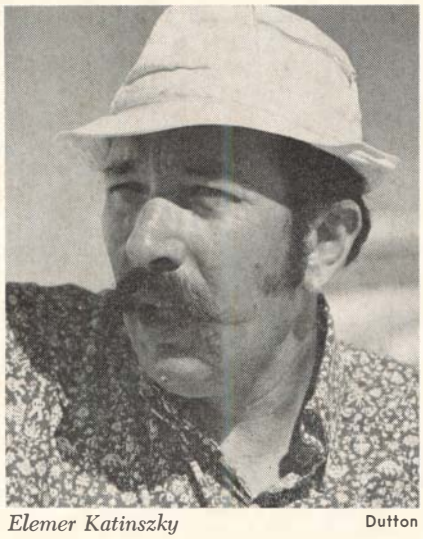
Ben Greene, 1968 U. S. National Soaring Champion, was fighting for a place on the U. S. International Team. On the first day he did not complete the task. He landed only six and a half miles short of the finish, but the competition was so fierce that he found himself in 50th place at the end of the first day, making the rest of the contest hopeless.

* * *

Late in the day on the 24th of June, Elemer Katinszky, the former holder of the world speed record for the single-place 500-kilometer triangle, approached the gate and finished the task. He did not come thundering across the finish line in the spectacular fashion that lets a pilot zoom hundreds of feet back up in the air and pick his landing place at leisure. Katinszky was low and slow. There were sailplanes which had landed and stopped on the runway ahead of him, the only runway he could safely use. One was too close for him to land without braking so he pulled open his drag parachute. His final glide had been a long, back-breaking strain, and he was lower than he thought. With little warning the Libelle stalled and dropped—a crushing impact, then the terrible abrasive sound of fiberglass being ground on the runway . . .

The landing gear was smashed, and a section was broken out of the pod aft of the wheel well and to one side. He took it into the repair shop in the closed end of the hangar. Work began immediately with help from a German technician who worked like a madman. From his time of landing Elemer Katinszky worked without a break until two o'clock in the morning. Then he went in for a quick sleep and was up for work again by six in the morning. They worked without stopping until the repair was complete. Then the ship was wheeled out onto the line.

Katinszky was the last man in the take-off line that day, but he took off and flew without any delay. The


Elemer Katinszky Dutton

ship was again structurally sound. It carried him aloft, handlebar moustache and all.

"You know, people are *vunderful* when you're really in a jam!" he said with great feeling.

PILOT	MPH	POINTS
Moffat, Cirrus B	64.8	1000
Scott, AS-W 12	63.6	981
Allemann, Libelle	60.9	939
Jackson, BJ-4	59.7	920
Smith, Sisu 1A	59.4	916
Brittingham, Cirrus	59.0	910
Thomson, Libelle	58.5	902
Squillario, Libelle	56.5	871
Nees, Kestrel	55.2	851
Smiley, Libelle	55.1	850

☆ THE CAST ☆

Fritz Kahl, Contest Manager


Dutton

Over six feet, slender, with the quiet speech and unfailing courtesy of west Texas, darkly tanned, powerfully built, dressed in suntans, heavy shoes, and a red baseball hat. He is always on duty, never tired, and always able to give immediate attention to any problem you put before him . . .

Fritz Kahl first came to Marfa in January 1943 while he was serving in the Army Air Corps. Marfa Army Air Field was an advanced twin-engine training base. For two years he instructed there in the UC-78 and he got married while he was at the field.

In January 1946, when the war was over, he returned to Marfa and went to work for his father-in-law in ranching. For 21 years he kept at this work, raising Angora goats, white-face cows, and sheep. In 1962 he took over an aviation service, which became known as Kahl Aviation.

While this was going on in Marfa, people like Red Wright, Al Parker, Wally Scott, and Gene Waggy in nearby places like Odessa began thinking about Marfa as a place to soar. "They wanted to fly without getting in anybody's hair and they wanted to get away from sand dunes and oil derricks."

A soaring camp was organized. Red Wright got Fritz Kahl interested, and he in turn interested local ranchers, who little by little got broken in as tow pilots. In 1966 Fritz Kahl managed the Regionals contest which was held in Marfa and he was contest manager for the 1967 Nationals, where 119,000 miles of cross-country soaring were flown in eight contest days. Reno had held the previous record, with 93,000 miles in nine contest days.

Marfa was asked to take on the 1969 Nationals as a dress rehearsal for the 1970 World Contest. Fritz Kahl, Presidio County, Marfa, and the local soaring club said yes in April of 1968. They received the approval of the SSA Board of Directors at the mid-summer Board meeting in Elmira.

SECOND CONTEST DAY

Big John Brittingham was talking earnestly to Alex Aldott near the open hangar door. Alex Aldott is the most celebrated photographer in soaring and he is also a pilot of note. In July 1964 at the Marfa record camp he flew the Prue Super of Dr. Wylie Mullen 465 miles, landing near Guymon, Oklahoma. This was the Marfa distance record until the 27th of June 1969.

He holds three Hungarian soaring records: "You have to make Hungarian records over here because there you are running out of country after 500 kilometers."

"Are you going to do any flying here this year?" John Brittingham asked him.

"No, I'm just here with my wife, Dita, for the photography," replied Mr. Aldott.

There was a pause.

"I feel like hell today," said Big John.

"Maybe it's the water in Marfa," said Alex Aldott very solicitously. "I've been feeling . . ."

"No . . . too much booze and too little sleep. Water never bothers me. I chewed and swallowed tobacco all around the course yesterday. No bugs in my stomach could ever survive that."

The assignment for the day was a speed task: Marfa to Pecos to Van Horn and back to Marfa—238.5 miles.

The weather was expected to be similar to yesterday because the air mass had not changed. "It was not real good yesterday, it won't be real good today," said Dave Owens, the meteorologist.

* * *

Best flight of the day—Wally Scott in Rudy Mozer's AS-W 12, putting him into the overall contest lead.

Wally Scott was halfway to Balmorhea before he found his first really good lift. He only got 10,500 feet over the rough hills and from there he made a straight glide to the lift area of Balmorhea, where he said there is almost always a thermal. This time he did not find one and wasted 10 minutes looking around for lift, trying to get high before going on to Pecos. Altitude was difficult to come by. When he looked up, he saw the late starters who had gone through the gate 15 or 20 minutes after he had. They were still above him at Pecos.

"So I decided to fly MacCready. The speed ring called for speeds of 95 mph. In the sink I went up to 100 and even 105 mph. Three thermals got me only five miles west of Pecos after short climbs. I could hear the fellows up ahead were having trouble, so I started using weaker lift, hanging on until it got down below 300 fpm, and going up to 10,500 or 11,000 feet. I spent two hours on that second leg, but I had no bad scrapes.

Joe Lincoln, the author of this year's Nationals coverage, is justifiably well known for both his writing and his flying. To bring you the details of the 1969 contest as accurately and vividly as possible, Joe went to Marfa armed with both his Cessna 180 (which he generously loaned out as a towplane) and a professional photographer (Allen A. Dutton). We shudder to think what this account cost the author in time and dollars. Thanks, Joe.

We also wish to express our appreciation to Alex Aldott, who likewise spent a great deal of time and money while photographing the new sailplanes on hand as only he can do it. Soaring—both the magazine and the movement—obviously owes people like Joe Lincoln and Alex Aldott a great debt of gratitude.

"I made a run on the second turn at Van Horn while 7800 feet high. When I was ready to take my turn pictures, I heard the audio and looked at it. I was going up four meters. While circling up, I took my photos and worked on up and took two more. The thermal weakened at 13,500 feet. I headed well to the right of course to compensate for the wind, but even so I drifted toward Mount Livermore.

"There was a real good cumulus cloud at Mount Livermore that dissipated about ten minutes before I got to it.

"I only gained 3 or 4000 feet after Van Horn. I was working in shear or gusts from 9700 feet to 11,000. Then I came on home. I had 1000 feet too much. I flew MacCready on the third leg, with speeds between 80 and 100 mph. I was on redline going through the finish gate."

* * *

John Brittingham went through the start gate later than most competitors.

"There wasn't no gliders around to look at," the Yale man joked.

John Brittingham Dutton

John thermaled his Cirrus and ran north, but his thermals weakened at Balmorhea Lake. It was here that he caught sight of the first ships in the distance. He caught up with them at Pecos. From Pecos he began fighting his way upwind and found weak thermals and heavy sink. By the time he got to Kent he was down to 1000 feet.

"Kent was that horrible sink-hole that was shooting them out of the sky like flies," said Mrs. Brittingham.

He saw a dust devil on the end of a ridge. "I didn't have the guts to fly straight to it in the lee of the ridge." But on the way to it he found a good thermal which took him back up to 12,000 feet. Then he continued working toward Van Horn.

"I never got in quite as bad shape again. I got several thermals that ran 800 to 1000 fpm. That was

the strongest part of the day, and it was lucky for me since I was on the windward leg.

"I made the second turn at 10,000 feet. I was still catchin' a lot of gliders . . . then, comin' home, just driftin' with the wind, usin' a little 5 or 600-fpm stuff an' pickin' up a couple thousand feet for insurance—then I just dove for the airport.'

Brittingham finished a strong second for the day, the only pilot to score in the 900's. As a result, the rancher from Ramah, Colorado, moved into second place in the cumulative standings, 131 points behind Scott.

* * *

Dick Johnson was exhausted. He was almost down on the sunny, windward side of the Apache Mountains. He got a save there in 1967, but this time his variometer was pegged on the bottom. Was he on the wrong side of a wave? In desperation he turned east to the lee of the Apache Mountains where in logic there should have been sink. At high speed he flew his modified HP-13 toward a short airstrip on a ranch and called Alice Johnson: "If you don't hear from me in one minute, I'll be down east of the Apache Mountains." Instead of going down he found a weak choppy thermal. Gradually it strengthened and took him back up to 12,000 feet.

"After Van Horn I couldn't do anything wrong. It was easy flying the rest of the way home." His speed of 46.2 mph moved the seven-time U.S. National Champion from 23rd place to 17th overall.

* * *

Dick Schreder was not so lucky on the difficult second leg. Nobody who has not experienced it recently can appreciate the grinding frustration of fighting a headwind in weak thermals. Dick thermaled and ran, thermaled and ran, for two hours without making any substantial gain. He could never reach the strong thermals up ahead, which were tantalizingly indicated by dust devils. He was in the most difficult area during a weak period and could not get over 8000 feet high, where some of his competitors had been able to climb up to 11-12,000 feet and reach farther west where the lift strengthened. Dick Schreder fought it out until the day collapsed, then the HP-15 went down without ever getting to the stronger lift that was out west of Kent. The man who had finished second at Marfa in '67 was now down in 68th place.

* * *

Ben Greene was flying a new Kestrel just three weeks old, and his luck was much better than on the first day.

"I had a good ride—average. I actually expected stronger winds than we had. I got in a monstrous gaggle of sailplanes early in the second leg. A gaggle tends to restrict everyone's performance to the lowest common denominator, as Paul Bikle says. I agree. After working there awhile, I discovered it was flyable alone and I pushed out.

"I joined Wodl and A. J. Smith, the individualists. We worked two thermals together. I saw Dick Johnson far below. He was in the lee of the Apache Mountains. It must be when he found the lift there." The rest of his trip home was easy.

Greene tied Ross Briegleb (Diamant 16.5) for 3rd place for the day, Ross and Ben being the only other two pilots besides Scott and Brittingham to break 50 mph. Nonetheless Ben was still down in 38th overall, with a lot of ground to make up.

* * *

Mike Greenwald (Cirrus) made it through the finish gate 25 seconds before it closed at 9:00 p.m. He started his final glide five miles north of Valentine.

"It wasn't by choice. I didn't intend it to be my final glide. I made a couple of turns and gained 50 fpm, but I kept watching my wristwatch and knew I didn't have time to stay. I hit some zero sink on the way home. There was a quartering headwind.

"My glide calculator said I was about 100 feet below what I needed to make it, but I had no choice. Time was gone. I hit just enough zero sink to take me in.

"I was below some of the cactus and yucca bushes and was watching them go by the wings. Then I hit the very end of the runway. I was all through flying. The stick was clear back in my gut when I touched down. I rolled the last 200 feet across the finish line, 25 seconds before it closed.

"People were cheering and I heard it. Until I hit the ground, nobody, including me, knew if I was going to make it."

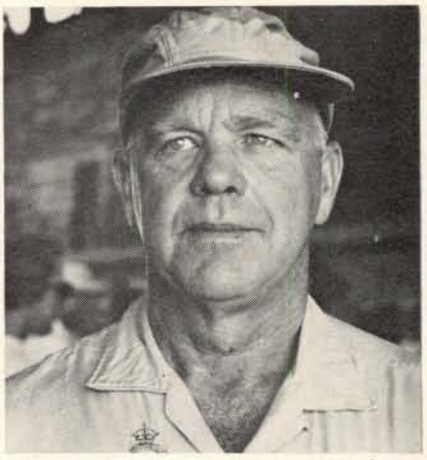
* * *

George Moffat, the first-day leader, had finished 13th for the second day and was now in 3rd place overall. No real trends had been established yet, except that Scott and the AS-W 12 were going to be tougher than anticipated and that there were an awful lot of good pilots around who seemed capable of winning.

PILOT	MPH	POINTS
Scott, AS-W 12	58.3	1000
Brittingham, Cirrus	54.8	940
R. Briegleb, Diamant	50.3	863
Greene, Kestrel	50.3	863
Allemann, Libelle	49.3	846
Mears, Libelle	48.8	837
Smith, Sisu 1A	48.7	835
Mullen, Cirrus	48.4	830
Robertson, Phoebus	48.1	825
Ryan, Phoebus	47.9	821

☆ THE CAST ☆

Paul Bikle, Pilot



Dutton

Short, born with a cigar in his mouth, hair thinning to the point where the top of his head approaches luminosity, competitive, chunky, generous but independent, determined—with a marvelously infectious laugh that seems to bring youth and joy into a whole room—the third American Diamond pilot, seventh in the world, a former president of the Soaring Society of America, a winner of the Lilienthal Medal for setting two world soaring altitude records in a single flight.

He started gliding in Waco primaries in college. In Detroit between 1935 and 1939 he logged his time in the air by seconds. Some 218 flights gave him a total of two hours and 22 minutes. The primaries were rebuilt each weekend from crack-ups they had suffered on weekdays.

In 1938 he went to Elmira as a crew. It was his first trip there and he saw his first sailplanes. Then came an eight-year break from 1939 to 1947. In 1947 Colonel Floyd Sweet brought an LK to Dayton. In time the Soaring Society of Dayton was formed. Paul Bikle got his C pin in 1947. He flew a TG-3 500 hours in two years. He got his Silver badge in Dayton, then moved to California in 1951. In March of 1952 he bought his 1-23 and in a period of two months went from a Silver badge up to the full Diamond.

"I'm flying an HP-14 now. It's a good average sailplane, sort of what I wanted in a ship. Its performance is fair. Like the other Schreder ships, most of the performance is in Schreder, not in his ships. You can see this from what has happened to the ships he has turned loose. But I like my ship—like the old 1-23. It's easy to fly and easy to land—good approach control. My kids are flying it. I'd just as soon turn them loose in it as I would in a 1-26."

"What are your goals?" I asked him.

"I always looked at soaring a little different from you. It's sort of a matter of testing myself against the weather. And I enjoy cross-country soaring as much as contest flying.

"Now I'm getting older. It's a yardstick on aging. How do I compare with last year? Two years from now I'm going to retire. We are planning to go to Europe, South Africa, Australia, and New Zealand. The idea is to see old friends I have met in soaring. I will talk about it and soar with them. Maybe after that I'll be fed up with it and go back to work."

"What do you think of record flying?"

"I never got any sense of achievement out of it. Even the altitude flight was just a happenstance. I think the biggest sense of achievement comes when you go five miles farther than somebody else when you are out 300 miles. I don't specially like speed triangles. If I come right back where I started from, I don't feel like I've been any place."

"What do you think of the new exotic sailplanes?" I asked.

"You mean fiberglass?"

"Yes."

"You must realize that they're no longer exotic. It has become a standard material. Our own Schweizers are very good. They're well adapted for club and commercial operations, but by their own choice Schweizer has let a segment of the American market go."

Dick Schreder's skinny-winged HP-15, with the contest site—Marfa's Presidio County Airport—in the background. Aldott

"What do you think of the way soaring is going in our country?"

"A lot of different people are interested in soaring now for a lot of different reasons. This is all good as long as they find satisfaction in it. It's just too bad that different segments of the soaring population feel they have to criticize each other. You have been in soaring long enough to see it change. Soaring has become far more diverse than it was back in 1956. This is not bad—it's just different."

Paul Bikle is a man who commands much admiration. A graphic opinion was expressed by Red Wright: "Bikle's the greatest guy in the world. If you need a good clear opinion on something, technical or administrative as far as soaring is concerned, you can go to him and you can get a good unbiased opinion without any equivocation whatsoever, and you can bet your bottom dollar it will be right. We lean on Paul Bikle a lot."

THIRD CONTEST DAY

At 11:00 a.m. on the morning of June 26th, there was a great pounding, hammering, and the sound of a Skil saw in the hangar. In the open tunnel that led out to the camping area there was a great box under construction. It was 10 or 11 feet long, 4 feet wide, and perhaps 5½ feet high.

"What's it going to be?" I asked.

"That," said Elemer Katinszky in his gentle accent, "is a cage for the vedderman."

° ° °

I ran into Big John Brittingham in the men's room. He looked unusually serious, and his glance went from the mirror to the window.

"How's it going?" I asked him.

"I'm running scared now. I always said I'd quit when it wasn't fun any more. It's not fun now."

"What's the matter?"

"I don't like being this high. It'll prob'ly be all right after today."

"What do you mean?"

"I don't like being this high up in the standings."

"Oh," I answered, trying to be sympathetic. "It's a problem I never had."

Big John, who has gone unbeaten for three straight years in the 1-26 Nationals, was due to finish 31st that day, but would be in 3rd place overall and would continue to be in contention for the championship until the close of the contest.

The task was a speed dash from Marfa to Van Horn and return, 155 miles. The weather forecast called for dry waves on the east side of the higher ridges. Isolated thunder-

storms were possible, but the meteorologist did not anticipate that the pilots would have to fly over any wet ground for the day's task. He estimated that sustaining thermals would begin at 1:30 in the afternoon, with maximum thermal activity at 5:00 p.m. The winds would have the characteristic early morning calm, with a windy afternoon when the inversion was broken and the high-level winds began to mix with lower air.

The best flight of the day was again made by Wally Scott in his borrowed AS-W 12: 62.3 mph, stretching his overall contest lead to 212 points (over George Moffat, who had finished 3rd for the day to move into the runner-up position ahead of Brittingham, who in turn was leading long-time Libelle-driver Rudy Allemann and youthful old-timer Ross Briegleb, Briegleb having pushed his Diamant into 2nd place for the day). After they had both finished the task and had tied down their sailplanes, the two leaders, Wally Scott and George Moffat, were talking in the food concession.

"I heard A. J. was down low over the mountains, I think somewhere up near Mount Livermore," said Wally.

"Oh, he's likely playing one-upmanship. He was probably cruising over the mountains between 14,000 and 18,000 feet," George replied.

"He sounded pretty convincing."

A. J. Smith was flying the Sisu he has owned since 1963 and which suffered the crack-up at the Internationals in England. He went through the starting gate at 2:40 and got a good thermal at Marfa Municipal Airport which took him nearly up to 11,000 feet at 500 fpm. From there he cruised toward Mount Livermore at 65 knots.

The next 12 miles were all downhill, and things began looking more ominous by the minute. "Two miles south of Mount Livermore I was down to 7000 feet. The bottom of the valley there is 6500 feet, and I started working a ridge. This was the only place to get lift, but it was pretty stupid because there was no place to land. I've heard that nothing lives there but goats. I don't believe it. I don't think goats could live there. Nothing but gray and white rocks about the size of this hangar."

He was trapped against a vertical rock face two miles south of Mount Livermore. The rock face was sheer and, having no slope toward the wind, it made any lift that came up turbulent and full of unpredictable eddies. The only thing to do was to soar back and forth above the windward side of this cliff and pray for a thermal. A. J. slowly began to sink toward what looked like certain destruction at the bottom of the cliff. When he had gone down 200 feet below the top of the rock face, however, he got a thermal which carried him back up to the summit. But here the wind broke it off, and once again he began to sink toward the rocks. This happened a second time. Lift came from what he thought was a wind-shadow thermal, and while he was working this up, he thought his last chance to save himself and his sailplane would be to work a dished-out cup in the terrain which faced the westerly wind less than a mile farther north. The second thermal was broken off and vanished at the summit of his cliff. Again he sank . . .

A third try. The thermal that he found this time seemed a little stronger. It did not disappear when he got to the summit of the cliff, but allowed him to work up 1000 feet above the rocks, and from there he got back on course by going 10 miles west. From there he had good thermals all the way to the turn and back.

His hands were blistered from the strain of his flight on the cliff; his left shoulder was bruised from hitting the cameras. "I think we're just pushing too hard. We're getting too low."

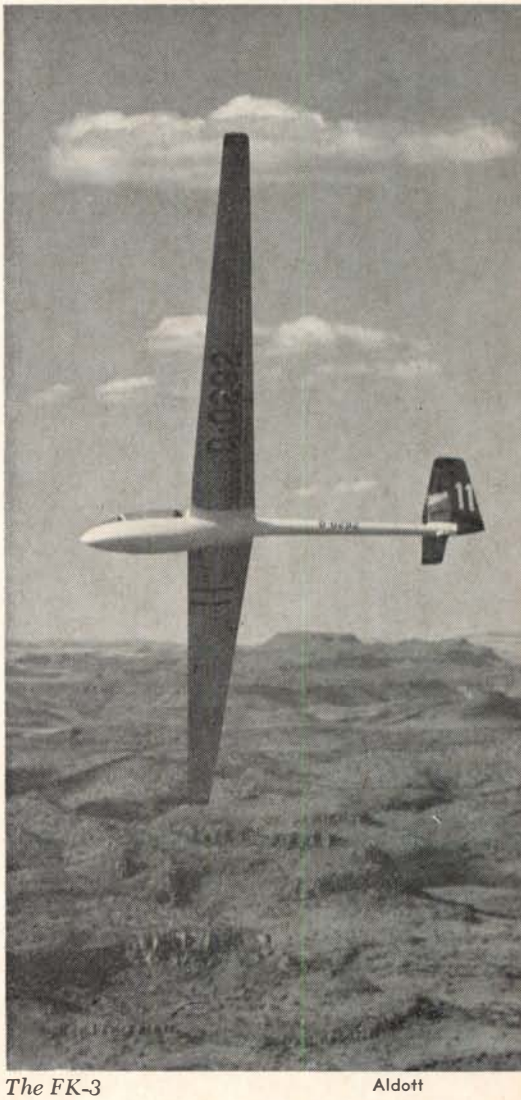
Smith's speed was 12 mph off the pace set by Scott, leaving the world champion in 24th place for the day's task and dropping him from 5th to 6th in the cumulative standings. Rounding out the top ten overall were: Jim Smiley (Libelle), George Squillario (Libelle), Harro Wodl (FK-3), and John Ryan (Phoebus C).

PILOT	MPH	POINTS
Scott, AS-W 12	62.3	1000
R. Briegleb, Diamant	61.6	989
Moffat, Cirrus B	60.5	971
Wroblewski, HP-14	56.5	908
Comte, Diamant	56.4	906
Mullen, Cirrus	55.7	895
Buck, Libelle	55.7	895
Smiley, Libelle	53.9	866
Newgard, Libelle	53.9	865
Wodl, FK-3	53.5	860

☐ THE SAILPLANES ☐

It had been five years since I had last been at a national soaring contest, but in that short half decade a revolution has been wrought in competition sailplanes. McCook in 1964 was not kind to the sailplanes with heavy wing loading. Dick Johnson won the contest with his Skylark 4, and experts might have debated as to whether he could also have won the contest with an aging 1-23D. At that time the Austria was a very modern ship, and Schweizer Aircraft had a pair of their earliest 2-32's in the competition.

In 1969 the world of competition sailplanes has gone clear around the circle and returned to where it was in the mid-30's, with Germany completely dominating the field. Fiberglass is the material which is used in the construction of these new aircraft. At Marfa there were no less than 47 German ships on the line (the vast majority of which



The FK-3 Aldott

were fiberglass); while neighboring Switzerland was represented by eight fiberglass Diamants. The FK-3, however, is an indication that the Germans have not completely given up on metal construction.

The only American ships that were there in numbers were the HP's which have emerged from the design genius and unbelievable energy of Dick Schreder. Even Len Niemi's mighty Sisu has passed the zenith of its glory. Furthermore, there were just two BG-12's at the contest and a single Schweizer 1-23D—interestingly, the sailplane with which Paul MacCready won the 1953 contest. A 1-23D at Marfa had all the rustic charm of a Model-A Ford at Indianapolis. And the only 2-32 there was rigged as a camera ship and used in thermal soaring photography by the Drew Associates.

It is curious to note that there was not a single Polish aircraft on hand, and both France and England came through with only one aircraft apiece.

Some of the pilot comments on the ships were both fascinating and instructive.

Rudy Allemann on the first of July: "After the final turnpoint, you looked out on a big gap, 40 or 50 miles of blue sky beyond a couple clouds near McCamey, to what looked like Fort Stockton and was actually Alpine. That's where the high-performance ships have an advantage over mine." Rudy Allemann was flying a Libelle, a ship with a maximum glide angle around 39 to 1. In the days when the RJ-5 was the most famous sailplane in the world, glide angles in the high 30's or up towards 40 seemed prodigious. In 1969, a top competing pilot could say with no pretense at all, "That is where the high-performance ships have an advantage." Thirty-nine to one is only medium-high performance against competition whose glide angles ran as high 44 to 1.

George Squillario on the Libelle: "It's better than me. Once in a while designers get lucky. This was a combination of circumstances which made an unusually good machine. The designer, Mr. Hanle, and his wife are soaring people. You can tell it. When you put out your hand to reach for something, it's there."

A. J. Smith: "Those Cirruses are good machines—good contest machines."

"What is your goal in soaring?" I asked George Moffat.

"To win the Internationals, what else? That's the only thing we do it for—to win . . ."

"How long do you plan to stay with your Cirrus?"

"Probably not very long. For top competition, a sailplane is not a very long-lived item. If they make something better, I'll get it."

Dick Johnson was one knowledgeable exception to the universal admiration for fiberglass and the practice of stepping from one fiberglass ship to another:

"A lot of these pilots are victims of brochuremanship. They look at those beautiful polars and wonderful promises and then buy a new ship. After they get it they don't mean to be deceitful when they talk to you, but they feel they have to believe what they read . . . and at the factory they might have test flown their new ship beside an old Ka-6?"

Super-exotic sailplanes — Wally Scott: "I would like to see the FAI lock in on a Standard Class sailplane. They should control the aspect ratio, the span, the frontal area, and all major areas of construction. Personally I do not like flaps, but I think it should have speed-limiting dive brakes. The way we're going, within five years you won't be able to get into an exotic ship unless you have $25,000 to $75,000 to spend."

Flat-out on the deck, Ben Greene's Kestrel screams past the speed-task finish line and starts its pull-up to pattern altitude. Dutton

In Marfa, 1969, the exotic ship to end all exotic ships was Pat Beatty's BJ-4. This variable-geometry sailplane has a fascinating background (much of which was described by the ship's creators in the Tuntland-award-winning paper published in the May 1968 issue of *Soaring*). Beatty, working with Fritz Johl (the J of BJ), started out making the BJ-1. The project was scrapped halfway through when Pat began reading about flaps. "We couldn't understand why no one had built a sailplane with external airfoil flaps." Their first completed aircraft was the BJ-2, built of wood. It used flaps that increased the wing area for thermaling and were much the same as those on the current BJ-4, but not quite as large. The BJ-3 was a development of the BJ-2 with a thinner wing, bigger flaps, and greater use of metal. The BJ-4 uses the BJ-3 wings on a new fuselage. It was started in the summer of 1968. Pat Beatty does the structural and mechanical design and building, while Fritz does the stressing and aerodynamic design. "Our roles are not clearly defined," Beatty says. "I interfere with him

on the stressing and aerodynamic side. He interferes with me on the mechanical side." Another BJ-4 is under construction with slight changes in the wing and profile. They hope to have it finished shortly after the beginning of the new year.

Dick Schreder on the HP-15: "I think the HP-15 will eventually be a very good ship. It has some bugs in it which did not show up until the contest. Then it's too late to do anything about it. At a contest you can correct only minor things. I'm very satisfied with its high-speed performance. At low speed, it is nose heavy and requires too much up elevator. I think at high speed it has the potential of being better than anything here. In its present state, I think it's one of the poorer sailplanes here.

"I flew one test with it at Bryan, Ohio, on the 21st of June. The next test was at Marfa on June 23rd. I plan to make new flaps and ailerons for the ship. I'm going to increase the width of both by about 20 percent to delay separation, and I'm going to move the wing forward an inch to an inch and a half to decrease the tail load in thermaling. That shouldn't have any appreciable effect on the high-speed performance. My present hands-off trim is 120 mph and that's too fast.

"I'm very happy with the HP-15 wing and its type of construction which permits light weight and high aspect ratio. Normally, if you go to an aspect ratio of over 30 to 1, the weight goes up pretty fiercely. The design speed of the HP-15 is 180 mph, but I limit it to 120 mph in rough air."

"Why do you think the Germans have almost completely gone over to fiberglass?" I asked him.

"Whenever you talk to Germans about metal, they say, 'Well, we don't have anybody who can work in it.' I think it's a state of their minds. I think repairs can be made faster and cheaper in metal honeycomb than in fiberglass, but *conventional* metal construction cannot compete with glass ship."

"One exception to the rule on the German ships in this contest is Harro Wodl's FK-3. It has metal wings. Do you think this has any significance for the future in German sailplane manufacture?" I asked.

"Yes, I think the Germans will see the light on metal without being pushed. They've shown tremendous interest in the HP-15. If a wing like this were to be conventionally built of metal, it would have to be twice as heavy as it is. If it were fiberglass, it would have to be nearly solid."

"Do you expect a big future for your new HP-15?"

"I don't know if the HP-15 will really ever be accepted."

"What do you anticipate will happen in Open Class sailplanes?"

"For Open Class I think the spans will get greater. It's really the only way to go. Also I think this will stimulate interest in the Standard Class. The CIVV has removed the restriction against retractable wheels. They now accept flaps as a dive brake, which means you can also use them for thermaling and landing.

"I think Open Class ships will price and size themselves out of business. You know, your friends all disappear when it's time to assemble or disassemble your sailplane. Some of these new ships have such extreme flexibility in their wings that people have to carry out the tips. You can imagine what would happen to a ship like that in a hard cross-country landing."

"What is your impression of the new fiberglass sailplanes?"

"I think they are very good from a performance standpoint. They're tops at this contest."

"Do you see any drawbacks in them?" I asked.

"Many of them have had flutter problems. Providing adequate wing stiffness has emerged as the primary design consideration. Now, the trend toward higher aspect ratio puts fiberglass ships at a weight disadvantage."

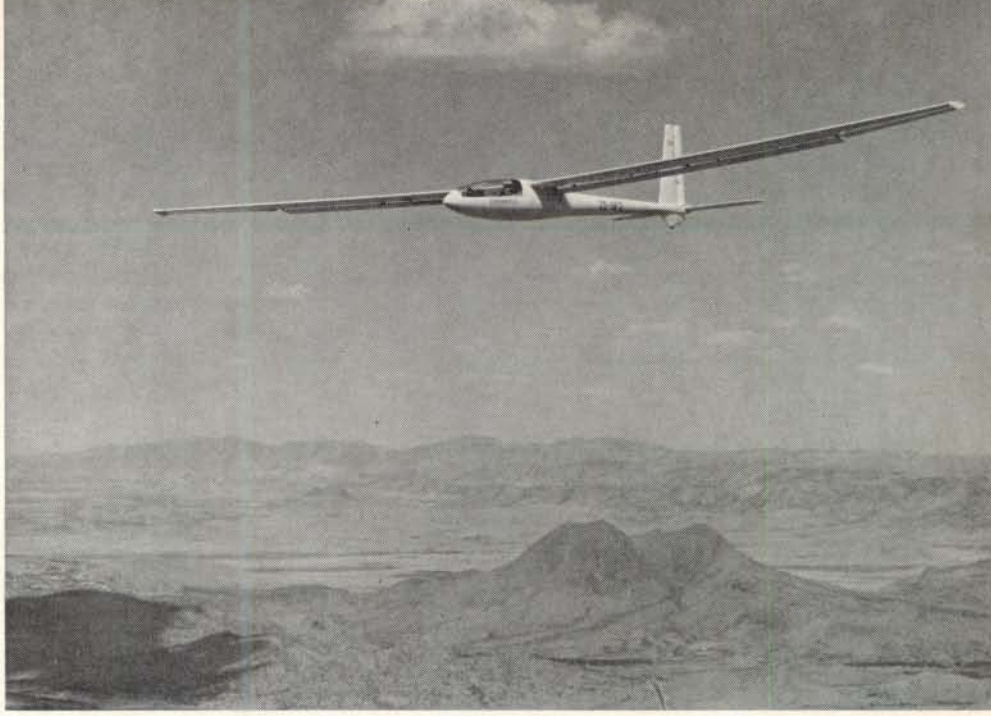
"What do you think will, or should, happen in the future for American competition-sailplane manufacture?"

"I think the SSA or somebody ought to encourage the production of American high-performance sailplanes. I really don't know how, but otherwise we will all be flying foreign ships. Right now the future looks pretty dim. Nobody's really doing much about it. The trouble is I'm the only one dabbling at it and I don't depend on it for a living, so there's no monetary incentive and not enough time to put into it. I still think that the best route to go for the future is metal . . ."

After thanking him for the interview, I sat and reflected.

I would like to suggest that Schweizer Aircraft Corporation and Dick Schreder should once again explore the feasibility of working together. Schweizer Aircraft has an international reputation for building safe, rugged, and dependable aircraft which last forever.

Schweizer Aircraft has a facility which has been established many years and which has grown both in competence and importance in soaring circles. The Schweizer brothers' main interest in life is soaring and making sailplanes. Schweizer Aircraft could thus gain a new area to cover in the field of soaring; they could put more effort into making sailplanes and less into making fins for the Grumman Gulfstreams, pressurized cabins for Pip-



The most easily identifiable flying object at Marfa was the South African BJ-4. Aldott

er Aircraft, and other things that have occupied them in the past.

Dick Schreder is a sailplane designer of international stature. He has produced designs which have won acceptance in competition soaring circles.

He has now introduced a revolutionary material which has a promise of being as saliently important in the future as a material for building sailplanes as fiberglass has become during the 1960's. Soaring is also Dick Schreder's main interest in life, but his business is not in aircraft manufacture, and he has no interest in manufacturing sailplanes.

It's hard to think of a more logical combination than Schreder and Schweizer.

Drag Parachutes

There is something basically grotesque about using a parachute for the bung of a sailplane. They even generate grotesque language. It is not called a *drag* chute, it struts through soaring circles as a *drogue* chute; and the pilot does not pop the chute or open it, he "deploys" it. There is no extra charge for the Wagnerian terminology.

I was interested to hear leading soaring figures object to the drag chute—pardon me, the drogue parachute—as a glide-slope and landing control device.

George Moffat: "In some ways the AS-W 12 is better than the Cirrus. I had one on order two years ago, but canceled it. There are no flaps, and there's too much danger of breaking the ship in an off-field landing. I have never seen a parachute which is really dependable, and it's like throwing away $10,000 every time it decides not to work. On one day Wally Scott threw away 3000 feet to land at an airport. That's 60 points. Very few contests are won by as much as 60 points. What if that should happen several times?"

Red Wright on the AS-W 12: "That thing's terrific. It may not be the best all-around aircraft, but for distance flying and penetration it can do it. It's got some drawbacks —they sacrificed a convenient landing characteristic. It's got no dive brakes. It's got a tail chute to stop you, and if that fails, you'd better have a lot of runway."

Dick Schreder: "I wouldn't touch a parachute on a sailplane with a 10-foot pole. It's highly unreliable. Even if it works 999 out of 1000, the time it doesn't gives you real problems."

FOURTH CONTEST DAY

A group of three men sat at one of the tables in the pilots' meeting room, studying a set of air charts.

"No . . . off in this area southeast of Dallas all you have is pine country—pine and marsh," one of the men said to Rene Comte of Switzerland.

"That's good. I have business with lumber at home," said Rene Comte.

"Yes, but the lift is weak," explained the second man to his pilot.

"And no place to land," said the first man, who was getting worried that their guest was going to fly that way.

"But there must be a little field here and there," said Mr. Comte, thinking of the fields of Europe.

"Nothing," said the first man pointing at the air chart. "I flew once 150 miles from here to here without seeing a place to land."

"You're a man of courage," said Monsieur Comte with dignity.

"I didn't know it was that way when I took off," the first man explained.

"That country encourages you to stay up," said a bystander.

Dutton

On the morning of June 27th, Marshall Claybourn announced that the task was going to be free distance. The starting gate was going to open at noon and would not close. If any pilot exceeded a flight of 250 miles, the next day would be given over to rest. If 500 miles should be exceeded, there would be two days of rest.

Dave Owens told the pilots that the air was moister than it had been. Thermals would begin at 1:30 p.m., and the afternoon winds were expected to be lighter than they had been. He said there would be rain and wet ground in Oklahoma, southeastern Texas, and New Mexico, but none in the Texas Panhandle. There would be cumulonimbus clouds over most of Oklahoma, with scattered ones over the Texas Panhandle. Although he mentioned lighter winds and mushy air, he spoke of better thermals because they would not be broken up by wind shear. The Marfa dewpoint front ran north by east, and he forecast another front running to the eastward.

* * *

The convection started more than an hour earlier than forecast, and when the last sailplane was launched, the sky was exploding with the heart-breaking cumulus clouds that have made west Texas a soaring paradise known the world over.

I walked back toward the hangar through the shimmering heat of the concrete apron, stepped through the gate of the cyclone fence, and stopped for a moment near the car of Red Wright, where he had the back open and was making a sandwich for himself with food he kept in a styrofoam ice chest. I looked up to the sky. In three different places within two miles of the field, there were gaggles of sailplanes working in lift. The outline of every sailplane would be a clear, hard black when they were against the white of the blazing clouds; then, in a sudden miraculous transformation, they would become pure white when they went out into the deep blue sky. There was a feeling of terrible loneliness and regret that

I was down where I was—an uncontrollable longing to be up there soaring.

° ° °

Wally Scott was towed aloft between 12:15 and 12:20, having realized that soarable weather was going to begin more than an hour earlier than forecast. He found lift of 500 fpm immediately after he released, and climbed up toward a large cumulus cloud. But he did not go clear on to cloud base until he was on the far side of Alpine. At that point he went up to the mist at 11,500 feet in a thermal that approached 700 fpm.

Red Wright speaking about one of his neighbors: "There are about eight months of soarable weather a year in Odessa. It is rare that Wally Scott ever misses a soaring day. He is probably the best trained soaring pilot in the United States. If nobody else is soaring and there's no towplane available, he'll get a car tow. He don't care if he only gets up to 500 feet on tow, he'll go on up. Today he'll still be flying when the sun goes down."

There was a large rain area southwest of Fort Stockton, and the clouds ended there. Going past them, Wally saw small clouds with bases 1000 feet higher than the big clouds at the base of a thunderstorm, and he noted with interest that he was able to climb 1000 feet above these little ones with Ben Greene and A. J. Smith.

"I had an early start, and at that moment there was no visible indication of lift up toward the north or the east."

He set out on what he thought might be a final glide toward McCamey, slowing down to 65 mph to conserve his altitude and hoping he might find some new lift down low in the distance. There was not a ripple until he was down to 5000 feet above sea level, 2500 feet above the ground.

Then he found half-meter lift. A cloud street was developing north toward Monahans. He had arrived at the lift a little too early, but he thought this weak lift might get him ahead to Crane and the Pecos River Bridge. While he was working it, he saw the cloud street that was now developing 50 miles behind him, but it was too far to go back—flying against the headwind. He worked light thermals which were south of Crane and finally made contact with a small cumulus cloud just north of the town. Presently the lift started exceeding 300 fpm, and good cumulus clouds began forming between Odessa and Midland. It looked best to go to the east edge of what seemed to be a developing cloud belt. He

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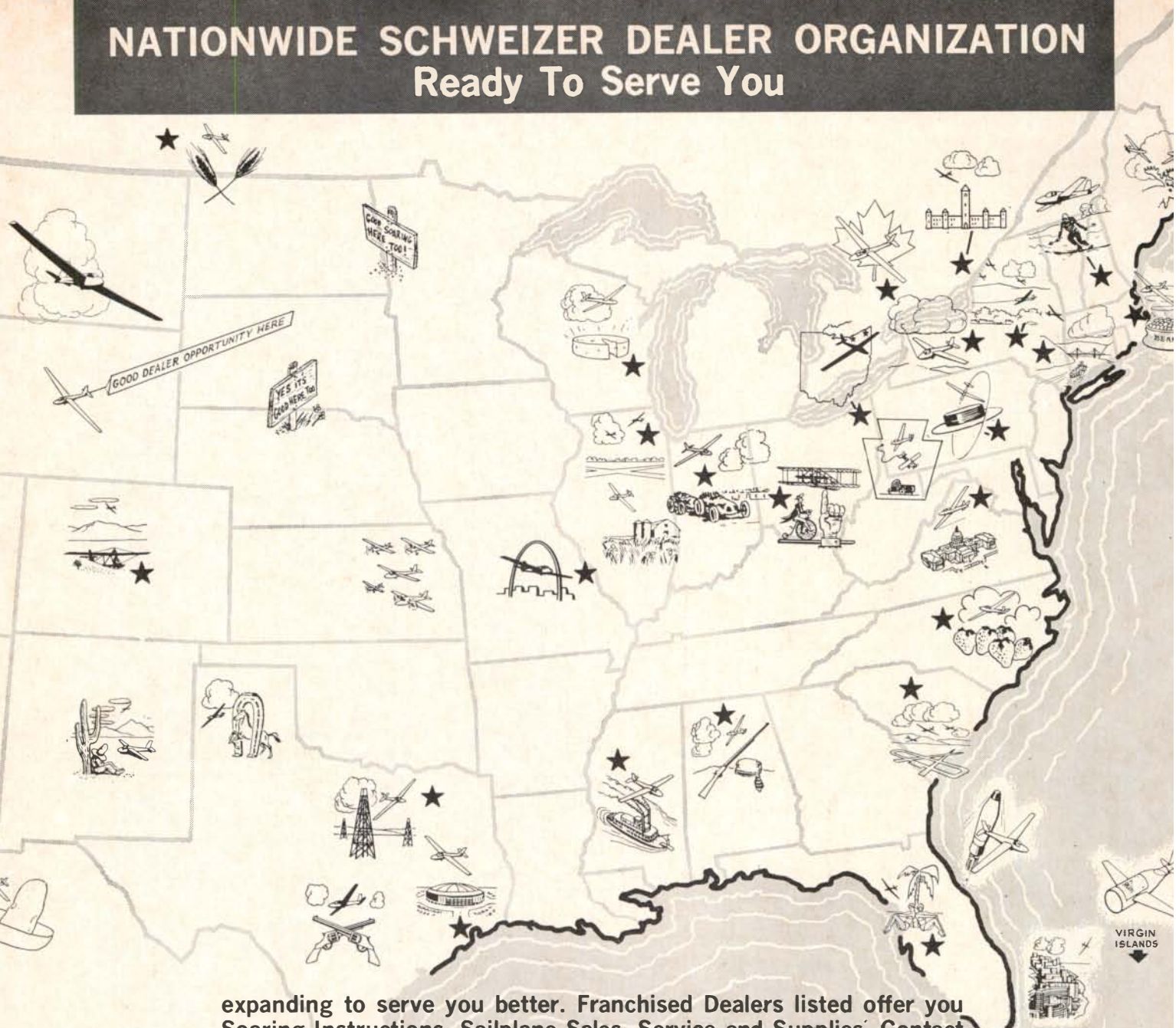

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Valley Sailplanes
RR #1, Manotick, Ont., Can
Ph: 613 692-3622

Pioneer Soaring Center
RR 2, Tottenham, Ontario
Ph: 416 936-4367

Northern Ohio Soaring
Jefferson (Arpt), Ohio 44047
Ph: 216 576-4896

Torp Aero Service, Inc.
Monroe Cty Arpt. Bloomington, Ind. 47401
Ph: 812 825-2392

Soaring Society of Dayton
Box 581, Dayton, Ohio 45419
Ph: 513 299-1943

West Bend Flying Service
Box 409, West Bend (Arpt), Wisc. 53095
Ph: 414 334-5603

Mainline Aviation
Joliet (Arpt), Ill. 60435
Ph: 815 725-1635

Emrich Flying Service
Greenwood (Mun. Arpt.). Miss. 38930
Ph: 601 453-5811

Sugarbush – South
c/o Young & Isherwood, Penthany Bldg.
Christiansted, St. Croix, V.I. 00820

Schweizer Aircraft Corp.
15 Airport Road, Elmira, N.Y. 14902
Ph: 607 739-3821

was getting near the area where the front was forecast to be, and in his mind was the contest pilot's dream of cruising hour after hour at 100 mph under the leading edge of a cold front.

He had lost radio contact with Wally, Jr., his crewchief, and now radioed a communications center in Odessa to call his wife and have her tell young Wally to go toward Wichita Falls. He thought the cold front would be there by the time he arrived and now he set course toward Snyder, northeast of Odessa. Presently the towering cumulus at Snyder began overdeveloping and throwing out false cirrus. At the bottom was cumulus mammatus. He began to feel himself slipping into a vice.

"Either I had to get with this, or stay ahead of it."

The air ahead of the overdeveloping offered hope. South and east it seemed to be dead. He decided to penetrate to the building edge. At Rotan he headed straight north and climbed up to cloud base. He continued pressing northward, but by then he was surrounded by rain. Trying to look ahead, he could not see any distinct cloud shadows on the far side of the storm. He went as far north as the omni at Guthrie and found nothing more. Dead end.

He decided to go back and turned south. He made the escape successfully, but it cost 45 minutes.

Wally Scott returned to the lift area on the edge of the thunderstorm, which seemed to be forming a squall line. Then he went east 15 miles, hoping for a continuous line, but the cloud base lowered to 7500 feet at the east edge of the squall shelf. Looking behind him, he saw there was nothing except an overhang. Now the air on all sides was dead.

He estimated that he could make a final glide to about Munday and land at Leffler Airport. Figuring that others were going in the same direction, he thought they could not go very much farther. His final glide was calculated with great precision, and at the end of it he found himself dodging radio antennae. Rather than being in a cold front as forecast, he concluded that he had been flying on the east side of a dewpoint convergence zone. He landed at 5:56 in the afternoon, having achieved a straight-line distance of 335 miles.

Thus ended the travail of one of the truly great soaring pilots, now flying at the peak of his form.

* * *

Rudy Allemann was towed aloft at 12:30, which was the earliest he thought he could keep the Libelle up. Cloud base over Marfa was at 11,000 feet, and he climbed up within 500 feet of it before making a high-speed run toward Alpine; then he climbed again and went on toward Fort Stockton. At Fort Stockton he came to the big cumulonimbus cloud, which was to be one of the major forks in the road during the 1969 contest. This thunderstorm was dropping a heavy shaft of rain; false cirrus was blowing off the top. He had to make the decision whether to go right under the tiny cumulus clouds, or left into clear air. Which way?

He decided on turning left. The air was dead. At first he missed seeing the very small cumulus clouds which were behind him on the left. After gliding for a time in dead air, he wondered if he should turn and go back to the cumulonimbus cloud. Then, looking around, he saw tiny cumulus clouds developing off to the west. He turned left 120 degrees and cruised through dead air toward these tiny cumulus flowers. Luckily he still had safe altitude and was able to glide to the bubbling air that was evidently a shear line. He worked up under two small cumulus clouds after seeing them rapidly fill up with sailplanes.

The Libelles of Bud Mears and Graham Thomson were out ahead of him, having gained in the race as a result of his delay in seeing the cumulus clouds developing in the west.

Having climbed in the new, unstable air, he turned north under a developing cloud street and ran north with many others. This cloud street gradually became wider and wider until it filled in the whole area between him and the build-ups that marked the western edge of the dewpoint front. Allemann stayed one cloud west of the big build-ups to forestall possible trouble in case of shading from false cirrus. There were downdrafts across Kermit and Andrews, Texas, but the cumulus clouds were still lining up in streets.

"I would pick a street and run it, then look for another and run it. As long as this was going on, I wasn't too unhappy that I wasn't out in front. I heard John Brittingham say he was in lightning.

Blue spots began to show between him and the big mass of cloud. At last he came to the end of his cloud streets and had to make a decision. Should he go on straight and glide out his altitude, or cross over a channel of clear air to the main, towering cloud mass? He decided to turn east. Was it a front? In any case, huge overdeveloped cumulonimbus clouds were above Shamrock. He heard voices from sailplanes that were going down underneath it. He stayed under his last cumulus cloud of the street and climbed just as high as possible before starting across the blue void.

"I heard Graham Thomson radio: 'I'm down to 1000 feet.' " And hearing this, he radioed to Helen Thomson, "Graham is going down at. . . ."

"Negative, negative. I'm just down to 1000 feet," Graham replied.

At 9800 feet Rudy couldn't squeeze out another foot of altitude and he set course east toward the big mass. When he was down to 6000 feet, he saw a wall of dust under the cumulonimbus cloud. He thought there might be lift there, but he wanted enough altitude in case he got let down.

Beyond Shamrock he found his first new lift, 200 fpm. As he flew northward, the lift ran out and he turned back to use it up to the top. He finally got back to 7000 feet and flew northward to an enormous cloud up ahead. Presently he came under a "pie plate" which was 11,000 feet above sea level. There was a mighty anvil at 40,000 feet and there were cumulus under this pie plate at 9000. He was 2000 feet underneath the small cumulus, but he cruised easily northward under the pie plate, flying straight and gradually increasing altitude until he had 11,000 feet. He worked northward around the overdeveloping cloud as the cloud was also blowing north. "I ran off my maps about this time."

From 11,000 feet he left the cloud which had been so good to him and glided 20 miles through clear air to the north. Ahead was another cumulonimbus cloud. He thought that John Brittingham, Bud Mears, and Graham Thomson were there. Across the hole he

found a good bit of zero sink and when he got in range of the new cloud, he flew under another pie plate which gave him 300-fpm lift. He advanced his speed up to 85 mph in order to run this lift.

"It was an eerie feeling looking up at that cloud and knowing you were going to have to land very soon and might be in a hell of a windstorm, but it was a magnificent cloud. I think it went up to 40,000 feet. Have you seen Mount Rainier in the evening? This was three times that big. It was gray and black at the bottom. Above this came a sudden transition to a white crown on top, like a perfect rosette. It was like a great white queen on a chessboard, looking down on the black pawns far below.

At 7000 feet he pulled his dive brakes open in order to stay legal and land before dark. He could have gone 30 miles more without pulling the brakes, and another 100 miles by working cloud lift.

Even so he had gone 520 miles (to Mooreland, Okla.), advancing to second place overall, only four points behind the unlucky leader, Wally Scott.

o o o

Dick Johnson was scheduled to take off at 12:32.

"I did everything just right for the first hour. The forecast was for sustaining thermals to begin at 1:30. They actually started much earlier, so I upped my take-off time to 12:02. I was in the second take-off line. I cut the cord early in a good thermal a mile short of the regular release area and circled up at 700 fpm. The people in the release area were only going up 300 fpm. I circled clear up to 11,000 feet, so I was ahead of everybody there for a while. I was congratulating myself on being at the right place at the right time, but that didn't last long.

"At Alpine I joined the Cirruses of Moffat and Derujinsky. They followed the instability line to a point 5 or 10 miles west of Fort Stockton, and we came to a small thunderstorm. It was dropping a half-mile column of rain, and the ground near the rain was white from hail. I had to decide which way to go around this storm and with Moffat I decided to go right. My goal was to run downwind to the Fort Worth area. Beyond the thunderstorm there was no more cloud except a tongue of wispy cumulus going north. I had to decide whether to head north or east. I decided to go diagonally and set a course northeastward.

Rudy Allemann's Libelle has an affinity for storm clouds. Aldott

"The only clouds ahead were low and dead-looking. I was still high from the lift in the thunderstorm. The flatlands ahead had that perilous look, like there's not much doing out there.

"I was with Ben Greene, and we glided along together from 11,000 feet. We went down and down, clear to 6000 feet before hitting another bump. This was only 3500 feet above terrain.

"Later on I got even lower and worked several thermals between 1500 and 2500 feet above the ground. I was able to keep 500 feet above Ben Greene, and we slowly worked up toward Odessa. There was an hour of very slow going, then came rather good lift only 10 miles southwest of Odessa.

"From there on, things really seemed to be clicking. The wind was holding as forecast from the southwest, judging by the cloud shadows. It was easy to climb to 8000 feet in lift running from 500 to 700 fpm.

"Then I was faced with another choice: should I take a quartering cross tailwind to the front by going north, or a quartering tailwind from the other side and go toward Fort Worth? I decided on turning right to miss the front, guessing that others would be stopped as they came up to it. I reasoned that they would fly out tongues of cloud leading right up to the front and then hit a blank wall. They would be trapped by a stiff headwind if they tried to return. This trap was merciless. It required either a landing or an irreparable loss of time. . .

"So I flew on and on until I landed at seven minutes after seven, thinking I had done everything beautifully and having visions of being one of those at the very top. Unfortunately it didn't work out that way."

He made 331.5 miles. It was the 50th best flight of the day and dropped him from 21st place to 25th.

o o o

Nearing the end of the free distance day, A. J. Smith was getting low, half a mile west of Delhi, Oklahoma, 417.5 miles out from Marfa (15th place for the day). He could not go any farther and made his approach to a newly plowed field of red Oklahoma clay. Landing into a heavy wind, he rolled only three feet. Then, gesturing frantically, he was able to get a farmer to bring his tractor out onto the field. He quickly tied the tow hook of his Sisu to the tractor with a rope, still heading his ship into the wind. Then he immediately got back into his sailplane, put down the canopy, and awaited the coming assault.

(continued on page 24)

36th U. S. NATIONAL SOARING CHAMPIONSHIPS, MARFA, TEXA

FINAL STANDING	PILOT	SAILPLANE	JUNE 24 262.5-MI. TRIANGLE SPEED MPH	JUNE 24 DAILY SCORE	JUNE 25 238.5-MI. TRIANGLE SPEED MPH	JUNE 25 DAILY SCORE	JUNE 25 CUM. SCORE	JUNE 26 155-MI. G & R SPEED MPH	JUNE 26 DAILY SCORE	JUNE 26 CUM. SCORE	DISTANCE MILES	JUN FREE D DAI SCO
1.	Moffat	Cirrus B	64.8	1000 (1)	46.6	798 (13)	1798 (3)	60.5	971 (3)	2769 (2)	374.0	715 (
2.	Scott	AS-W 12	63.6	981 (2)	58.3	1000 (1)	1981 (1)	62.3	1000 (1)	2981 (1)	335.0	641 (
3.	Brittingham	Cirrus	59.0	910 (6)	54.8	940 (2)	1850 (2)	49.2	790 (31)	2640 (3)	510.0	975
4.	Allemann	Libelle	60.9	939 (3)	49.3	846 (5)	1785 (4)	52.3	840 (17)	2625 (4)	519.5	993
5.	Mears	Libelle	52.7	812 (13)	48.8	837 (6)	1649 (10)	46.9	754 (36)	2403 (13)	517.5	989
6.	Briegleb, R.	Diamant 16.5	48.2	743 (24)	50.3	863 (3)	1606 (11)	61.6	989 (2)	2595 (5)	402.0	769 (
7.	Smith	Sisu 1A	59.4	916 (5)	48.7	835 (7)	1751 (5)	50.3	807 (24)	2558 (6)	417.5	798 (
8.F	Wroblewski	HP-14	48.7	751 (21)	43.1	738 (30)	1489 (25)	56.5	908 (4)	2397 (14)	527.5	1009
9.	Semans	Phoebus C	48.5	748 (22)	45.0	771 (19)	1519 (20)	51.7	831 (20)	2350 (18)	488.0	933
10.F	Wodl	FK-3	54.7	844 (11)	44.0	754 (26)	1598 (12)	53.5	860 (10)	2458 (9)	331.5	634 (
11.	Conn	Cirrus	44.8	691 (35)	46.5	796 (14)	1487 (26)	49.5	795 (27)	2282 (25)	506.5	968
12.	Johnson	HP-13M	48.3	745 (23)	46.2	793 (16)	1538 (17)	50.1	805 (25)	2343 (21)	331.5	634 (
13.F	Jackson	BJ-4	59.7	920 (4)	42.9	735 (31)	1655 (8)	46.8	751 (38)	2406 (12)	343.0	656 (
14.	Meyer	HP-11A	45.7	705 (32)	44.6	764 (23)	1469 (28)	49.3	792 (29)	2261 (27)	474.5	907 (
15.F	Rowe	Diamant 16.5	51.0	786 (14)	45.0	772 (18)	1558 (14)	53.4	858 (11)	2416 (11)	359.0	686 (
16.	Byars	Kestrel	49.4	761 (18)	44.0	754 (26)	1515 (21)	48.0	772 (33)	2287 (24)	403.0	771 (
17.	Mullen	Cirrus	43.6	672 (41)	48.4	830 (8)	1502 (22)	55.7	895 (6)	2397 (14)	325.0	621 (
18.	Thomson	Libelle	58.5	902 (7)	44.9	770 (20)	1672 (6)	42.1	676 (52)	2348 (19)	415.0	793 (
19.	Greene	Kestrel	256.0*	390 (50)	50.3	863 (3)	1253 (38)	52.6	845 (15)	2098 (35)	344.5	659 (
20.	Beltz	SH-1	46.7	721 (26)	47.8	819 (11)	1540 (16)	50.3	808 (23)	2348 (19)	488.0	933
21.	Ryan	Phoebus C	50.2	773 (17)	47.9	821 (10)	1594 (13)	51.9	834 (19)	2428 (10)	295.5	565 (
22.	Robertson	Phoebus	46.3	713 (29)	48.1	825 (9)	1538 (17)	45.5	731 (43)	2269 (26)	332.5	636 (
23.	Smiley	Libelle	55.1	850 (10)	46.7	801 (12)	1651 (9)	53.9	866 (8)	2517 (7)	235.5	450 (
24.	Linke	Kestrel	49.2	759 (19)	44.8	769 (21)	1528 (19)	52.3	840 (17)	2368 (16)	343.0	656 (
25.	Bikle	T-6	43.8	675 (39)	42.0	720 (34)	1395 (33)	44.3	712 (47)	2107 (34)	481.5	921 (
26.	Squillario	Libelle	56.5	871 (8)	46.4	796 (14)	1667 (7)	49.8	800 (26)	2467 (8)	253.5	485 (
27.	Compton	Cirrus	44.9	693 (34)	44.4	762 (24)	1455 (29)	47.6	765 (35)	2220 (28)	318.0	608 (
28.	Crowell	Libelle	46.5	718 (27)	41.3	708 (36)	1426 (30)	46.8	751 (38)	2177 (31)	331.5	634 (
29.	Chase	Cirrus	50.9	785 (15)	41.4	709 (35)	1494 (24)	52.5	843 (16)	2337 (22)	366.0	700 (
30.F	Stouffs	*S. Libelle	46.1	711 (30)	37.2	637 (42)	1348 (34)	48.6	781 (32)	2129 (33)	369.0	706 (
31.	Enevoldson	*Phoebus A	44.8	691 (35)	46.0	789 (17)	1480 (27)	131.5*	339 (77)	1819 (44)	523.0	1000
32.	Derujinsky	Cirrus B	42.8	661 (42)	43.6	747 (29)	1408 (32)	46.0	740 (42)	2148 (32)	343.0	656 (
33.	Nees	Kestrel	55.2	851 (9)	40.6	697 (37)	1548 (15)	50.6	813 (21)	2361 (17)	382.5	731 (
34.	Griffith	Libelle	254.0*	387 (51)	42.7	732 (32)	1119 (42)	52.7	846 (14)	1965 (39)	339.5	649 (
35.F	Comte	Diamant 18	43.7	674 (40)	43.6	748 (28)	1422 (31)	56.4	906 (5)	2328 (23)	418.5	800 (
36.F	Mix	SH-1	40.2	621 (47)	34.2	586 (46)	1207 (40)	46.9	753 (37)	1960 (40)	366.0	700 (
37.	Buck	Libelle	54.2	836 (12)	113.0*	190 (76)	1026 (48)	55.7	895 (6)	1921 (42)	375.5	718 (
38.	Siebels	Libelle	50.4	778 (16)	125.0*	210 (70)	988 (50)	49.2	791 (30)	1779 (45)	356.5	682 (
39.	Hunter	Diamant 16.5	46.0	709 (31)	36.0	617 (44)	1326 (36)	39.3	631 (59)	1957 (41)	433.5	829 (
40.	Newgard	Libelle	248.0*	378 (52)	44.7	766 (22)	1144 (41)	53.9	865 (9)	2009 (38)	365.0	698 (
41.	Tresslar	Diamant 16.5	40.6	627 (46)	37.4	640 (40)	1267 (37)	47.7	766 (34)	2033 (37)	265.5	508 (
42.F	Heginbotham	SH-1	221.5*	338 (69)	40.1	688 (38)	1026 (48)	37.4	601 (66)	1627 (52)	442.0	845 (
43.	Mozer	AS-W 15	46.4	715 (28)	213.5*	358 (53)	1073 (44)	38.8	624 (61)	1697 (47)	411.0	786 (
44.	Katinszky	Libelle	44.1	680 (38)	161.0*	270 (61)	950 (54)	37.3	599 (67)	1549 (53)	325.0	621 (
45.	Schat	Phoebus	47.7	735 (25)	44.5	762 (24)	1497 (23)	42.6	685 (50)	2182 (30)	365.5	699 (
46.F	Mercier	*Edelweiss	45.3	698 (33)	227.0*	381 (51)	1079 (43)	38.3	615 (65)	1694 (48)	415.0	793 (
47.	Haber	Libelle	48.8	753 (20)	33.6	577 (48)	1330 (35)	53.4	858 (11)	2188 (29)	225.0	430 (
48.	Starr	1-23HM	248.0*	378 (52)	207.0*	347 (55)	725 (58)	41.7	671 (53)	1396 (57)	368.5	705 (
49.F	Jensen	Phoebus	248.0*	378 (52)	35.1	602 (45)	980 (53)	49.5	794 (28)	1774 (46)	295.5	565 (
50.	Drew	Drew 2	225.0*	343 (65)	42.2	723 (33)	1066 (45)	153.0*	395 (76)	1461 (54)	284.0	543 (
51.	Karlovich	*HP-12	248.0*	378 (52)	209.5*	351 (54)	729 (57)	44.7	718 (44)	1447 (55)	309.5	592 (
52.	Leffler	*Boomerang	208.5*	318 (73)	38.7	663 (39)	981 (52)	41.5	667 (55)	1648 (50)	343.0	656 (
53.	Royce	Diamant 16.5	203.5*	310 (74)	133.5*	224 (66)	534 (74)	46.1	741 (41)	1275 (64)	356.5	682 (
54.	Bagshaw	Libelle	229.0*	349 (64)	128.0*	215 (67)	564 (72)	40.2	645 (58)	1209 (68)	382.5	731 (
55.	Sprague	Diamant 16.5	141.5*	216 (79)	197.0*	330 (57)	546 (73)	39.1	628 (60)	1174 (70)	356.5	682 (
56.	Shannon	*Ka-6CRPE	229.5*	350 (63)	227.0*	381 (51)	731 (56)	34.8	559 (70)	1290 (62)	313.0	598 (
57.	Briegleb, K.	BG-12	232.0*	354 (62)	37.0	634 (43)	988 (50)	40.9	657 (56)	1645 (51)	359.0	686 (
58.	Ivans	Sisu 1A	248.0*	378 (52)	194.5*	326 (58)	704 (59)	44.5	715 (46)	1419 (56)	161.5	309 (
59.	Colton	Diamant 16.5	223.5*	341 (67)	111.5*	187 (77)	528 (75)	41.6	668 (54)	1196 (69)	247.5	473 (
60.	Sisley	C-100S	234.0*	357 (61)	128.0*	215 (67)	572 (71)	44.0	706 (48)	1278 (63)	359.0	686 (
61.	Holbrook	HP-13H	42.8	660 (43)	238.5*	400 (49)	1060 (46)	38.4	617 (63)	1677 (49)	304.0	581 (
62.	Ecklund	Dart 17R	221.5*	338 (69)	206.5*	346 (56)	684 (60)	40.3	648 (57)	1332 (60)	495.5	947
63.	Williams, G.	Cirrus	248.0*	378 (52)	128.0*	215 (67)	593 (66)	38.9	624 (61)	1217 (66)	304.0	581 (
64.	Byrd	BG-12	225.0*	343 (65)	192.0*	322 (59)	665 (61)	42.6	684 (51)	1349 (59)	356.5	682 (
65.	Schreder	HP-15	248.0*	378 (52)	119.0*	200 (72)	578 (68)	36.4	585 (68)	1163 (71)	339.5	649 (
66.	Snead	*Ka-6	223.0*	340 (68)	139.5*	234 (64)	574 (69)	33.7	542 (73)	1116 (73)	270.5	517 (
67.	Williams, J.	JH-1	44.4	685 (37)	124.0*	208 (71)	893 (55)	77.5*	200 (78)	1093 (74)	328.0	627 (
68.	Zauner	HP-13	256.5*	391 (49)	149.5*	251 (63)	642 (63)	38.4	617 (63)	1259 (65)	315.5	603 (
69.	Stauffer	HP-11	61.0*	93 (80)	100.0*	168 (79)	261 (81)	34.7	558 (72)	819 (77)	328.0	627 (
70.	Bierens	*Ka-6E	221.5*	338 (69)	153.5*	257 (62)	595 (65)	32.8	527 (74)	1122 (72)	366.0	700 (
71.	du Pont	HP-14	202.5*	309 (75)	117.5*	197 (74)	506 (76)	43.9	705 (49)	1211 (67)	346.0	662 (
72.	Oldershaw	O-3	248.0*	378 (52)	117.0*	196 (75)	574 (69)	44.7	718 (44)	1292 (61)	60.0	115 (
73.F	Fujikura	HP-11	189.5*	289 (77)	81.5*	137 (81)	426 (80)	34.8	559 (70)	985 (76)	202.5	387 (
74.	Bovenkerk	1-23	194.0*	296 (76)	118.5*	199 (73)	495 (78)	34.8	560 (69)	1055 (75)	282.5	540 (
75.	Steinhoff	Cirrus	23.5*	36 (81)	238.5*	400 (49)	436 (79)	24.5*	63 (80)	499 (82)	301.5	576 (
76.	Whigham	GW-2	216.0*	329 (72)	99.5*	167 (80)	496 (77)	23.0*	59 (81)	555 (81)	243.5	466 (
77.	Greenwald	Cirrus	41.6	642 (45)	34.1	584 (47)	1226 (39)	52.8	849 (13)	2075 (36)	335.0	641 (
78.F	Orsi	S. Cirrus	189.5*	289 (77)	192.0*	322 (59)	611 (64)	46.4	746 (40)	1357 (58)	196.5	376 (
79.	Klein	Libelle	261.0*	398 (48)	37.4	640 (40)	1038 (47)	50.5	811 (22)	1849 (43)	281.0	537 (
80.	Hutchinson	HP-14	17.5*	27 (82)	109.5*	184 (78)	211 (82)	29.6	476 (75)	687 (79)	76.0	145 (
81.	Talalas	*S. Austria	235.0*	338 (60)	136.0*	228 (65)	586 (67)	77.5*	200 (78)	786 (78)	DNC	0 (
82.	Slack	Cirrus	42.2	651 (44)	DNC	0 (82)	651 (62)	DNC	0 (82)	651 (80)	DNC	0 (
Total Task Miles Each Day			19,716.5		16,584.0			12,112.0			27,958.5	

F denotes foreign entrant.

Figures in parentheses indicate daily and cumulative standings.

*An asterisk before the name of a sailplane denotes an SSA-sanctioned Standard Class entrant; elsewhere an asterisk indicates distance (miles) flown instead of speed (mph), as a result

TABLE OF SCORES (BERTHA RYAN, SCORER)

NCE	JUNE 30 AREA DISTANCE			JULY 1 274.5-MI. TRIANGLE			JULY 2 AREA DISTANCE			JULY 3 344-MI. TRIANGLE		
CUM. SCORE	DISTANCE MILES	DAILY SCORE	CUM. SCORE	SPEED MPH	DAILY SCORE	CUM. SCORE	DISTANCE MILES	DAILY SCORE	CUM. SCORE	SPEED MPH	DAILY SCORE	CUM. SCORE
3484 (4)	482.0	1000 (1)	4484 (4)	61.0	929 (2)	5413 (3)	475.0	1000 (1)	6413 (1)	69.7	1000 (1)	7413
3622 (1)	428.0	888 (10)	4510 (2)	65.7	1000 (1)	5510 (1)	393.5	828 (10)	6338 (2)	68.5	983 (2)	7321
3615 (3)	421.5	874 (11)	4489 (3)	56.3	857 (11)	5346 (4)	400.0	842 (9)	6188 (4)	61.7	885 (11)	7073
3618 (2)	437.5	908 (8)	4526 (1)	60.6	922 (3)	5448 (2)	411.5	866 (4)	6314 (3)	52.2	749 (45)	7063
3392 (6)	475.0	985 (2)	4377 (5)	58.1	885 (7)	5262 (5)	401.0	844 (8)	6106 (5)	63.2	908 (8)	7014
3364 (7)	466.0	967 (5)	4331 (6)	58.1	885 (7)	5216 (6)	393.5	828 (10)	6044 (7)	65.6	942 (4)	6986
3356 (8)	447.5	928 (6)	4284 (7)	59.0	898 (5)	5182 (7)	413.5	871 (3)	6053 (6)	64.3	923 (6)	6976
3406 (5)	380.5	789 (50)	4195 (8)	48.8	743 (40)	4938 (8)	391.5	824 (23)	5762 (8)	59.8	859 (15)	6621
3283 (9)	400.0	830 (17)	4113 (9)	53.0	808 (21)	4921 (9)	392.5	826 (22)	5747 (9)	56.5	811 (28)	6558
3092 (16)	440.0	913 (7)	4005 (12)	53.4	813 (17)	4818 (13)	404.5	852 (7)	5670 (12)	61.1	877 (13)	6547
3250 (11)	395.5	821 (21)	4071 (11)	53.4	813 (17)	4884 (10)	393.5	828 (10)	5712 (10)	57.3	823 (26)	6535
2977 (25)	475.0	985 (2)	3962 (14)	52.7	802 (22)	4764 (15)	417.0	878 (2)	5642 (13)	61.2	878 (12)	6520
3062 (18)	399.0	828 (19)	3890 (19)	52.3	797 (23)	4687 (19)	379.5	799 (28)	5486 (20)	68.2	979 (3)	6465
3168 (12)	403.0	836 (14)	4004 (13)	54.9	836 (15)	4840 (11)	409.5	862 (5)	5702 (11)	53.0	761 (42)	6463
3102 (15)	395.5	821 (21)	3923 (17)	58.6	892 (6)	4815 (14)	352.0	741 (46)	5556 (16)	62.1	891 (9)	6447
3058 (19)	395.5	821 (21)	3879 (21)	57.5	875 (9)	4754 (17)	381.0	802 (26)	5556 (16)	61.8	887 (10)	6443
3018 (23)	402.0	834 (15)	3852 (23)	57.2	871 (10)	4723 (18)	405.0	853 (6)	5576 (15)	59.5	854 (17)	6430
3141 (13)	390.5	810 (44)	3951 (15)	53.2	810 (19)	4761 (16)	368.0	775 (31)	5536 (18)	58.6	841 (22)	6377
2757 (36)	475.0	985 (2)	3742 (29)	60.3	919 (4)	4661 (21)	366.5	772 (33)	5433 (22)	65.4	939 (5)	6372
3281 (10)	389.0	807 (45)	4088 (10)	48.9	745 (38)	4833 (12)	371.5	782 (30)	5615 (14)	51.4	738 (48)	6353
2993 (24)	395.5	821 (21)	3814 (25)	56.1	854 (12)	4668 (20)	391.5	824 (23)	5492 (19)	58.1	834 (24)	6326
2905 (28)	432.5	897 (9)	3802 (26)	53.1	809 (20)	4611 (24)	393.5	828 (10)	5439 (21)	59.1	848 (19)	6287
2967 (26)	381.0	790 (49)	3757 (28)	52.3	796 (25)	4553 (26)	393.5	828 (10)	5381 (24)	58.9	846 (20)	6227
3024 (22)	393.5	816 (29)	3840 (24)	50.8	774 (31)	4614 (23)	357.5	753 (40)	5367 (25)	56.4	810 (31)	6177
3028 (21)	411.5	854 (13)	3882 (20)	51.1	777 (30)	4659 (22)	360.5	759 (36)	5418 (23)	52.1	747 (46)	6165
2952 (27)	388.5	806 (46)	3758 (27)	49.7	757 (34)	4515 (27)	389.5	820 (25)	5335 (27)	56.5	811 (28)	6146
2828 (31)	380.5	789 (50)	3617 (34)	55.0	838 (14)	4455 (29)	393.5	828 (10)	5283 (29)	59.5	854 (17)	6137
2811 (33)	399.0	828 (19)	3639 (33)	54.9	836 (15)	4475 (28)	393.5	828 (10)	5303 (28)	56.7	813 (27)	6116
3037 (20)	393.5	816 (29)	3853 (22)	49.8	759 (33)	4611 (24)	355.5	748 (43)	5359 (26)	51.7	742 (47)	6101
2835 (30)	395.5	821 (21)	3656 (32)	43.4	661 (55)	4317 (32)	393.5	828 (10)	5145 (30)	58.1	834 (24)	5979
2819 (32)	413.0	857 (12)	3676 (31)	45.4	691 (46)	4367 (31)	345.0	726 (50)	5093 (32)	56.1	806 (33)	5899
2804 (34)	391.0	811 (43)	3615 (35)	49.7	756 (35)	4371 (30)	355.5	748 (43)	5119 (31)	52.7	757 (44)	5876
3092 (16)	393.5	816 (29)	3908 (18)	260.0*	379 (63)	4287 (33)	343.5	723 (51)	5010 (34)	59.7	857 (16)	5867
2614 (42)	393.5	816 (29)	3430 (40)	52.0	792 (26)	4222 (36)	359.0	756 (39)	4978 (35)	58.2	835 (23)	5813
3128 (14)	388.0	805 (47)	3933 (16)	81.5*	119 (77)	4052 (41)	393.5	828 (10)	4880 (39)	63.4	909 (7)	5789
2660 (39)	393.5	816 (29)	3476 (38)	51.8	789 (28)	4265 (34)	355.5	748 (43)	5013 (33)	53.5	768 (39)	5781
2639 (40)	316.0	656 (68)	3295 (42)	51.6	786 (29)	4081 (39)	393.5	828 (10)	4909 (37)	60.5	868 (14)	5777
2461 (47)	393.5	816 (29)	3277 (43)	55.9	851 (13)	4128 (38)	360.5	759 (37)	4887 (38)	58.7	843 (21)	5730
2786 (35)	350.0	726 (57)	3512 (36)	48.5	738 (41)	4250 (35)	320.0	674 (54)	4924 (36)	54.8	786 (35)	5710
2707 (38)	377.5	783 (52)	3490 (37)	42.4	646 (58)	4136 (37)	338.5	713 (53)	4849 (40)	50.4	724 (50)	5573
2541 (43)	366.5	760 (55)	3301 (41)	50.8	774 (31)	4075 (40)	348.5	734 (47)	4809 (42)	50.4	724 (50)	5533
2472 (46)	324.0	672 (64)	3144 (46)	52.0	791 (27)	3935 (43)	346.5	729 (48)	4664 (44)	55.3	794 (34)	5458
2483 (45)	345.5	717 (58)	3200 (44)	47.5	723 (42)	3923 (44)	381.0	802 (26)	4725 (43)	49.6	712 (54)	5437
2170 (54)	395.5	821 (21)	2991 (50)	52.4	797 (23)	3788 (46)	357.0	752 (41)	4540 (45)	54.1	777 (38)	5317
2881 (29)	393.5	816 (29)	3697 (30)	201.5*	294 (72)	3991 (42)	393.5	828 (10)	4819 (41)	341.0*	397 (66)	5216
2487 (44)	330.5	686 (62)	3173 (45)	45.5	694 (45)	3867 (45)	285.5	601 (57)	4468 (46)	51.3	736 (49)	5204
2618 (41)	395.5	821 (21)	3439 (39)	232.5*	339 (67)	3778 (46)	289.5	609 (56)	4387 (47)	56.3	808 (32)	5195
2101 (55)	393.5	816 (29)	2917 (53)	44.0	670 (54)	3587 (52)	356.5	751 (42)	4338 (49)	56.5	811 (28)	5149
2339 (49)	316.0	656 (68)	2995 (49)	42.5	647 (57)	3642 (51)	339.5	715 (52)	4357 (48)	50.3	722 (52)	5079
2004 (58)	393.5	816 (29)	2820 (55)	44.4	677 (49)	3497 (54)	393.5	828 (10)	4325 (50)	48.8	700 (59)	5025
2039 (56)	393.5	816 (29)	2855 (54)	44.1	672 (53)	3527 (53)	372.5	784 (29)	4311 (51)	47.5	682 (62)	4993
2304 (51)	385.5	800 (48)	3104 (48)	44.7	680 (48)	3784 (48)	238.5	502 (61)	4286 (53)	49.0	703 (57)	4989
1957 (60)	401.5	833 (16)	2790 (56)	45.3	690 (47)	3480 (56)	346.0	728 (49)	4208 (54)	50.1	719 (53)	4927
1940 (61)	395.5	821 (21)	2761 (59)	38.4	585 (61)	3346 (59)	366.0	771 (34)	4117 (56)	54.2	779 (36)	4896
1856 (65)	374.0	776 (54)	2632 (63)	46.7	711 (44)	3343 (60)	367.0	773 (32)	4116 (57)	52.9	759 (43)	4875
1888 (62)	399.5	829 (18)	2717 (60)	44.3	674 (51)	3391 (58)	381.0	762 (35)	4153 (55)	48.1	691 (61)	4844
2331 (50)	376.0	780 (53)	3111 (47)	40.6	618 (60)	3729 (49)	271.0	571 (59)	4300 (52)	319.0*	371 (70)	4671
1728 (70)	393.5	816 (29)	2544 (64)	48.9	744 (39)	3288 (62)	271.0	571 (59)	3859 (62)	54.2	778 (37)	4637
1669 (72)	393.5	816 (29)	2485 (66)	40.9	623 (59)	3108 (64)	359.5	759 (37)	3867 (60)	53.5	768 (39)	4635
1964 (59)	393.5	816 (29)	2780 (57)	46.7	712 (43)	3492 (55)	189.0	398 (68)	3890 (58)	48.9	702 (58)	4592
2258 (53)	337.5	700 (61)	2958 (52)	260.0*	379 (63)	3337 (61)	238.5	502 (61)	3839 (63)	47.2	677 (63)	4516
2279 (52)	340.5	706 (60)	2985 (51)	44.4	676 (50)	3661 (50)	105.5	222 (77)	3883 (59)	323.0*	376 (69)	4259
1798 (68)	320.0	664 (65)	2462 (68)	49.5	753 (36)	3215 (63)	120.5	254 (76)	3469 (65)	53.4	766 (41)	4235
2031 (57)	317.0	658 (67)	2689 (61)	219.0*	319 (70)	3008 (65)	298.0	627 (55)	3635 (64)	332.5*	387 (67)	4022
1812 (67)	219.0	454 (76)	2266 (72)	42.6	649 (56)	2915 (66)	163.5	344 (73)	3259 (68)	49.5	710 (55)	3969
1633 (73)	342.0	710 (59)	2343 (70)	260.0*	379 (63)	2722 (71)	272.5	574 (58)	3296 (67)	43.2	621 (65)	3917
1720 (71)	359.0	745 (56)	2465 (67)	232.5*	339 (67)	2804 (69)	188.0	396 (71)	3200 (69)	49.4	709 (56)	3909
1862 (64)	391.5	812 (42)	2674 (62)	49.0	746 (37)	3420 (57)	211.5	445 (67)	3865 (61)	0	0 (77)	3865
1446 (75)	169.0	351 (78)	1797 (77)	44.2	674 (51)	2471 (72)	238.5	502 (61)	2973 (71)	48.5	697 (60)	3670
1822 (66)	236.5	491 (74)	2313 (71)	38.1	522 (62)	2835 (67)	236.5	498 (65)	3333 (66)	158.5*	184 (76)	3517
1873 (63)	319.5	663 (66)	2536 (65)	201.5*	294 (72)	2830 (68)	169.5	357 (72)	3187 (70)	250.5*	291 (75)	3478
1407 (76)	272.5	565 (71)	1972 (75)	159.5*	232 (74)	2204 (77)	233.0	491 (66)	2695 (73)	44.4	637 (64)	3332
1372 (77)	238.5	495 (72)	1867 (76)	251.5*	366 (66)	2233 (76)	189.0	398 (68)	2631 (74)	306.0*	356 (72)	2987
1595 (74)	196.0	407 (77)	2002 (74)	159.5*	232 (74)	2234 (75)	152.0	320 (75)	2554 (75)	308.0*	358 (71)	2912
1075 (78)	326.0	676 (63)	1751 (78)	232.0*	338 (69)	2089 (78)	189.0	398 (68)	2487 (78)	332.5*	387 (67)	2874
1021 (79)	316.0	656 (68)	1677 (79)	214.5*	313 (71)	1990 (79)	238.5	502 (61)	2492 (76)	300.5*	349 (73)	2841
2716 (37)	30.5	63 (79)	2779 (58)	DNC	0 (79)	2779 (70)	DNC	0 (79)	2779 (77)	DNC	0 (77)	2779
1733 (69)	229.0	475 (75)	2208 (73)	81.5*	119 (78)	2327 (74)	77.5	163 (78)	2490 (78)	DNC	0 (77)	2490
2386 (48)	DNC	0 (80)	2386 (69)	DNC	0 (79)	2386 (73)	DNC	0 (79)	2386 (79)	DNC	0 (77)	2386
832 (80)	238.5	495 (72)	1327 (80)	159.5*	232 (74)	1559 (80)	157.0	331 (74)	1890 (80)	266.5*	310 (74)	2200
786 (81)	DNC	0 (80)	786 (81)	DNC	0 (79)	786 (81)	DNC	0 (79)	786 (81)	DNC	0 (77)	786
651 (82)	DNC	0 (80)	651 (82)	DNC	0 (79)	651 (82)	DNC	0 (79)	651 (82)	DNC	0 (77)	651
	29,037.0			20,225.5			25,437.5			25,598.0		176,569.0

Note: one pilot was penalized 10% of his daily score for incorrect photo techniques; another was assessed 5% for unsafe flying.

pilot having failed to complete the course.

DNC means did not compete.

In a few minutes the dust storm was followed by rain, then came hail the size of golf balls, which put small dents into the fiberglass leading edge of his wings. The wind continued rising until it got up to a steady 70 knots, with gusts a little higher. In desperation A. J. ground-flew his ship for 10 minutes. The Sisu was jumping six inches off the ground.

"I scooched up as far as I could and held onto the instrument panel. I had the dive brakes open and the stick all the way forward and I could only see one wing tip in the rain, hail, and dust. I don't recommend that kind of flying to anybody."

The World Champion saved his ship.

° ° °

The crucial nature of the decision-making process during a free-distance task is perhaps best illustrated by the experience of Sterling Starr in his modified 1-23:

"At 6:00 p.m., cu's were still good but beginning to get soggy. A long line of clouds stretching away to the northeast was observed 10 miles to the east, with what looked to me like a wall of water coming out of them and slanting to the ground. I interpreted this as the front, backing up and creating a severe weather situation along my flight path. I reasoned there would be severe winds blowing in the vicinity of the front, down air near the wall of water, and problems on the ground after landing. I turned north, away from this weather, and landed an hour later as the lift ceased 370 miles out.

"Wroblewski, in the same area at the same time, interpreted the 'wall of water' as dust going *into* the clouds. He raced to the front, flew along it for two hours without circling, and landed at dark with 527 miles."

° ° °

"Fantastic . . . fantastic . . ." Fritz Kahl kept saying that night in contest headquarters after hearing about Jan Wroblewski's flight to Freedom, Oklahoma, the longest of the meet, 527.5 miles.

"He's really gonna be their boy now. They'll give him a great big Red Star."

On that day the pilots flew 27,958 miles, the distance around the earth at the equator, plus 3000 miles.

Jan Wroblewski Dutton

Needless to say, there was considerable up and down movement in the cumulative standings, depending upon which pilots went what direction. Einar Enevoldson, who made the longest flight of any of the Americans, had gone into the day in 44th place—11 positions and 310 points behind Belgium's Henri Stouffs in their clash for the Standard Class laurels. As a result of his newly gained 1000 points, Enevoldson and his Phoebus A vaulted to 32nd place and now trailed Stouffs (30th place) by only 16 points.

On the strength of his 1009 points, Wroblewski of Poland had leap-frogged from 14th place past Jackson of South Africa (18th place), Wodl of Austria (16th), and John Rowe of Australia (15th) to become the highest placed foreign pilot—5th place. Bikle was up from 34th spot to 21st. And Bob Semans and Bud Mears (particularly the latter) had inserted themselves into championship contention; while, on the other hand, Squillario (27th place), Smiley (26th), and Ryan (24th) were no longer the serious threats they had appeared to be 24 hours earlier.

For George Moffat, the day might have developed into a golden opportunity for reeling in Wally Scott. But George was "only" able to go 374 miles (24th for the day); and while he did pick up 74 points on Scott, he dropped behind Allemann and Brittingham—down into 4th position.

With two mandatory rest days coming up as a result of the 500-mile flights, the contest was now at least half over and the cumulative standings for the top ten were as follows:

1.	W. Scott	3622
2.	R. Allemann	3618
3.	J. Brittingham	3615
4.	G. Moffat	3484
5.	J. Wroblewski	3406
6.	B. Mears	3392
7.	R. Briegleb	3364
8.	A. Smith	3356
9.	B. Semans	3283
10.	T. Beltz	3281

PILOT	MILES	POINTS
Wroblewski, HP-14	527.5	1009
Enevoldson, Phoebus	523.0	1000
Allemann, Libelle	519.5	993
Mears, Libelle	517.5	989
Brittingham, Cirrus	510.0	975
Conn, Cirrus	506.5	968
Ecklund, Dart 17R	495.5	947
Beltz, SH-1	488.0	933
Semans, Phoebus	488.0	933
Bikle, T-6	481-5	921

☐ TASK SETTING ☐

Rudy Allemann: "You hear a lot of comment about removing free-distance tasks from competition. I think this would remove a great deal of freedom from competitive soaring. It would confine everybody to a race track.

At this year's Nationals, the principal victim of the breaks was Ben Greene. In 1967, Ben had finished 5th at Marfa and was subsequently ranked as the country's fifth-best contest pilot by the SSA Seeding Committee, making him the alternate team pilot for the 1968 Internationals. The following year Ben won the '68 Nationals and several lesser contests. As a result, it appeared that any placing in the top ten of the '69 Championships might well assure the defending champion a spot on the U.S. team for the 1970 World Championships — particularly if he could finish ahead of either Dick Johnson or Dick Schreder, whose positions on the team seemed more subject to challenge than those of A. J. Smith and George Moffat, both of whom had shown so brilliantly at the 1969 Internationals.

Short of breaking one's bird, the foremost disaster in contest flying is to fail to finish a speed task that a lot of other people somehow manage to complete. Pointwise, the rules are devised to make this an unpleasant experience. Such a fate befell Ben Greene on the first contest day, when his new Kestrel went down just 6.5 miles short of the finish line. As a consequence, he scored only 390 points (he averaged 855 over the next seven days) and he eventually concluded the meet in 19th place. But, though seemingly far removed from the top ten, Ben was actually only 186 points out of 9th place by the time the contest closed. If he had simply finished the course that first day, he would have picked up considerably more than those 186 points. And if he had matched even the second slowest time of the day (44th place), he would have ultimately ended up in 8th place.

Ben Greene flew a total of 2454 contest miles in this year's Championships. If he is not voted to represent this country at Marfa next summer, it will undoubtedly be because of a mere 6.5-mile trailer ride that Kestrel "Four Whiskey" took late in the day on June 24th.

In a sport where the competition is so fiercely close—where even the slightest misstep or ill fortune can undo years of effort and topple dreams of longstanding —the pressures that beset the serious competitors are enormous. Dutton

"The results of the distance day certainly show that differences in sailplane performance are not overly important in straight distance flying. But since the differences in flight performance were significant, the difference must be in the pilot who makes the decisions.

"Are we really trying to find the best pilot, or the best pilot-sailplane combination? Dr. Malcolm Bagshaw suggested having a runoff competition after the Nationals, where everyone flies the same kind of a sailplane to determine the best pilot. You pick the top 15 pilots for the runoff.

"An alternative to this is some kind of a sailplane handicapping system. No system can be perfect, but almost any system you use is better than none. We've done this for years in the Northwest. It brings in people who would otherwise not compete. Sometimes pilots in inferior ships have won, and pilots in superior ships really have to push at the top of their ability."

Dick Johnson on distance tasks: "I like 'em when I win. I used to win them all the time . . . In the case of Wroblewski, it gave him a chance to use all his talent, judgment, and initiative. That little rascal really went . . . So I'm certainly not against it."

Wally Scott: "I have always done better on free-distance flights by just following the conditions, rather than trying to preplan it. I've always been a lover of free-distance flying. I think free distance is a great equalizer. I know I could have flown a lot more than 335 miles in a 1-26 if I'd gone the right way. Anybody could have. If the task on June 27th had been distance along a line to Freedom, Oklahoma, it would have been a race. As it was, the decision factor came into it—and did it ever! Look how the standings shifted!

"In sum, everyone who went east did so in anticipation of something that did not materialize. There was a wide cloud belt from Amarillo to Rotan. The people who rode the center got shot down. The trick is to ride the dry air-edge, or the convergence zone. The way to handle a dewpoint front is to ride the dry edge. On June 27th, over 27,000 miles were flown. If everyone had gone up the west edge, I'd venture to say it would have been a 40,000-mile day."

Pat Beatty: "In Africa, we would have got out our six-shooters if Marshall had sentenced us to that straight-out task. Do you realize what he sentenced us to? He sentenced us to missing at least 20 percent of the flying here, which is a lot if you have come a long way and spent a lot of money to get here. He sentenced us to one long night out in the Bundu without a razor or pajamas, and spending at least $200 on a retrieve; and all to what object?

"There is just too much luck in this free-distance thing to make it a real judgment of skill. I'm opposed to the cat's cradle for the same reason."

Jacko Jackson: "This is 10 years out of date in soaring, isn't it? Remember, in the old days, they gave points for duration and they used to give points for altitude. These have disappeared. In time all distance tasks will disappear too."

Maurice "Jacko" Jackson Dutton

Boet Dommisse: "Bobby Clifford made 12 flights in South Africa without landing out once. These flights included the world out-and-return record, one 500-kilometer triangle, four 300-kilometer triangles, and other lesser flights. He went home without landing out once. *Remarkable.* Of about 20 or more competitors, most made only one out-landing. Always with a short retrieve. Many had no crew. What

happens then is that the ones who complete the flight go and crew for those who landed out.

"I think free distance is the property of the United States. They have the country for it. We realized what we had and have made the best of it."

FIFTH CONTEST DAY

A contestant is getting low. He has been circling in the same area for quite some time, then he shouts to his crew over the radio:

"I think I'm going to have to land. Get those cows off the runway."

A pause – then quite excited: "Those cows aren't cows, they're bulls!"

"Well, get them off the runway!"

A long pause—"We'll see what we can do."

After resting for two days, the contestants resumed the battle on June 30th, the task being distance within an area prescribed by turnpoints at Marfa, Van Horn, Pecos, and McCamey. The weather forecast called for overdevelopment in the Texas and Oklahoma panhandles and eastern New Mexico, with isolated thunderstorms over south Texas after 4:00 p.m. Maximum thermal activity was expected at 5:00 in the afternoon, with lift up to 13,000 feet at 600 fpm. The afternoon winds began shifting around to the south and east. The best flight of the day was made by George Moffat in his Cirrus with wing-tip extensions: 482 miles. His report:

"Early in the day I thought the trick was going to be to get around the course as fast as humanly possible, so I could do it again. There was a definite cutoff point. The second time around when I got to Pecos, I felt that if I'd been there only 15 minutes later, I couldn't have gotten out, and there was a ship there of lower performance that didn't get away.

"I struggled to get south over the high ground while the clouds ahead were dissipating. It was extremely frustrating, but I finally got up there. My idea was to arrive back at Marfa with several thousand feet of altitude, and then drift back toward Van Horn in one-meter lift; but over the high country I had to abandon this. I was drifting backwards faster than I was climbing.

"Finally I got back over the airport with 1000 feet to take my pictures, then I set out for Van Horn. But I didn't find much lift and I landed a little this side of Marfa."

* * *

Graham Thomson: "I screwed up early in the day. I spent three-quarters of an hour shilly-shallying, trying to decide whether to go to McCamey or Pecos. I half-way made a commitment to McCamey, when I changed by mind and went to Pecos instead . . . plain bloody stupidity, procrastinating like that. At the end of the day it made the difference between 390 miles and a flight that might have been 460 or 470.

"Have to do better—have to do better. . . "

The popular Glasflugel merchant was in 15th place in the cumulative standings, a position from which—after the first contest day—he did not deviate markedly.

* * *

At the close of the day George Moffat was still in 4th place overall, but he was just 5 points behind Brittingham and 26 points behind Wally Scott, who in turn was now 16 points back of the new contest leader, Rudy Allemann. In short, you could throw a Texas saddle blanket over the four of them.

Aside from Moffat closing in tighter on the leaders and Dick Johnson jumping from 25th place to 14th, the standings did not seem significantly altered from the previous day. Stouffs and Enevoldson had alternated positions, but Einar's lead was nearly as slender as Henri's had been the day before.

PILOT	MILES	POINTS
Moffat, Cirrus B	482.0	1000
Mears, Libelle	475.0	985
Johnson, HP-13M	475.0	985
Greene, Kestrel	475.0	985
R. Briegleb, Diamant	466.0	967
Smith, Sisu 1A	447.5	928
Wodl, FK-3	440.0	913
Allemann, Libelle	437.5	908
Robertson, Phoebus	432.5	897
Scott, AS-W 12	428.0	888

☆ THE CAST ☆

Ann Welch, Visitor

Trim and tan, with a cloth hat, short graying hair, dark knit shirt, and blue shorts. The smile is full of warmth; her face is full of the outdoors and the wind. The Queen could have searched from Newcastle to Land's End without finding a better ambassador . . . one of those people who has had a great draught from the Fountain of Youth and remains forever young in spirit.

Listen to her:

"The Spitfire was one of those classic aircraft. It was fantastic. It almost made you feel like you had your own wings."

"Lorne Welch is probably one of the most able of all test pilots. It's difficult to say this about one's husband, but it's true."

Ann Welch began flying in 1934. She started gliding in a Dagling in 1937. At Marfa, a day or two before the contest opened and 32 years after she started flying in a primary, she made Gold altitude.

In 1938 she began writing, finished and published *Silent Flight*, a novel for children. Other books which she has either written alone or in collaboration with her husband or F. G. Irving are: *Cloud Reading for Pilots, Gliding and Advanced Soaring, The Soaring Pilot, Go Gliding, Glider Flying, John Goes Gliding, The Woolacombe Bird, The Story of Gliding,* and *New Soaring Pilot.*

"There was another one; I can't think of the name."

During World War II she was in the ferry service and flew many types of aircraft "including horrible things like the Airacobra." She has been at every Internationals since the war, either as a pilot, team captain, or competition director. Sort of the Marshall Claybourn of England.

"How do you think the World Championships might go here next year?" I asked her.

"I think there is every chance of your having an enormously successful Internationals in 1970."

"Why?"

"Like you're making a pudding, you have to have the right things to put in it. Some places you could never have a successful championship because the place is not right. This place is right. You have a lot of people with the right sort of quick intelligence. You have the support of the locality—the towns of Marfa and Alpine. This is very important. The final thing is that you have the weather. You have the weather that the world wants."

"Do you think language will be a major problem out here? Most Americans are a little rusty on their

Polish and Japanese," I said.

"No, language is not nearly as big a problem as people think it will be if they have not had previous experience. What you do is make up printed cards for all pilots to carry at the World Championships. Printed on one side of the card is 'World Soaring Championships, Marfa, Texas, June 21—July 12, 1970.' Under this you have some general information and a picture of a sailplane. Toward the bottom of the card you have the words: 'The pilot bearing this card might need your help. There are many non-English speaking pilots at the contest. He will need to tie down his sailplane to protect it from storm damage or damage from livestock. He will need assistance in telephoning.'

"On the other side appear the words: 'This pilot needs help in telephoning contest headquarters and locating his crew. He will give you a piece of paper with his name and the geographical coordinates of his landing. He would very much appreciate having you relay this information to contest headquarters. They need to know his location, the coordinates of his landing, and the instructions for his crew so they can retrieve him.' "

I asked her about sailplane manufacturing in England. She told me that things were not looking good. The Elliotts have stopped making sailplanes, and Slingsby is no longer active. The British Gliding Association is setting up committees to encourage the production of gliders.

"English soaring is completely dominated by imported German fiberglass sailplanes, even more so than yours. We don't have any home-builts. Right now we have a world problem. It is a bad situation when gliders are being made only in one country. With competition you can keep the price down and make them more quickly available. Currently the waiting list on some aircraft is up to two years.

"We have another problem at home which I think I see developing in your country. That is the increasing gap between club-flying gliders and competition aircraft. It is very important to try to fill this gap between your club ships and top competition or exotic gliders, otherwise your ordinary glider pilot will get discouraged. Most pilots coming into gliding like the idea of competition and need it, but if they feel that getting a top-competition sailplane is too far away, they might go and buy themselves a sailboat.

"Your gliding in America has got to a runaway situation in terms of explosive growth. This will give you many unique problems, since gliding has never grown so fast or so big anywhere else before. The problem will be to anticipate the situation so that the character of the sport does not change in an undesirable direction."

SIXTH CONTEST DAY

Radio: "Three Echo, one mile out."

"Three Echo," answered the starting gate.

"Standby," said the sighter at the gate . . . "HACK!" said the sighter at the gate.

"Good finish Three Echo," said Marshall Claybourn into the Bayside radio.

"Beautiful finish, Three Echo," said an affectionate feminine voice on the radio.

The pilot had flashed over the finish line 10 feet high at 120 mph, zoomed steeply, and made a sharp turn left 450 feet high, then banked more gently onto his downwind leg in preparation for landing.

"Beauuuuutiful, Three Echo," said the affectionate feminine voice over the radio.

"If his wife don't love him, nobody will," said E. J. Reeves.

He came around on base leg, banking perfectly, then slid into a gentle final approach and opened his spoilers.

"Wonderful flight, Three Echo," said the caressing voice.

At this point, a male voice about half an octave down from basso crackled forth with, "We love you, Three Echo."

"Okay, okay. This is Three Echo. Knock it off," said the voice in the sailplane.

Marshall Claybourn called for a speed task from Marfa to Pecos to McCamey and back to Marfa—274.5 miles.

For the third time during the meet, Wally Scott proved to be the fastest gun in town (65.7 mph) and consequently he was able to regain the contest lead from Rudy Allemann who was third for the day and was now 62 points shy of first place.

Flying the third leg home between 95 and 100 mph, Wally was 45 miles out when he hit a violent negative gust that threw maps and small stones upward against the canopy while at the same time slamming his landing gear down. Had he lost a wing?

"The first thing I thought of was my parachute."

But evidently nothing was wrong. He started his final glide 15 miles northeast of Alpine at 110 mph and went through the finish gate at 130 mph.

George Moffat was the day's runner-up, enabling him to pass Brittingham (11th for the day) into 3rd place, just 35 points behind Allemann. The cumulative standings from 5th to 9th place were still the same as the previous day (Mears, Briegleb, Smith, Wroblewski, and Semans); however, veteran Joe Conn had used his new Cirrus to take 10th place away from 17-year-old Tommy Beltz of Lehighton, Pennsylvania, who was making an absolutely splendid showing in an SH-1.

Having hit his stride over the past two days (2nd and 4th), Ben Greene had stormed up from 36th place to 21st. And while he was destined to rise no higher than 19th by the close of the contest, he would nonetheless be able to say that he had cracked the top five on four of the eight contest days. No mean accomplishment!

PILOT	MPH	POINTS
Scott, AS-W 12	65.7	1000
Moffat, Cirrus B	61.0	929
Allemann, Libelle	60.6	922
Greene, Kestrel	60.3	919
Smith, Sisu 1A	59.0	898
Rowe, Diamant	58.6	892
Mears, Libelle	58.1	885
R. Briegleb, Diamant	58.1	885
Byars, Kestrel	57.5	875
Mullen, Cirrus	57.2	871

☆ THE CAST ☆

Harro Wödl, Pilot

Harro Wödl, the 1968 World Open Class Champion, started soaring in 1942, probably not a vintage year for European gliding. This is his first season with the new FK-3 sailplane. He is happy with it. In the 1968 Internationals he flew a Cirrus. He reports that the performance of the FK-3 is nearly the same as the Cirrus, but it is better for short-

Dutton

field landings and climbing. He would prefer the FK-3 in light soaring conditions. He hopes to fly the same aircraft when he returns next year for the 1970 World Championships.

I asked him for a few general impressions of the 1969 contest at Marfa, and he made the following observations:

The competition is very good, and the tasks have been well selected.

More towplanes will be needed for the World Championships.

220-volt electricity should be supplied on the field for recharging batteries.

There is a need for more telephones—more than one line is essential. It is busy too often.

How will the pilots and crews be accommodated? The Paisano Hotel is too small.

The contest staff is working very well. This includes the scoring department and the photographic laboratory, but the staff is a little too small. In a world contest they would be overworked.

Sometimes the starts are up to 20 minutes late. This could be solved by having more towplanes.

In Europe most aircraft must be launched and in the air before the first man can go through the starting gate. The starting gate should open a half hour or more after launching begins.

"How different do you find the flying here than in Europe?"

"Very different. Flying here is very fast. In Europe if you fly fast, you cannot finish the task. The landing fields in Europe are better than here, less danger. American pilots are very "sportive" in sharing information. There are no secret flight plans. We are very happy to be here, and it is very sportive of American soaring pilots to invite us here."

Harro Wödl's English is limited. Mr. Funk, the designer of the FK-3, and one of his crew members helped with the translation during the interview.

SEVENTH CONTEST DAY

Alpine Motel — cowhands and ranchers are sitting out in front:

"Ah sure wish we'd get some rain."

"Yeh, it's awful dry. It's these damn soaring pilots. They want it dry. Ah guess they been out-prayin' us."

Another task of distance within a prescribed area.

George Moffat won the day with a flight of 476 miles. It was a convincing victory; the second-place man, Dick Johnson, went only 417 miles. George Moffat was back on top for the first time since the opening day and would carry a 75-point lead into the final day.

George flew from Marfa to Van Horn, and there he had to make a choice between going 79.5 miles upwind to Pecos, or 151.5 miles upwind to McCamey. He chose Pecos. After getting there, he returned to Marfa in a crosswind, thus completing his first triangle. Then he went to Van Horn again. At that point he considered trying for McCamey from Van Horn. He pulled out his calculator and estimated that the best speed he could make against the wind would be a little over 50 mph. With the remaining thermal time, he did not think he could make it to McCamey, although he thought Pecos would come up with plenty of time to spare; thus the decision to go to Pecos. As things turned out, he arrived at Pecos just in time. The thermals were beginning to weaken rapidly. He took his pictures.

It was now late in the day, and there was nothing to do except drift back toward Van Horn in a quartering tailwind. Under the rules, he would not be able to claim any mileage in excess of the distance to Van Horn because he was returning down the same leg he had just completed. Therefore, the whole object now was just to be sure that he actually did reach Van Horn.

"I used every thermal that came along clear up to the top. No matter how often they came, or how weak, I worked them clear to the top. It was very pleasant. I have never had a flight quite like it. Normally you are in a great hurry. This leg I flew along at 56 mph between thermals. We made a glide ratio of 56 to 1 with the help of the wind. Then I had the frustration of ending up at Van Horn with 1500 feet of altitude and nothing to do with it . . ."

° ° °

Ben Greene made the same flight, except he could not quite get upwind to Pecos. He was very near. He climbed up in late thermals, losing distance to the wind, then

A group of the world's best soaring pilots display varying degrees of attentive interest in the usual morning weather briefing. Moving counterclockwise from the upper right-hand corner are: A. J. Smith, Bill Ivans, Jerry Robertson, Peter Heginbotham, Rudy Allemann, John Ryan, Dick Schreder, Hannes Linke, and Bud Mears. Dutton

Belgium's Henri Stouffs, who in 1968 was just a day of rain (that didn't fall) from winning the World Standard Class Championship, held on at Marfa to take the class (30th place overall). Dutton

cruised eastward to gain distance. He would climb and lose, and cruise to gain. Finally he landed near Toyah while there was still weak lift. His distance—366.5 miles, 33rd place.

* * *

Rudy Allemann made the standard initial triangle: Marfa to Van Horn to Pecos to Marfa, then returned to Van Horn as George Moffat had done. From there he went east and made it past Alpine, landing at the road-railroad intersection eight miles east of Hovey: 411.5 miles, 4th place.

* * *

Dick Johnson made the same triangle everyone did, then went back to Van Horn and from there cruised east and landed at the Firestone test track, 12 miles west of Fort Stockton. His total—417 miles.

"Very good flight," a fellow pilot said to him.

"It used to be," Dick replied.

* * *

Wally Scott made the normal first triangle, Marfa to Van Horn to Pecos to Marfa, then he went to Van Horn and returned to Marfa. He landed early looking very tired, 393.5 miles. He was hoping the late afternoon weather was as weak as it had seemed to him and he threw away some altitude at Marfa. He had flown the last half of the leg home from Van Horn to Marfa without hitting a bump. When he was coming in for his landing at Marfa, he popped his drag chute. Then he suddenly wondered: What if there is lift between here and Alpine?

* * *

Moffat's strong showing had pushed both Scott and Allemann down a notch, leaving them in 2nd and 3rd place with Rudy threatening to pass Wally, whose 10th-place finish for the day left him only 24 points ahead. The rest of the top ten remained the same as the day before, except that A. J. Smith, who made a flight similar to Johnson's, was able to edge out Ross Briegleb for 6th place overall. And Stouffs (30th place) was now the leading Standard Class contestant, having repassed Enevoldson (32nd place), a lead that Stouffs was not to relinquish on the final day.

PILOT	MILES	POINTS
Moffat, Cirrus B	475.0	1000
Johnson, HP-13M	417.0	878
Smith, Sisu 1A	413.5	871
Allemann, Libelle	411.5	866
Meyer, HP-11	409.5	862
Mullen, Cirrus	405.0	853
Wodl, FK-3	404.5	852
Mears, Libelle	401.0	844
Brittingham, Cirrus	400.0	842
Scott, AS-W 12	393.5	828
R. Briegleb, Diamant	393.5	828

10 others tied with Scott and Briegleb

☆ THE CAST ☆

A. J. Smith, Pilot

The highest place in the world for a competition soaring pilot is a wooden box that stands roughly three feet high. This is the pedestal upon which the World Champion stands after victory at an international contest. For about an hour he stays on this summit while people bring flowers and presents to him. There is music and ceremony. There is a beauty in which few on earth have stood at the center. One of the World Champions is A. J. Smith, a man with a relaxed elegance of bearing few can equal.

"Again, I'm surprised that the speeds this year aren't as high as they were in 1967. The lift is more turbulent than it was in 1967, and the Sisu just doesn't climb well in turbulent lift.

"Since '64, we have 20 or 30 new pilots who are superior competitors; I think we have a lot of pilots who are competitive on a world level.

"There's a really interesting contrast between previous world contests and this competition. World Championships have involved a greater variety of weather and have included some very weak weather. The World Championships become sort of a *mental* contest. You really have to play the weather. Marfa in 1969 is a *physical* discipline. Long, long flights where you have to drive and drive, hour after hour. I can look ahead to next year and see it will be the same kind of contest. It will be physically harder flying than most World Championship pilots are used to."

EIGHTH CONTEST DAY

On the final contest day, Marshall Claybourn called for a race from Marfa to McCamey to Van Horn and back to Marfa, 344 miles.

The launch line was to open at 11:00 a.m., and the finish line was to close at 9:00 that night. The weather man called for scattered cumulus clouds, with temperatures going up to 91 degrees. As usual, maximum thermal activity was forecast to be at 5:00 in the afternoon, when thermals of 700 fpm were forecast to go up to 13,000 feet. Winds aloft tended to be a little east of south, at speeds running from 14 up to 20 knots.

George Moffat went into the final day with a lead of 75 points. In this circumstance one would have expected him to fly conservatively, but this is not what he did. He tore around the course at a speed of 69.7 mph and was the first man to land back at Marfa. It was the fastest time of the day, his fourth winning task of the meet! A new U.S. National Champion had been chosen.

Wally Scott did nearly as well, and his speed, second best of the day at 68.5 mph, preserved his 2nd place in the final standings. It was an aesthetic ending; with the championship at stake, the two pilots who had dominated the en-

tire contest had come through under immense pressure to prove conclusively that they were indeed the class of the field.

For Rudy Allemann, however, the day was a disappointment. Finishing 45th, he lost 3rd place to John Brittingham (who finished 11th) by just 10 points.

A. J. Smith reported that he had an easy time on his flight. The lowest he ever got was 6500 feet, and on the second leg he flew much of the distance between 13,000 and 14,000 feet, with lift rates going up to 1000 fpm.

"I think if we had started an hour later, we would have had 75-mph speeds." A. J. was just 1.3 mph slower than Ross Briegleb, but it cost him 6th place overall—by 10 points. If Ross had gone much faster he might have overhauled Bud Mears, too. Instead he fell 28 points short. The competition everywhere was *close*.

Ann Welch was also astonished at the high speed and observed that both George Moffat and Wally Scott, who had the fastest times, landed at the very height of the day and so missed some of the strongest soaring.

Third for the day was the BJ-4, allowing Jacko Jackson to move up smartly from 20th place to a final position of 13th. But the two best-scoring foreign pilots were still Wroblewski (8th) and Wodl (10th).

It was some contest; there may never be another like it.

PILOT	MPH	POINTS
Moffat, Cirrus B	69.7	1000
Scott, AS-W 12	68.5	983
Jackson, BJ-4	68.2	979
R. Briegleb, Diamant	65.6	942
Greene, Kestrel	65.4	939
Smith, Sisu 1A	64.3	923
Comte, Diamant	63.4	909
Mears, Libelle	63.2	908
Rowe, Diamant	62.1	891
Byars, Kestrel	61.8	887

☆ THE CAST ☆

George Moffat, Champion

The awards banquet following the 36th U.S. National Soaring Championships was held in the Beta Sigma Phi Building, half a dozen blocks south of the Paisano Hotel.

After dinner and a speech by toastmaster E. J. Reeves, Marshall Claybourn stepped to the front of the stage and had the microphone handed up to him. Only three trophies were on the stage. The Larissa Stroukoff Memorial Trophy, honoring the best goal-and-return flight of the contest, went to Wally Scott, who was also celebrating his birthday. The Standard Class Trophy, a Paul Revere Bowl of silver, was awarded to the Standard Class victor, Henri Stouffs of Belgium.

After awarding SSA medallions to the pilots who had finished from 2nd place to 12th, Marshall Claybourn picked up the Richard C. du Pont Trophy. He then returned to his post behind the microphone, looked down at the trophy, and read off the names of those who had won it since the trophy was founded in 1947. Then he called for George B. Moffat, Jr.

Mr. Moffat rose and walked up toward the stage. His graying tousled hair was like a shock of wheat lying in the sun. After a few words, Marshall Claybourn gave him the du Pont Trophy, the highest competitive honor of the Soaring Society of America. As the champion moved over behind the microphone, pilots and crew members down on the main floor began to stand up—just a few in the beginning, then more and more of them in a cascading wave until every person in the room was on his feet. Then the applause began, and for a long, long moment everyone in the hall honored the man who had won the championship against the most formidable competition ever assembled in the United States.

During that moment, one could only guess what went on in the mind of the champion and what emotion was in his heart.

When the applause quieted and the audience was again seated, George Moffat began to speak of his days in soaring and how he met his crewchief. He gave his crewchief a fitting tribute: "Who else can drive a towcar 120 miles an hour?

"And then there's a johnny-come-lately named Suzanne." He spoke of her help, then asked his wife to come up on the stage with him. When she arrived, Marshall Claybourn interrupted the speech. He had a special present for Suzanne, a golden bracelet given by the South Africa team. There was another burst of applause. Then the champion continued. But he had difficulty knowing just what to do with his feet. Now, as he spoke, he raised his left leg by rolling the left foot up on tiptoe. This helped support the weight of the trophy, which he cradled in his left arm.

"You know, this thing is heavy. Maybe it represents all the sweat that goes into getting it."

He put his right arm around Suzanne. They are a couple handsome nearly past belief.

How long had been the road up to that stage! The 300-kilometer triangle in France back in 1959 that took more than six hours; the 1962 contest, 12th place even with a wheel broken on the second day. Then two world speed records—100-kilometer and 300-kilometer triangles—after the contest at El Mirage; the early Marfa soaring camps, then up to 5th place in the 1963 Nationals at Elmira. He went down to 25th place at McCook in 1964, but followed that with a new world speed record made in Odessa later the same year. And the endless study, the work, the hundreds upon hundreds of hours cleaning up small details on ship after ship. Adrian, 1965, the National Championship missed by a hair. Reno, 1966—he started in 1st place and held 2nd place for two days, then dropped in standing, but came back to finish in 2nd place. Marfa, 1967— shot out of the sky on the first day, only nine miles past the initial turnpoint, 320 points for the day, 28th place. This was followed by three 1000-point days as he struggled back up to finish in 4th place. During the 1968 Internationals in Poland he came in 4th, missing 2nd by only 22 points, missing 3rd place by a microscopic 20 seconds.

The measure of his achievement in 1969: He had beaten numerous present and past national champions, three world champions, and the incomparable Wally Scott, whose flying he admired so much. He has become an imposing international figure in soaring. On the final task, July 3rd, when people would have expected caution from him to protect his slender lead, he won the day in a blaze of competitive courage and competence.

He stood there now, speaking of past days: George B. Moffat, record holder, teacher, husband, champion . . . one arm around the trophy, one arm around his wife.

He had soared to one of the highest places on this earth.