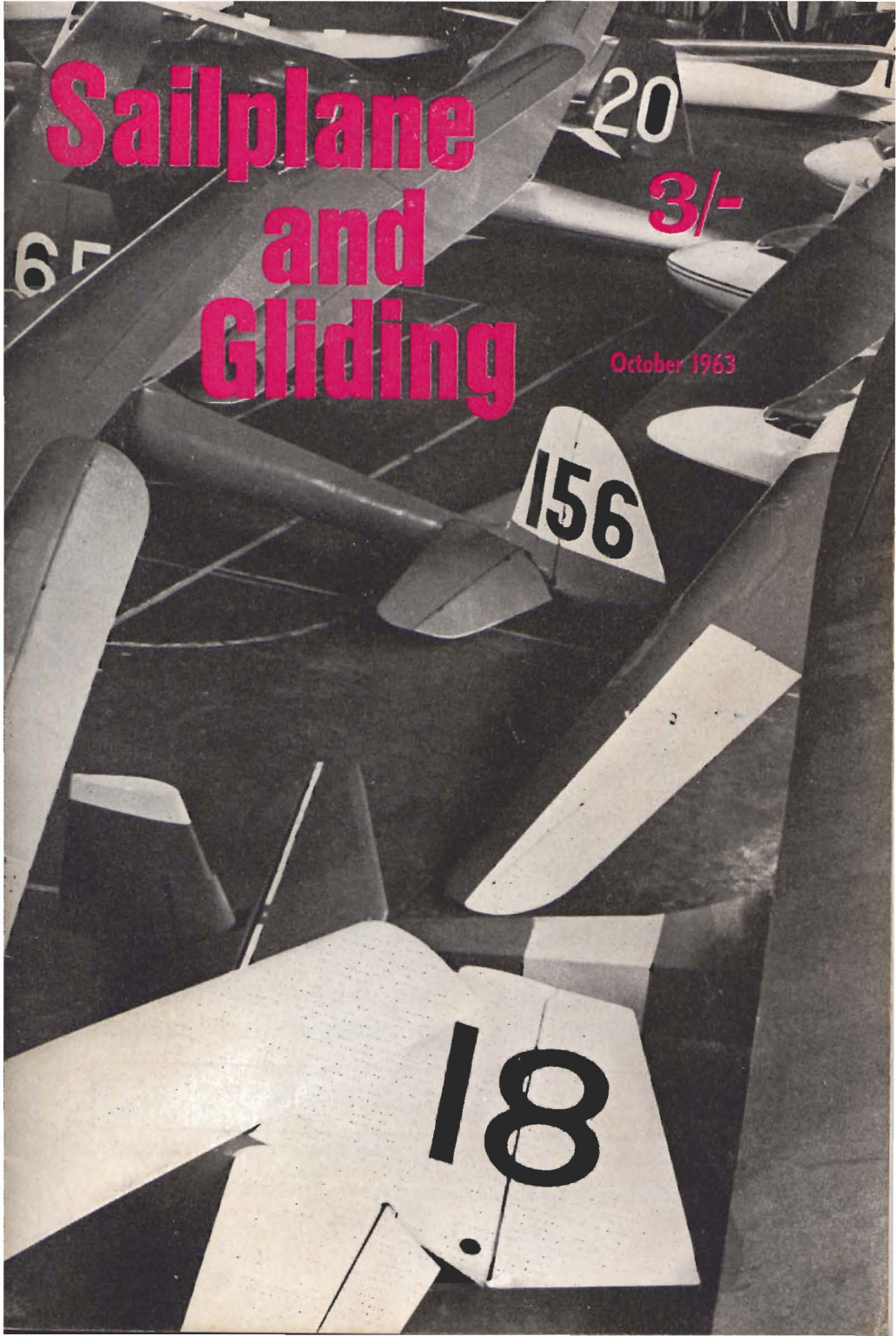
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Cover Photograph: The thermal season is nearly over. Photograph by J. D. Wilkinson taken at Swanton Morley.

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PENGUIN ON SNOWDON



by Stuart Waller

THIS is the tale of a short stubby-winged glider, a Swallow named Penguin, which one day outflew several long-winged pundit gliders to become the first glider to land in Anglesey.

The date was Sunday, 28th August, the second day of the Dunstable Regional Competition. The task set was distance along a line to the Long Mynd and Holyhead.

I chose an early start time and was airborne by 11.15 a.m. There were plenty of thermals, but all rather weak above 3,000 ft. a.s.l. I cruised slowly between 3,000 ft. and 2,000 ft., spending a lot of time circling. It took two hours to reach Stratford-on-Avon. The inversion had

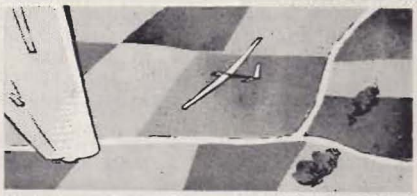


risen appreciably by now and was around 4,000 ft., cutting off all cloud formation.

Over Bromsgrove I shared my first thermal with the Fauvette. I little realized that I would be seeing a lot of this attractive sailplane. We flew together in several thermals, which gave me a pain in the neck, as he was always about 100 feet above me.

At the Clee Hills there seemed a lack of thermal activity. Two gliders on the ground did nothing to boost my waning confidence. Then I observed the Ka-7 chasing its shadow around a cornfield. I flew overhead into the welcome lift. The climb was very slow until Peter Scott joined in about 500 ft. above me. The thermal immediately responded and we shot up to 4,000 ft.

I enjoyed another fast climb near the Long Mynd, this time with Mike Riddell, before he sped off into the haze towards Wales. Conditions were now excellent. The Fauvette appeared again, this time below me. Soon I was 4,000 ft. over



Welshpool. But it was now 4.30 p.m. Would the thermals last so that I could reach Snowdon, I wondered!

After Welshpool I decided to veer north off course so as to avoid the more desolate part of the mountains. So I headed for Llanfyllin where I hoped to find my next thermal. Sure enough it was there, but very weak. The Fauvette appeared low from the south-west. He tired of the weak lift first, leaving me to sit it out. I gained a valuable 1,000 ft., and now at 3,500 ft. set off towards Llangynog. The valley fell away below me showing a cluster of sailplanes field-bound. At least I would beat those gliders, I thought, and headed up the valley towards the Berwyns. But I was now below the higher peaks. The hills fell steeply to the valley below, where the road wound its way up to the pass 1,700 ft. high, until it disappeared from sight on its descent to Bala. I was low enough to appreciate the grandeur of the scenery. My deliberations concerning a landing near the summit were forgotten as I hit rough turbulent air. Soon I was back to 4,000 ft. looking down at yachts



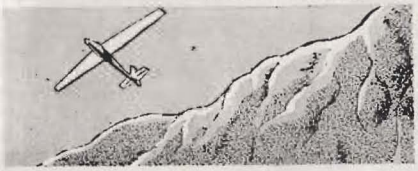
sailing on Lake Bala.

I approached the earth embankment

being constructed in the Afon Tryweryn. The Fauvette was there ahead of me, circling. By the time I got below him he had used up all the lift and I was left scratching around. Again I had serious doubts concerning the height I would have over the pass to Blaenau-Ffestiniog. The cars travelling along the B4391 looked rather close.

Once again I was rescued at the head of the valley where I encountered a thermal which built up until cloud formed overhead and lifted Penguin over 5,000 ft. Snowdon was now in the bag. I looked joyfully towards the sacred mountain, scene of previous Penguin pilgrimages.

It was now 5.30 p.m. and with 2,000 ft. showing I tucked a wing over the



jagged face of Yr. Aran. The rock escarpment fell away sharply to the lake below: forbidding landing country this! The wind was too light to provide hill-soaring. But the hot sun beating on to the rock was providing anabatic wind sufficient to lift Penguin. Gradually Snowdon's peak slipped down to the horizon, until at 6 p.m. I was at 4,500 ft. Snowdon had been soared. All lift had now subsided and I passed to the west of Snowdon, on final glide, too enthralled by the magnificence of the scenery to notice Riddell and Costin sitting by their gliders below.

The Menai Straits reflected the red glow of the evening sun. The flight was nearly over. Penguin's penetration gave out at Aberffraw. The flight of 305 kms. had taken 7 hrs. 15 mins. Unfortunately I was 8 kms. short of my declared goal.

I was much indebted to my determined team mates, Valerie Stephenson and Colin Pennycuick who drove over 700 road miles, and worked all Sunday night gathering tools from sleeping Welshmen to repair the trailer after a road accident had removed the undercarriage from the box. They finally knocked me out of bed at 7.30 a.m.

Penguin has gathered more gold dust, Snowdon at last had been soared (is this the first time?) and we were in the lead in the contest.



Our Overcrowded Air!

FIGURES for aircraft movements at the world's leading airports during 1962 have been analysed by the French magazine *Aviasport*, which gives a table comparing aircraft movements at the leading airports of London and Paris with airports in the U.S.A. which report a similar number of movements. The last column shows how far each comparable airport is down the list of U.S. airports arranged in order of traffic density. As *Aviasport* points out, U.S. airports deal with *all* kinds of aircraft, from jets to tourists. This is the list:

European Airports	*Aircraft Movements*	*American Airports*	*Aircraft Movements*	*Order of Traffic Density in the U.S.A.*
London, Heathrow	156,085	Fullerton, California	156,538	49th
Paris, Orly	89,235	New Castle, Delaware	89,661	143rd
Paris, Le Bourget	59,700	Lynchburg, Virginia	59,726	194th
London, Gatwick	44,897	Binghampton, New York	45,620	288th
Heathrow + Gatwick	200,982	Santa Monica, California	209,906	19th
Orly + Le Bourget	148,935	Oklahoma City	149,433	57th

A SKYLARK'S VIEW OF THE U.S. NATIONALS

by RICHARD H. JOHNSON

MY new Skylark 4 arrived in Houston, Texas, via sea freight in May. The next three weeks of my spare time was spent installing instruments, oxygen, and other gear in the Skylark, and at the same time fitting my Adastra trailer so that it could carry the Skylark as an alternate load.

Before leaving for Elmira, I found time to make only one aero-tow and five auto-tow launches. This was not as much practice as I had hoped to accumulate, but the Skylark is easy to fly and I found I was completely at home in it after the first 10 hours of flying.

My wife, Alice, and I had a hard three days' drive from Texas to Elmira. By not stopping to eat *en route*, we arrived just in time to attend the prerequisite pilots' briefing the evening before the contest's start.

JULY 2ND.—148-mile Triangle Speed Race, 52 miles N.W. to Dansville, 38 miles S.W. by S. to Wellsville, and return to Harris Hill, Elmira.

Moist gulf air was being carried north on light southerly winds, a fairly heavy haze restricted visibility to 3-5 miles, and a Canadian cool front, some 150 miles N.W., was approaching at a moderate rate. I crossed the starting line about noon, as did most of the other 48 entered pilots. All appeared to be going well along the first leg when I caught sight through the haze of a line of cumulonimbus moving rapidly towards the course from a north-westerly direction. It turned out to be a rapidly moving prefrontal squall line that steamed over competitors, crews, and all, in a violent manner before anyone could exceed the 35-mile minimum contest day mark.

I was as far along course as anyone when I reached the fast-moving wall of rain, but elected not to push on through because I could not maintain the two-mile minimum visibility required on the heavily congested airways where we were flying. Instead, I counted sailplanes, both in the air and on the ground, and decided that the required 10 would not exceed 35 miles to make it a contest day. Since I had 6,000 feet of altitude and did not relish the thought of trying to secure my Skylark in the rain and heavy winds, I turned tail, landed on Harris Hill 20 minutes later, and put the machine safely in the hangar before the storm's arrival.

JULY 3RD.—Distance Along Fixed Line, 47 miles N.E. to Courtland, 47 miles back to Harris Hill, then west on 271° course as far as possible.

The Canadian cool front had pushed through Elmira during the previous evening, leaving the air cool and relatively dry. The winds were strong, being 30 knots from the N.W.

I was the first to take off, taking an 11.00 a.m. start. This was a bit early, but since Harris Hill faced the N.W. wind it would be no problem staying up until adequate thermals developed. I soared the Skylark on combinations of weak broken thermals and ridge lift until I considered conditions good enough, then went out on course. I cruised conservatively at about 60 knots between the broken thermals and maintained

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respectable altitudes. Cumulus clouds formed along the route with bases at 7,000 feet and tops near 11,000 feet. It would have been to some advantage to cloud-fly here, but the entire course lay on airways, and VFR flying only was permitted for the sailplanes.

On the latter portion of the return leg, I began flying with Bernie Carris in the RJ-5. We apparently were in the lead and the race was on. He had a bit better glide ratio and more speed on the straightaway, but I could outclimb him somewhat in the thermals. We passed back over Harris Hill together at about 5,000 feet altitude and started on our final westward course. Although it was only 4.00 p.m., conditions began to weaken while the cold N.W. wind appeared to blow harder. Bernie could not maintain more than a few thousand feet of altitude now, and on no less than three occasions I thought he was about to land. I maintained altitudes of 5,000 to 7,000 feet but made only slow progress along the course.

By 4.30 p.m. I, too, was losing altitude but had left the RJ-5 somewhere behind. The strong quartering headwind made it impractical to circle in weak lift. Since I could find only weak lift now, I soon found myself slope-soaring on a ridge 38 miles out from Harris Hill. After some 10 minutes here waiting hopefully for a thermal, who should come along but Bernie Carris in the RJ-5! We slope-soared together, then found one last usable thermal to climb in. We both drifted back badly in the wind, but I managed to climb the Skylark 2,000 feet and was able to glide to a landing six miles beyond the ridge. Bernie did not climb quite as well and landed 1.5 miles behind me.

Leading Scores, First Day

Pilot	*Sailplane*	*miles*	*Pts.*
Johnson	Skylark 4	137.6	1000
Carris	RJ-5	136.0	988
Zauner	Ka-6	115.9	842
Bikle	Prue Std.	115.9	842
Witek	Foka 4	115.9	842

JULY 4TH.—151-mile Goal-and-Return Speed Race, 75.5 miles E.N.E. to Norwich and return.

The cool Canadian air continued to flow down from the N.W. The wind velocity eased somewhat—to about 22 knots.

Although I could have made my start considerably earlier, I delayed until 12.40 p.m. in an effort to take advantage of the best part of the day for the task. I found conditions poorer than I expected. About 35 miles out we struggled under small thin cu and had difficulty staying above 3,500 feet. Here I flew with Bill Evans in his new Sisu 1A, Adam Witek in a Foka 4, and Harry Higgins in the Elfe PM-3.

Soon it became necessary to cross a dead-looking area downwind of Cayuga Lake. This lake is large and cold, and generally plays havoc with convection to its windward. Bill Ivans led out and the rest of us followed a few miles behind. Near the far side I could see Bill run out of altitude and land just before he could reach the small cumuli beyond. Harry Higgins in the Elfe and I were now together and down to 1,500 feet several miles short of where Bill went down. It was mainly Harry's excellent thermalling and search manoeuvring that got us both out of that hole and to the safety of the cumuli beyond.

Harry and I flew together to the turnpoint at Norwich. Although the Elfe circled in large turns, it climbed surprisingly well, but not quite as good as the Skylark, of course. As with my previous day's experience with the RJ-5, Harry had the edge on glide ratio and speed but the Skylark's superb climbing performance enabled me to keep up with the Elfe for the time being.

On the return leg Harry and I went on somewhat different courses and I saw him no more. He evidently did well, as he was one of the six who managed

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to complete the course. I flew with many on the return leg but ended up racing with A. J. Smith in his new Sisu Ia. Same story on glide ratio, speed and thermalling as with the RJ-5 and Elfe, but apparently the Sisu had the edge here because after a 30-minute contest A.J. managed to get some two or three miles ahead of me.

It was now 5.30 p.m. and conditions weakened rapidly. My hope for completing the task dimmed. I knew if I was to beat A. J. Smith I would simply have to outlast him in the weak final thermals of the day. This I managed to do by two miles, but my performance for the day was 7th as I was forced to land nine miles short of Harris Hill.

Leading Scores, Two Days

Pilot	*Sailplane*	*m.p.h./ miles*	*Total pts.*
Bikle	Prue Std.	27.7	1738
Higgins	Elfe	29.4	1702
Johnson	Skylark 4	142.2	1677
Carris	RJ-5	132.7	1620
Witek	Foka 4	141.5	1516

JULY 5TH.—67-mile Goal-and-Return Race, 33.5 miles N.E. to Ithaca and return.

The cool Canadian air was fortified by a secondary outbreak during the early morning hours which caused the air to be very unstable and the wind to blow a fierce 35 knots from the N.W.

I crossed the starting line at about 12 noon, stayed high but had a devil of a time trying to keep from being blown off course. Lift was strong, generally 3 to 4 metres per second, but the wind appeared to move the cloud shadows faster than the automobiles travelling the highways! I flew alone and felt somewhat lucky when I completed the course in 2 hours and 10 mins. This was 8th best for the day, the speed merchants winning the top points with the heavier ships. Dick Schreder in his HP-11 did best with an amazing 47.1 m.p.h .

Leading Scores, Three Days

Pilot	*Sailplanes*	*m.p.h.*	*Total pts.*
Carris	RJ-5	36.6	2419
Johnson	Skylark 4	30.9	2367
Bikle	Prue Std.	27.2	2358
Moffat	HP-8	45.8	2317
Witek	Foka 4	33.3	2252

JULY 6TH.—172.5-mile Goal-and-Return with Free Distance thereafter, 86 miles N.E. to Conastota and return.

The cool Canadian air was still pouring down from the N.W. but its velocity had moderated to about 20 knots.

I took off at 10.50 a.m. and started out on course soon thereafter in order to attain as much mileage as possible. 15 miles out I was down below 2,000 feet for a period and thermalled with a Schweizer 1-23D for a time while slowly extracting myself from this hole. The 1-23 appeared to thermal well, and I found I was unable to outclimb it in this instance. With my delay a number of sailplanes were now ahead of me along the course. I soon joined A. J. Smith with his Sisu and we worked thermals together, but independently, each trying to out-do the other. Thermals were 1 to 2 m/s which did not give A.J. much chance to use his superior speed performance. Finally, by finding a lucky 3 m/s thermal, I was able to get ahead of A.J., and managed somehow to stay a bit ahead for the rest of the day, except for a brief unhappy period which I will describe later.

Only a few thin cumuli along the route, with bases at 5,000 feet. No cloud-flying again—airways everywhere. Halfway back the thermals slowly started to weaken. Had a bit of a problem with the cold air downwind of Seneca Lake but made it successfully after a 1,900-foot low point. On the last 25 miles back I saw a Schweizer 1-23H-15, flown by Walter Cannon, stay annoyingly ahead of me about two miles. I knew the Skylark should easily overtake him, but it just didn't happen! Finally, I ignored better judgment and pushed on by Walter at the expense of considerable altitude so that I could arrive at Harris Hill before he did. Walter prudently stopped and climbed in a not-too-good thermal and I pressed on under him trusting to find something better—a task which I failed miserably.

I came over Harris Hill at 2,000 feet, then turned straight downwind looking for a thermal on the lee side. Nothing but down, and plenty strong! In 3 minutes I was down to 500 feet and over the heart of Elmira. One quick pass over a smoke stack at a power station netted nothing. I made almost final plans to land at the city's outskirts near a TV

antenna tower, but found I could just squeeze in one pass over a railroad round-house while approaching the field. Now down to 340 feet, I was literally pulling up on the Skylark control stick trying to stay airborne. I found zero sink over the round-house; so I circled for all I was worth to stay up. A light 10-knot wind drifted me southward toward a good ridge two miles away. I knew that if I could maintain my weak thermal until it drifted into the ridge, most surely I would then be able to climb. This is exactly what happened. Meanwhile, Walter Cannon passed over me some 3,000 feet above. A. J. Smith also passed over in his Sisu, but not so high.

It was really weak now and I treated each thermal as if it were the last. Soon the Sisu was down, and I had managed to get the Skylark up to 3,000 feet. It took another 20 minutes for me to see Walter land his 1-23H-15, but I was determined now to make up for some of my previous foolishness. By working each bit of thermal and/or ridge lift exhaustively, I managed to keep the Skylark airborne until 7.50 p.m., landing just before dusk 74 miles S.E. of Elmira. This was second best distance, Bernie Carris went south from Harris Hill and managed to go 20 miles farther.

Leading Scores, Four Days

Pilot	*Sailplane*	*Miles 6th*	*Total pts.*
Carris	RJ-5	263.1	3419
Johnson	Skylark 4	243.7	3293
Moffat	HP-8	241.9	3236
Bikle	Prue Std.	200.8	3121
Zauner	Ka-6	205.6	2969

JULY 7TH.—Free Distance.

The cool Canadian air was again reinforced by a secondary outbreak and the wind blew at a fresh 20 knots from the N.W.

A straight downwind run would be best for speed, but the Atlantic Ocean would loom up before 200 miles had passed. The choice was one of two: either go east in a crosswind toward Cape Cod, Mass., or south in a crosswind toward Washington, D.C., and Virginia. I elected to try the latter.

Again little cloud-flying because of the innumerable airways, although it would have been of considerable help during the first two hours when the cloud bases were not high. Near Harrisburg 100 miles south I joined René Comte in his Skylark 4 and Adam Witek in his Foka. After two thermals together we parted, my course going west to theirs. On approaching Baltimore the haze became moderately heavy and both the thermal strengths and wind velocity slackened. I struggled for two hours more and landed 275 miles out for 4th best distance. George Moffat in his HP-8 and Gleb Derujinsky in his Sisu 1A practically tied for first by going nine miles farther. Although independently, both flew well west of Baltimore until they reached the Blue Ridge Mountains which faced the prevailing N.W. wind. They then ridge-soared until almost dark. Gleb Derujinsky even encountered a small lenticular cloud while on these ridges and made an attempt to contact its lift. He failed to do so and the attempt cost him a number of miles that he might have added otherwise.

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Leading Scores, Five Days

Pilot	*Sailplane*	*Miles 7th*	*Total pts.*
Johnson	Skylark 4	275.0	4259
Moffat	HP-8	284.7	4232
Carris	RJ-5	227.4	4218
Zauner	Ka-6	228.6	3772
Bikle	Prue Std.	179.2	3750

JULY 10TH.—80.5-mile Triangle Speed Race, 25 miles S.W. to Elkland, 30 miles N. to Hammondsport, 25 miles S.E. to Harris Hill.

The cool air still flowed toward Elmira from the N.W., but now only at 15 knots, and the air contained more moisture than we had become accustomed to. Alto-stratus kept most of the sun's heat

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from reaching the ground and thermals did not form well. It would be a tricky day, and I hoped I could see fit to do the right things. I took off at 11.50. At 12.30 a number of small cumuli formed and the task appeared possible. I made a pass through the starting gate and was joined by about 15 others. After going a few miles, I decided against continuing and turned back. Of those who continued few survived the course.

The longer I stayed around Harris Hill the worse conditions became. By 2.30 p.m. I was down to 500 feet above Harris Hill. Almost everyone else either landed at Harris Hill or along the course. I now wished I had gone with my 12.30 start because I then would have at least a few contest points should it turn out to be a contest day.

As is happened, my luck held out. I gradually climbed to 3,800 feet and made another start. Soon afterwards I was joined by Adam Witek in his Foka and Rudy Allemann in his Ka-6. It was difficult going the first 15 miles but then clouds built as we approached the first turn. Witek and I climbed to the 6,000-foot cloud bases. Again those airways and no cloud-flying. There were several large tempting cumuli on the second leg towering to about 20,000 feet and a climb in one of them would have made that 30-mile upwind leg easy. As it was, I went along as best I could below the bases, almost being forced to land once when down to 800 feet.

I finally made the second turn and headed back for a relatively easy last leg, completing the task in 3 hrs. 10 mins. In the meantime Dick Schreder made it back just in time to make a second start before the starting gate closed at 4 p.m. This time around he took only 2 hrs. 10 mins. and earned top points for the day.

Leading Scores, Six Days

Pilot	*Sailplane*	*m.p.h. 10th*	*Total pts.*
Johnson	Skylark 4	25.4	5010
Carris	RJ-5	26.5	4973
Schreder	HP-11	37.9	4693
Moffat	HP-8	47.6*	4622
Witek	Foka 4	28.3	4418

* *miles distance*

JULY 11TH.—Free Distance.

The monotonous cool Canadian air was still with us for the final contest day. Wind W. at about 10 knots and increased moisture in the air.

Which way to go was the big question. Some alto-stratus still remained, and there were indications that the clouds would overbuild into thunderstorms early in the day. With only a 37-point lead, I was quite intent on finding the best possible course. That day sailplanes went in all directions from Harris Hill. The most successful group went S.S.W. to the Pittsburg area; the second best group went E. toward Connecticut, I being in the latter group.

At first I tried to maintain a N.E. course and detoured to the west of each thunderstorm encountered. Finally, I came to one too big to circumvent to the west and had to press on where I could find lift to the S.E. West of Albany I was able to contact a squall line along which I rode for some 40 miles until it became lost in the Catskill Mountains west of the Hudson River.

Here I found a cloudless area 25 miles wide that I would have to cross before I could reach the clouds on the far side. I had 2½ m/s climb under a large cumulus, but as usual I was on an airway. Determined to fly by the rules, I went a few miles south to see if I could find suitable lift there off the airway. No luck. I found only zero sink at best. In frustration I swung back north toward the broken squall line but found only heavy overcast and no lift. It was now more impossible than ever to cross the widening cloudless area to the east; so I again headed south along the eastern edge of the Catskill Mountains looking for any kind of lift.

This time I found it, marked by two hawks in a sunlit area, and off the airway for a change. I climbed at 2 m/s,

reached cloudbase at 5,000 feet, turned on my gyros, and climbed on in. I climbed at 3 to 4 m/s and soon reached 10,000 feet where the light rain began to turn to ice. Since I was still close to an airway to the east, I headed south until clear, then east on course. I thought I had plenty of altitude but the cumulus east of the Hudson River had receded to almost the Massachusetts border by the time I caught up to them. I was never able to climb to cloudbase thereafter, but did manage to continue on in weak lift for another 32 miles and landed 210 miles out. It was lucky for me that I did make those last two miles because as it turned out Bernie Carris had made a good flight that day and narrowed the 37-point gap to a mere 8 points!

Bernie flew 217.5 miles and landed near Pittsburg. The best flight this day was 258 miles made by A. J. Smith in his Sisu. I felt quite happy to have the contest close at this point.

Leading Final Scores

Pilot	*Sailplane*	*Miles 11th*	*Total pts.*
Johnson	Skylark 4	210.0	5824
Carris	RJ-5	217.5	5816
Witek	Foka 4	238.9	5344
Schreder	HP-11	142.3	5245
Moffat	HP-8	141.5	5170
Bilkie	Prue Std.	204.0	5037
Comte	Skylark 4	228.4	4536
Zauner	Ka-6	148.0	4464
Schweizer	Schweizer 1-29	164.9	4450
Smith	Sisu 1A	258.0	4432

Airspeed Indicators

IF a glider is fitted with an airspeed indicator whose scale only extends to a figure which is less than the never-exceed speed of the glider, then a dangerous situation can occur in which the never-exceed speed is in fact exceeded without the pilot being aware of it. For example, if a glider having a never-exceed speed of 108 knots I.A.S. is fitted with an A.S.I. having a maximum indication of 100 knots, then a pilot might fly at, say, 115 knots without being aware that he was going faster than 100 knots.

This example assumes that the instrument has an internal stop which prevents the needle moving beyond the end of the scale. In some instruments, the needle will go beyond the end of the calibrated scale, and instances have been noted in which a 100-knot instrument has been installed with the never-exceed speed marked as a red blob beyond the end of the scale. Such an arrangement is unsatisfactory because the bellows are being subjected to a greater deflection than the makers intended.

To obviate this danger, the Technical Committee has instituted the following rules and procedure:—

1. After 1st January, 1964, B.G.A. Certificates of Airworthiness will only be renewed if the Inspector signifies that the glider is fitted with an airspeed indicator whose maximum scale reading exceeds the never-exceed speed by at least 5%, that the needle will reach the end of the scale before its travel is limited by a stop, and that he has calibrated it against a suitable standard. The revised version of Form Insp/2 will incorporate suitable wording.
2. All C's of A. of cloud-flying gliders will be endorsed with the following:

   This certificate is only valid if the glider is fitted with an airspeed indicator having a maximum scale reading of at least . . . knots/m.p.h./k.p.h.

   This will not be affixed to non-cloud-flying C's of A. because some training machines (e.g. Tutors) may be flown without instruments.
3. When a new machine is obtained from a manufacturer without instruments being fitted, it will be the owner's responsibility to ensure that an appropriate instrument is fitted so that the C. of A. remains valid up to the time of the first renewal.

F. G. IRVING,
Chairman,
B.G.A. Technical Committee.

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Belgian Competitions

EDDY VAN BREE, one of two visitors from Holland, won the Belgian National Championships which were held at Mons Aerodrome from July 18th to 28th. H. Stouffs, of Belgium, came second. There were twenty-two entries; the sailplane types were ten German, nine Polish, two Dutch and one Czechoslovakian. Leading final totals were:

Pilot	*Sailplane*	*Pts.*
Van Bree	Ka-6	4570
Stouffs	Ka-6	4232
Lacroix	Mucha	2691
Cartigny	Foka	2371
Litt	Jaskolka	2267
De Dorlodot	Ka-6	1869
Smet	Super Sagitta	1851
Sander	Mucha	1766
Drory	Ka-2	1753
Dury	Blanik	1671

CHALLENGE VICTOR BOIN

Another Belgian annual contest, the Challenge Victor Boin, named after the chairman of the Royal Belgian Aero Club, was likewise won by a Dutch pilot, with a Belgian in second place. It is a one-day international event, and in 1959 it was won by David Ince (U.K.) flying an Olympia 419. This time the contest was flown from a Dutch aerodrome at Woensdrecht, and the entries were four from Belgium and 13 from Holland. Four Dutch-owned Skylark 2's took part, the best achieving fifth place.

The day, July 6th, dawned with an overcast, but the weather improved about noon. G. J. Ordelman in a Dutch Sagitta won with a 219-kilometre (136 miles) into Germany, and H. van Treck, of Belgium, in an L-Spatz, came second with 149 kilometres (92.6 miles). Leading pilots:

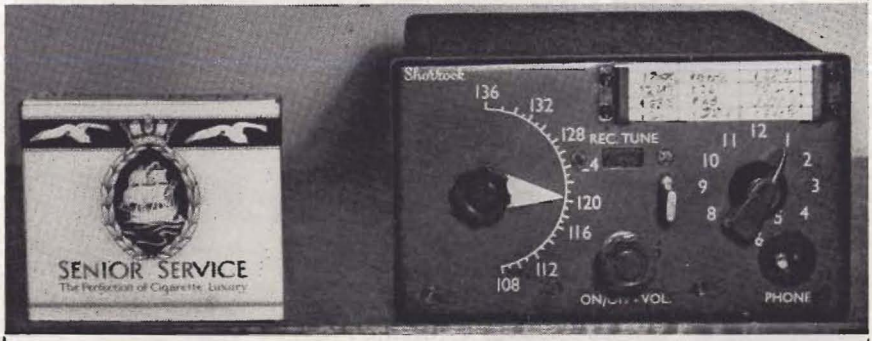
Pilot	*Sailplane*	*Km.*
G. J. Ordelman (Holl.)	Sagitta	219
H. van Treck (Belg.)	L-Spatz	149
A. Breunissen (Holl.)	Ka-6	125
E. T. Reparon (Holl.)	Sagitta	113
A. K. Szabo (Holl.)	Skylark 2	97
E. F. van Bree (Holl.)	Ka-6	92

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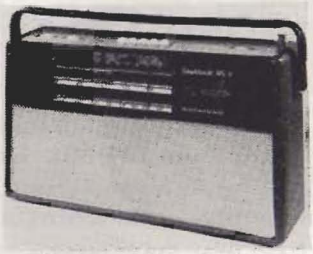
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The Elusive Polar

by PHILIP WILLS

THE potential buyer of a new sailplane has to consider a large number of questions, and decide what he will buy after balancing the value to him of various factors: for he cannot get everything.

Apart from price, considerations include: stability and handling, manoeuvrability, speed and ease of rigging, repairability, cost of maintenance, ability to land in small fields and to take off and land on rough ground, cockpit comfort and pilot's view, size, which to some degree affects ease of handling on the ground, size of trailer and tow-car—and, of course, performance. This is generally assessed on the Polar Curve, and the choice here lies in general on deciding how much importance is attached to the left-hand sector—the climbing regime—and how much to the right-hand one—the cruising regime.

Up to recently, the emphasis, performance-wise, in this country has been on getting to the top of the thermal as quickly as possible, with some sacrifice of speed to the next one. This presumably because of our temperate conditions. Now fashion is swinging towards wearing the polar more to the right.

Of course, designers attempt to get the best of both worlds, but this all too quickly leads to extremes in complication, and hence price, and consequently to the sacrifice of a good number of the other requirements.

When looking at the above list, whereas all but the last can fairly speedily be assessed by the manufacturer and user, it seems well-night impossible to obtain real cast-iron polar curves for sailplanes. The reason is not far to seek—the work involved is expensive, time-consuming and even dull. Until someone thinks of a better way, what is required is a large number of aero-tows to considerable heights with specially instrumented sailplanes in calm air—usually therefore at unearthly hours in the early morning—followed by hours and days of dull mathematical computations.

We really must try and overcome this problem, and not only in this country, but in the meantime the—very second—best is to indulge in comparison flying. Since even this involves at the very least one aero-tow to 5,000 ft. for each of the two gliders concerned, it is not cheap, but it is interesting enough to expect a number of pilots to try it out, and even a number of single reports coming from several different pairs of pilots from different parts of the world will, taken together, give some reasonable idea, not of absolute, but of relative performances. If these reports are sent to the manufacturer concerned, it would enable him to produce something at least likely to be more reliable than the third, least satisfactory, method of all—calculated polars.

The following notes may help:

(1) The thing is enormously easier if each glider concerned is equipped with

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radio, so that the pilots can talk to each other and one of them can give data (heights, speeds, etc.) to the ground.

(2) The test must be carried out above any unstable layer of air.

(3) The two aircraft should fly approximately level with each other, about a span apart. If one is up to 3 yards behind the other, it helps; but not too far, otherwise the wake of the leading one may advantage the one behind.

(4) There is a tendency for one or both pilots unconsciously to apply a little rudder, to keep away from the partner. It is wise therefore to put a wool-tuft on the perspex cockpit-cover in front of your nose, as this very sensitive slip indicator will immediately show this up.

(5) It is best to start in the low speed range, for obvious reasons. A comparison at this end takes longer than you would think. Given a minimum sink around 2 ft./sec., 5 minutes' flying will cost 600 ft., and if by then one aircraft is 25 ft. higher than the other, this indicates a superiority of 4%. Quite a lot.

(6) The start of the test should be signalled to the ground, with the speed and height, who then press a stop-watch. The best measure of height difference is the fuselage-length of the glider—say 25 ft. When both parties agree that one machine is around one fuselage-length higher than the other, tell the ground, giving altitude, which then stops its watch. The speed and time will give approximately the air-distance flown. Tap the altimeter before giving starting and finishing heights.

From these data, the distance, time and height-loss, an approximate comparison will emerge, which should be quoted as a percentage.

(7) Do *not* think this will give anything like a figure of true corrected sinking speeds. The two A.S.I.'s may read slightly differently, due either to different Position Errors, or one being out of calibration. The air is almost certainly not truly stable, and is certainly not a "standard atmosphere". The wings of each aircraft may be covered with dust or squashed flies, accreted since take-off. Dozens of calculations are required, and dozens of readings, before a true corrected point can be plotted on the polar.

1964 DIARY

CHRISTMAS CARDS

Orders are now being accepted for the 1964 edition of the B.G.A. diary, and the new Christmas Card.

THE DIARY is this year covered in dark red leather-cloth and is again 5/-, plus 3d. postage.

THE CHRISTMAS CARD has a colour photograph of a P—21 and Tug before take-off in snow. The price is 9/- per dozen, plus 1/- postage.

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But the figure you get may be of *some* direct use: you may get some idea of the real performance you can expect in real air from your actual glider when covered in real dust and squashed flies. Come to think of it, this may matter more than anything else.

(8) If the original aero-tow is 5 miles down-wind, the end of the first test (up-wind) may bring one over the airfield again with, say, 4,400 ft. to go, and still 2,000 ft. of stable air below. The pilot slightly to the rear will have been "in charge" (because he can see more of what is going on), so it is useful then to use airbrakes to level up the aircraft again, go straight ahead and repeat the test with the previous leading pilot dropping slightly back and taking charge.

(9) If there is still useful height available, turn down-wind towards the airfield and do another test in the higher speed range. Here the differences in performance are likely to be larger, so although height is lost more quickly, a fuselage-length height-difference will be achieved more quickly.

It is not much good going on after

this amount of height difference has been established, because thereafter the two pilots' estimates of the difference will vary wildly.

(10) When sending in your results, include any substantial differences in the configuration of each glider—viz. differences in pay-load (difference in pilot weights, weight of instrumentation such as one machine having accumulators installed for electric services, the other not, etc.), any non-standard features on either machine likely to affect the drag, one machine being old and wrinkled and the other spanking brand-new, etc.

Please will lots of people play, and *report* their findings. Even if you can only do a single test, from this, added to lots of others, will emerge some sort of a picture, and put an end to some of the nonsenses bandied around. If we have so far had to buy gliders based on performances calculated in optimistic designers' heads (for if a designer was not an optimist he would commit suicide), the remedy lies partially in our hands.

* * *

At Wombleton on August 2nd we carried out two comparison flights, one between my Skylark 4 and Alf Warminger's 419, the other between the 4 and Tony Gaze's Austria.

The first tests, made at 47 kts., 60 kts., and 70 kts., indicated that up to about 50 kts., the 4 was superior; thereafter the performance seemed indentical. The 4 had skid and no fixed wheel. The 419 was flying with approximately 30 lbs. more pay-load.

Against the Austria, tests at 51 kts., 58 kts., and 70 kts., indicated that the curves crossed at around 54 kts.—up to that speed the 4 was better, thereafter the Austria, and substantially so at higher speeds.

These were single flights, and so not of course conclusive: I report them now simply in the hope that others will check and send their findings in.

Examples of what *not* to send:

1. The last thermal took me to 5,000 ft. after which I glided 40 miles. Your glider is *wonderful.*
2. Ditto . . . ditto 10 miles. Ditto . . . ditto . . . lousy.
3. At 70 knots its sinking speed is only 3 ft./sec. Marvellous!
4. Ditto . . . ditto 20 ft./sec. You should be shot.

Such information is not sufficiently full to enable anyone to form any conclusions on it, except possibly some tentative ones about the sender.

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AP745

Regionals at Dunstable

NOTE.—*We are indebted to Mike Garrod who gave the forecasts at briefings and for the accompanying notes on each day's weather, which are printed in italics.*

THIS is the second time that the London Gliding Club organised these Regionals, which were held from the 27th July to 5th August.

Out of the 37 pilots and 25 gliders entered for this contest, quite a number started to arrive on Friday afternoon, and soon there was an expectant atmosphere building up amidst the hustle and bustle of the final arrangements. At 16.10 Humphry Dimock flew in from Lasham (60 miles); it took him 1 hr. 40 min. and he averaged approximately 39 m.p.h. The second to arrive in style was Peter Scott, who had had the same idea as Humphry, and had left Nymsfield (75 miles) at 15.45, to arrive at Dunstable at 18.25 with an average speed of 37 m.p.h. Peter had not flown since the Nationals and welcomed this opportunity of a practice flight.

Saturday, 27th July

After John Furlong had introduced the officials and helpers, Mike Fairman set the task, a 115.7-km. triangle (71.9 miles): Steeple Morden, Podington, Dunstable. First take-off at 13.30. X = 20.

An anticyclone was centred over the southern North Sea, with a ridge extending to the west. Over south-east England the winds were light, ten knots or less, mainly from the north-east. There was a marked inversion at about 5,000 feet above sea level, but up to this height there were good thermals, marked by 1-2/8 of shallow cumulus. Soaring was possible well on into the evening.

Competitors were eager to get airborne, and the first pilot crossed the starting line at 13.52. Eighteen out of the 25 gliders finished the course, Peter Scott being the fastest with 1 hr. 47 min., and Gordon Camp in a Sky the slowest with 3 hrs. 41 min. Of the few who missed out on this day two were rather unfortunate. Stuart Fursman, who had landed at Podington, was knocked over by a Grunau Baby which was coming in to land, and had to be taken to hospital, where they found he had a broken neck vertebra. His crew also met with an accident on the way to Podington and had to be taken to hospital for treatment, so they had to retire from the contest at this early stage.

Humphry Dimock just failed to get back to the site and had to land on the other side of the road, damaging his glider fairly extensively in doing so. This put him out of the contest for the next two days. While all this was going on, Peter Scott went round the course for the second time but found he had been 4 min. slower than the first time round.

Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*	*Pts.*
Scott	Oly. 419	39.9	1000
Scarborough	Skl. 3F	34.6	826
Zeally	Ka-6	31.4	805
Riddell	Skl. 3F	33.9	777
Ismail	Skl. 2	30.4	762
Neaves	Fauv.	29.9	743
Redman	Sky	28.1	711
Richardson	Skl. 3F	30.0	695
James	Oly. 2	25.0	689
Bentson	Skl. 4	29.6	685

Sunday, 28th July

Task: Distance along a line through Long Mynd (108.5 miles) and Holyhead. X = 15.

The synoptic situation had changed little since the previous day, but subsidence in the ridge of high pressure had lowered the inversion to around 3,500 or 4,000 feet above sea level. There was still, however, instability beneath the inversion once the temperature got up. Shallow cumulus formed quite early in the morning, the base rising above 3,500 feet during the afternoon at Dunstable. Further north-west the inversion was a little higher, and dry thermals were rising to 5,500 feet above sea level. It was again possible to remain airborne well on into the evening.

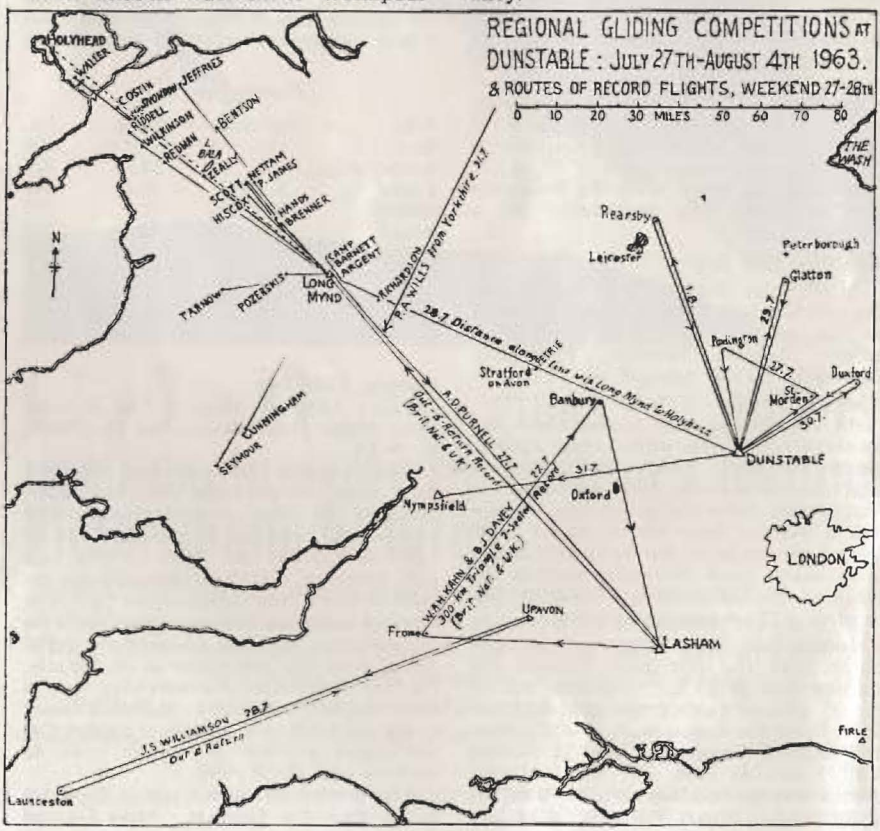
The conditions turned out to be a lot better than the forecast. Mike Garrod

said afterwards that on the information he had he did not think that pilots would get much further than the Long Mynd, and this may have been partly the reason why the line was to go through Holyhead, as it was thought unlikely that pilots would get into Wales.

An outstanding flight by Stuart Waller in his Swallow won him the day. Once he got into Wales he made for the sunny sides of the hills, which gave him sufficient height on every occasion to cross into the next valley. He arrived at Snowdon at 18.00 hrs. with 2,000 ft., and he then fulfilled one of his ambitions by climbing to 4,500 ft. and flying over Snowdon to his landing place at Aberffraw in Angelsey, 188 miles away.

Mike Riddell went on to Welshpool after he had passed the Long Mynd and got up to 4,500 ft. near Llanfair-Caereinion; from there he reached the west side of Lake Vyrnwy where once more he climbed to 4,600 ft. which took him to Lake Bala. He then decided to leave track, as in the distance small Cu were forming in the Portmadoc area. He arrived at the reservoir with 1,000 ft. and his final thermal took him to 2,500 ft., which was enough to land him at the foot of Snowdon at Bedgellert.

Chuck Bentson had more difficulty and tried wind-shadow thermals. These, however, did not go much higher than 2,000 ft. and he only had just enough height to clear the various hills to give him more breathing space in the next valley.



Peter Scott and Hugh Mettam found themselves in a dead-end valley with not enough height to clear the mountain in front of them. Although able to maintain height for some time, they finally had to land with rather a small choice of fields. Peter landed in the field he had picked as an overshoot, but Hugh thought this rather small to contain two gliders and landed in the next field up, only to find that this was rather steeper than anticipated and, after landing the glider, he rolled backwards into a hedge, damaging the rudder and elevator.

Dudley Hiscox also damaged his glider when he landed at Fronheulog 136 miles away and he retired from the competition. He very kindly agreed to his rudder and tailplane being used on Hugh Mettam's glider and therefore only one day's flying was lost.

Very unfortunately Stuart Waller's crew had an accident with the trailer which damaged it badly enough to delay their return to Dunstable for a whole day, and although briefing had been deferred to noon, they could not be back to fly the next day.

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Longest Distances

Pilot	*Sailplane*	*mls.*	*Landed at*	*Pts.*
Waller	Swl.	188	Aberffraw	1000
Costin	Oly. 2	174	Betws-Garmon	924
Wilkinson	Fauv.	166	Pontcroesor	778
Riddell	Skl. 3F	172	Bedgellert	758
Jeffries	St. Aus.	165	Fronfrancis	745
Redman	Sky	156	Trawsfynydd	736
Zeally	Ka-6	149	Llanuwchllyn	708
James	Oly. 2	137	Llangynog	703
Bentson	Skl. 4	155	Glasfryn	646
Scott	Oly. 419	139	Rhydyfelin	599
Mettam	Skl. 3B	139	Rhydyfelin	599

Leading Totals, 2 Days

Waller & Pennycuick	1670	Wilkinson & Neaves	1540
Scott	1599	Zeally	1514
Riddell	1563	Redman	1447
Costin & Collinsplatt	1561	James	1392

Monday, 29th July

Task: Out-and-Return to Glatton (86 miles), due south of Peterborough. X = 20.

The ridge of high pressure was still persisting from an anticyclone over southern Norway, the axis of the ridge being over Yorkshire. Winds were light, mainly from the E.S.E. over south-east England. Some drying out of the air had occurred during the night, and although some shallow cumulus formed for a time around midday, convective motion brought about a drying-out of the air at low levels and the cloud disappeared entirely by 2 p.m. Thermals were not easy to work, extending to

about 5,000 feet above sea level, but there were some very powerful cores for those fortunate enough to find them.

Again the conditions were different from the forecast, but this time they were more difficult, and most pilots had to scrape somewhere along the route. The only one to complete the task was Gordon Camp in the Sky; it took him 3 hrs. 13 min. to do so, averaging 16 m.p.h., and only once was he down to 1,300 ft. on the way out. He got his last thermal 11 miles from base, which took him to 2,000 ft., and he glided in from there with 50 ft. to spare. Eighteen other pilots had been observed round the turning-point, but they all sank to earth on the way back.

Tuesday, 30th July

Task: Out-and-Return to Duxford (65 miles) X = 20.

No material change had taken place from the previous day, the ridge of high pressure still lying over Yorkshire to South-west England. Dry thermals were again the feature of the day, being moderate in strength during the afternoon up to 4,500 ft. above sea level, though it was possible to struggle a little above this. Winds were veered from the previous day to about south-east, 10-12 knots.

Thermals were rather late in starting and quite a few pilots needed a second launch to get away. After the slow start, however, some of the thermals had good



Photo by M. Garrod

One glider flew happily around showing three sets of Comp Nos., all different.

Daily Score

Pilot	*Sailplane*	*Pts.*
Camp	Sky	1000
Neaves	Fauv.	747
Zeally	Ka-6	682
Daniell	Skl. 4	615
Richardson	Skl. 3F	597
James	Oly. 2	594
Scarborough	Skl. 3F	578

Leading Totals, 3 Days

Neaves & Wilkinson	2287	Camp	2014
Zeally	2196	Scott	1994
		James	1986

cores, and soon pilots were on their way. Gordon Camp was first across the starting line, but a little later had a desperate struggle at 600 ft. over Letchworth. After he had recovered from this, he says, the rest was straightforward, but being rather over-cautious he took too much height for his final glide, only to find that he was the first to arrive back at Dunstable. Only five pilots completed the task and twelve went round the turning-point. In fact, the large gaps between the thermals brought a lot of pilots down so low that they were unable

to recover enough height to go on.

Peter Scott ran into strong sink on his final glide and missed getting in by one field, thus losing him all the speed marks. Another pilot who nearly got home was Humphry Dimock, who was flying for the first time after his glider had been repaired in a hurry by Ken Fripp.

Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*	*Pts.*
Camp	Sky	21.32	1000
Hands	Ka-7	20.97	994
Tarnow	Skylark 3	22.50	930
Barnett	Skylark 4	22.10	922
Richardson	Skylark 3F	19.80	885
Pennycuick	Swallow		800
Scott	Olympia 419		728

Leading Totals, 4 Days

Camp	3014	Neaves & Wilkinson	2710
Zeally	2739		
Scott	2722	Daniell & Barnett	2577

Wednesday, 31st July

Task: Race to Nympsfield (75.5 miles). X = 20.

A line of cirrus to the west during the day gave visual evidence of a slow-moving cold front (over Ireland) and some relaxation of the high-pressure ridge had ensued. However, South-east England was still under an easterly anticyclonic flow. Thermal activity was evident quite early in the morning, but was not good until after midday. Soon afterwards the cumulus base was nearly 5,000 feet above sea level, but was very shallow. Further to the west during the afternoon the thermals were much reduced in strength owing to the cirrus cover, and it was not easy to exceed 4,000 feet above sea level. There was also little or no cloud to mark the thermals. Winds were east north-easterly between 10 and 12 knots (almost parallel to the course).

The first launches were taken by Chuck Bentson and Peter Scott, but Tom Zeally in his Ka-6 was first across the starting line. The weather on the whole proved to be better than forecast, and soon after 13.00 hrs. most pilots had crossed the starting line and were on their way. The band of cirrus which could be seen from Dunstable did not in fact stop thermal activity, and 16 pilots reached Nympsfield at speeds ranging from 35.4 m.p.h. to 20 m.p.h. Ron Dodd unfortunately mistook the common next to Nympsfield as the goal, as he saw a group of people sitting in one corner which he thought was the finishing line. Gordon Camp, who had landed only about two thermals away from Dunstable, had the greatest trouble to get hold of his crew quickly; they had overshot him in their eagerness by quite a bit, and it was not until very late when Gordon could set off on another attempt, only to score a few points for the day.

Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*	*Pts.*
Dimock	Skl. 4	35.4	1000
Bentson	Skl. 4	33.4	924
Mettam	Skl. 3B	33.0	909
Neaves	Fauv.	30.6	908
Scott	Oly. 419	32.3	890

Leading Totals, 5 Days

Neaves & Wilkinson	3618	Daniell & Barnett	3416
Scott	3612	Richardson	3414
Zeally	3588	Waller & Pennycuick	3249

Thursday, 1st August

Task: Out-and-Return to Leicester (Rearsby Aerodrome) (124 miles). X = 20.

Pressure fell considerably during the night, and two thundery lows were situated to the south-west and south-east of the British Isles. South-east England was still under the influence of a very light eastery flow, and still very dry aloft. The inversion, however, had risen and weakened considerably to a height of

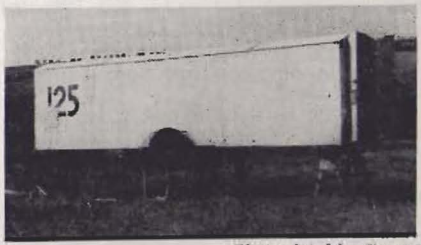


Photo by M. Garrod

This was the state of the Swallow trailer when the glider arrived at Nympsfield.

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around 6,500 feet above sea level. Stratus during the morning took some time to clear off, and a slow burning-off of the surface inversion delayed the better conditions which subsequently developed. By 3 p.m. the cumulus base was about 5,500 feet, but was only a few hundred feet thick. In places the thermals were dry. Some thermals were very powerful, and a dust devil 500 feet tall was observed over a chalk pit near Dunstable during the afternoon. Thermal activity continued until well after 6 p.m. On the northern end of the route, thermals were mostly dry, and it was difficult to get above 4,500 feet, but some were very strong. Winds were light and variable in direction but north-easterly at ground level.

According to the forecast most pilots were fitting their batteries into the gliders for the first time during the contest. However, it was soon apparent that things were going to be different, and the early starters were soon back on the ground. The remainder of the pilots hurried to the starting board to delay their take-off times, Humphry Dimock and Chuck Bentson being the only exceptions as they managed to stay airborne locally for a considerable time waiting for things to improve, which it finally did around 13.00 hrs.

Except for a little cloud over Dunstable which evaporated as soon as it started, most of the flying was done in blue thermals and the late starters never saw any cloud at all. Unfortunately this was the day when we had some tug trouble, and the pilots who had selected later times now found that launching was running behind schedule and were about 20 minutes out. Humphry Dimock was first round the turning-point soon after 16.00 hrs., followed by Chuck Bentson and Mike Riddell. Altogether thirteen pilots got round the turning-point and three landed at Rearsby. Although thermals went on to quite late nobody managed to get back to base. Humphry Dimock was the nearest, landing about eight miles short. Gordon Camp climbed to 3,300 ft. near Market Harborough and landed just north of Northampton at 19.00 hrs.; nobody else landed later than that.

Daily Scores

Dimock	1000	Scott	790
Camp	887	Riddell	775
Jeffries	836		

As this was the last day when flying took place, the final scores will be found in the table of results.

Friday, 2nd August

Rain and drizzle.

Saturday, 3rd August

MORE RAIN AND DRIZZLE.

Sunday, 4th August

RAIN, RAIN and RAIN. The outlook for better conditions was so slim that the organisers decided to declare the contest closed, and prizegiving was arranged for 11 o'clock. Beryl Stephenson was called upon at short notice and kindly presented the prizes to the winners. Peter Scott thanked the organisers and members of the London Gliding Club on behalf of all visiting pilots for all the work they had put in to make this a most successful week.

The London Gliding Club has asked us to acknowledge the following firms and persons for their kind donations and prizes.

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FINAL RESULTS: DUNSTABLE

Final Place	*Pilot or Pilots*	*No. of Contest Day and Date* 1 27th	2 28th	3 29th	4 30th	5 31st	6 1st	*Final Points*	*Comp. No.*	*Sailplane*
1	P. M. Scott	1000	599	395	728	890	790	4402	10	Olympia 419
2	R. A. Neaves & K. G. Wilkinson	762	778	747	423	908	672	4290	197	Fauvette
3	J. G. B. Daniell & R. C. Barnett	584	456	578	922	839	710	4126	81	Skylark 4
4	T. S. Zeally	806	708	682	543	849	420	4008	22	Ka-6
5	C. Richardson	695	388	597	885	849	576	3990	161	Skylark 3F
6	G. Camp	513	501	1000	1000	3	887	3904	64	Sky
7	C. J. Pennycuick & R. S. Waller	670	1000	—	800	779	620	3869	125	Swallow
8	C. W. Bentson	685	646	254	402	924	753	3664	361	Skylark 4
9	D. M. R. Riddell	805	758	381	—	884	775	3603	173	Skylark 3F
10	P. James	689	703	594	0	829	747	3562	127	Olympia 2
11	S. R. Dodd & J. M. Hands	608	592	303	994	331	497	3325	219	Ka-7
12	J. Argent & G. Scarborough	826	456	578	202	769	452	3283	91	Skylark 3F
13	A. Tarnow	647	461	406	930	759	65	3268	9	Skylark 3
14	P. Pozerskis	568	445	318	696	853	282	3162	260	Skylark 4
15	S. J. Redman	711	736	361	477	238	556	3099	206	Sky
16	T. W. Sheppard & J. R. Jeffries	600	745	0	614	272	836	3074	272	Std. Austria
17	G. Collinsplatt & J. Costin	637	924	0	138	809	542	3050	92	Olympia 2
18	H. R. Dimock	300	—	—	696	1000	1000	2996	228	Skylark 4
19	Rika Harwood & H. S. Mettam	47	599	—	494	909	654	2703	65	Skylark 3B
20	A. R. Ismail & J. B. Brenner	776	571	169	0	315	0	1831	56	Skylark 2
21	A. MacDonald & A. Petric	507	218	455	0	330	0	1510	135	Olympia 2
22	W. May & A. Cunningham	271	228	0	0	526	228	1253	176	Skylark 3B
23	S. Tomlin & L. Seymour	263	200	330	189	252	4	1238	109	Olympia 2
24	D. G. O. Hiscox	219	580	Retired				799	42	Skylark 3B
25	S. Fursman	173	Retired					173	262	Ka-7

NOTE.— A dash indicates that the sailplane was not flown; a zero that the pilot flew but did not score.

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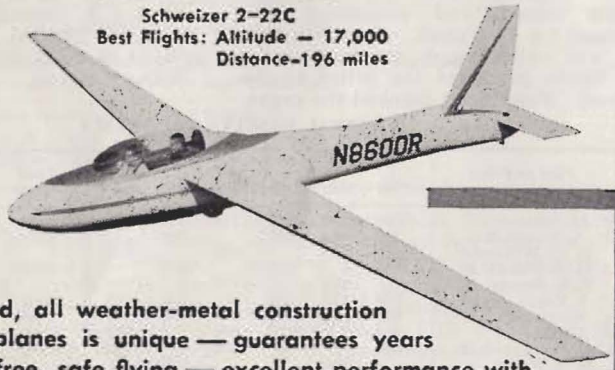
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The Polish Gliding Championships

by E. JERZYCKI

THE 1963 Polish Gliding Championships, held at Leszno between 2nd and 13th June, were considered to be the most interesting so far held in Poland. The weather was, on the whole, good, but by no means excellent, and at times quite tricky—a combination of strong lift and large areas of clamp. Anticyclonic conditions predominated throughout most of the Championships. The task-setting was very ambitious and stretching the pilots' capabilities to the limits. As in last year, a 500-km. triangle was set; alas, no one got round, as conditions on the last leg had deteriorated rather quickly and unexpectedly.

Ten tasks were flown (all closed circuits) in the available 13 days, and the total distance flown was 76,394 km. (47,470 miles). There were 40 entries: 28 Fokas and 12 Jaskolkas (10 per cent bonus). Clerk of the Course was Mrs. I. Zabiello; task-setter: Mr. J. Dankowski.

The winner was a 23-year-old pilot, J. Wroblewski, and the "Argentinian" champions, Makula and Popiel, came 4th and 3rd respectively. As all the tasks were races, the vogue during the Comps. among the pundits was the delaying of the crossing of the starting line, and line recrossing, and it seems that both Makula and Popiel possibly overdid the trick on one occasion.

The first Jaskolka finished in 20th place—a very good effort by L. Merlo, with the rest of the Jaskolkas filling the bottom places. It was significant that even on the poor weather days, and accepting a very high and even standard represented by all pilots, the Jaskolkas were no match for the Fokas. In all cases it was the penetration and not the circling capability that determined the results. This has firmly confirmed the opinions already held in Poland on this subject.

Final Results

1.	J. Wroblewski	8166	points
2.	M. Gorzelak	7986	,,
3.	J. Popiel	7736	,,
4.	E. Makula	7668	,,
5.	F. Kempka	7523	,,
6.	J. Adamek	7229	,,

Tasks

1st Task: 206-kms. Out-and-Return. 13 pilots completed the task.

2nd Task. 507-km. Triangle. Task not completed and declared as Distance along a Line. Best distance 495 km. 12 pilots covered over 400 km. and a further 13 over 300 km.

3rd Task: 188-km. Out-and-Return. All pilots completed the task. Best speed 85 km/h. 25 pilots exceeded 70 km/h.

4th Task: 305-km. Triangle. Task not completed and declared as Distance along a Line. Best distance 268 km.

5th Task: 218-km. Triangle. 13 pilots completed it. Best speed 70 km/h.

6th Task: 2 × 105-km. Triangle. 32 pilots completed it. Best speed 81.5 km/h.

7th Task: 308-km. Triangle. 19 pilots completed it. Best speed 73.7 km/h.

8th Task: 334-km. Triangle. 5 pilots completed it.

9th Task: 2 × 144-km. Triangle. 8 pilots completed it.

10th Task: 266-km. Triangle. 17 pilots completed it.

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THE E2 Compass is often blamed for no fault of its own—excessive deviation (or difference between compass north and magnetic north). To allow for the proximity of magnetic materials it is provided with two or three (according to model) corrector magnets, and indiscriminate tampering with these will produce large errors.

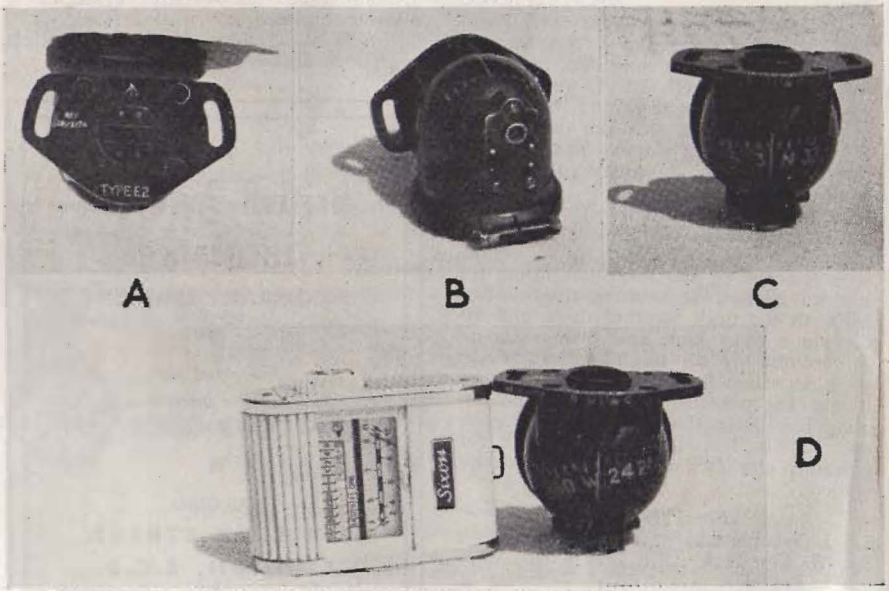
Coefficients A, B, C and Component R

The effects of aircraft permanent magnetism are resolved into three components, P (fore-and-aft), Q (athwartships) and R (vertical). P and Q cause errors which have a maximum on E. or W. and N. or S. respectively, whereas in level flight R has no effect. The maximum error due to P is called Coefficient B; the maximum error due to Q, Coefficient C; and a constant error due to faulty alignment of the compass with the aircraft axis, Coefficient A. The E2 compass provides for neutralisation of these three coefficients as well as Component R, but not for the effects of soft iron.

Adjustment of the Corrector Magnets

The glider should be chocked up into its approximate flying attitude, but in such a way that its heading can be altered without too much fuss and bother. This must be done outside and in an area free from lumps of iron and other magnetic disturbers. You need an assistant with an accurate hand bearing compass, and his job will be to find the aircraft's magnetic heading, by sighting on the fin and centre of the wing midsection, while he is far enough away from the aircraft's own field.

Since the compass cannot be read to better than 2°, it is not worth going through the formal measurements and preparing a deviation card, if a rough method will reduce residual deviation below 2°. However, a simple means of



A. Both B and C correctors are aligned to give zero correction. B. Heeling error corrector (for component R) visible on the underside. C. Keyholes for B and C correctors are under the letters B and C. The centre markings are for coefficient A correction. D. The compass is on the same heading as above but shows the effect of an exposure meter placed close.



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preparing a deviation table will be described to cover the unfortunate case of a badly sited compass with large deviation.

Coefficient A should be minimised as a first step by carefully aligning the compass with the instrument panel or fore-and-aft axis if the mounting position permits.

Now, with the assistant's aid, line the glider up accurately on East-West by use of the hand bearing compass (of course it is the hand bearing compass which reads E. or W., not the E2, which may have error). Set the R corrector, which is unmarked and underneath, so that the three lines visible in the window on the port lower side of the case, all line up to form one line. Some models do not have an R corrector, and so there is nothing to do at this stage.

Next insert the key (don't use pliers or any botched-up tool, keys are available from the makers) into the starboard upper hole, marked C, and adjust by turning until the C marks in the little circular well on top line up. Transfer the key to the B hole on the upper face and turn it till the E2 compass reads East or West, as appropriate, i.e. no deviation on this heading. If it is possible to tip the glider nose-up and nose-down without altering the E.-W. heading, the R corrector on the underside can be adjusted to keep the compass reading East or West despite the change of attitude. If the compass is not mounted so its vertical axis is parallel to the aircraft's, there will be a small amount of interaction between R and B and some inter-adjustment is needed.

Then turn the glider so that it heads North or South accurately, and adjust with the key in the C hole till the E2 reads North or South, i.e. no deviation on this heading. If there were no soft iron effects then there would be no residual deviation, but this must be checked by noting the deviation (actual magnetic heading minus heading indicated by E2) on headings of N., N.E., E., S.E., S., S.W., W., and N.W. If on any of these headings the deviation exceeds 2°, a check on Coefficient A should be made. The eight deviations are added up and their sum divided by eight. This ought not to exceed 2°; if it does, move the

whole compass clockwise if A is plus or anti-clockwise if A is minus, by the amount of Coefficient A. Then, if the residual deviation is still greater than 2°, return to the E.-W. position, adjusting B for correct indication (don't touch C on this heading), and if required, R underneath, for attitude. Change heading to N.-S. and adjust C for correct reading. If more than 2° of deviation exists on any of the eight headings, you are in a bad way. Either you re-site the compass away from disturbances or you read further, prepare a deviation table and use it.

Preparation of Deviation Table

This section need only be read if, after having performed the above ritual, the residual deviation is excessive and you are not able to move the compass to happier surroundings. The method is based on an acceptable error of ± 1°, but is essentially the same if greater or less accuracy is required.

First plot the eight deviations against magnetic heading on a graph, and join the eight points by a smooth curve. From the odd, unmarked, deviation lines (corresponding to 1°, 3°, 5° of deviation which you cannot measure, since the compass only reads to 2°) drop perpendiculars and read the magnetic headings corresponding. Figure 1 shows this rather more clearly than my description.

Now make a compass rose with an outer ring which for the moment is left blank. Mark in radii on the bearings where the deviation curve of Figure 1 cuts the bearing axis, as shown in Figure 2.

These lines mark where the deviation changes sign and the sectors where the deviation is + are marked SUBTRACT, and where the deviation is −, ADD. (Not just to be difficult, but deviation is defined as Magnetic minus Compass and we want Compass from Magnetic.)

To finish off, draw lines in the outer ring on bearings corresponding to the

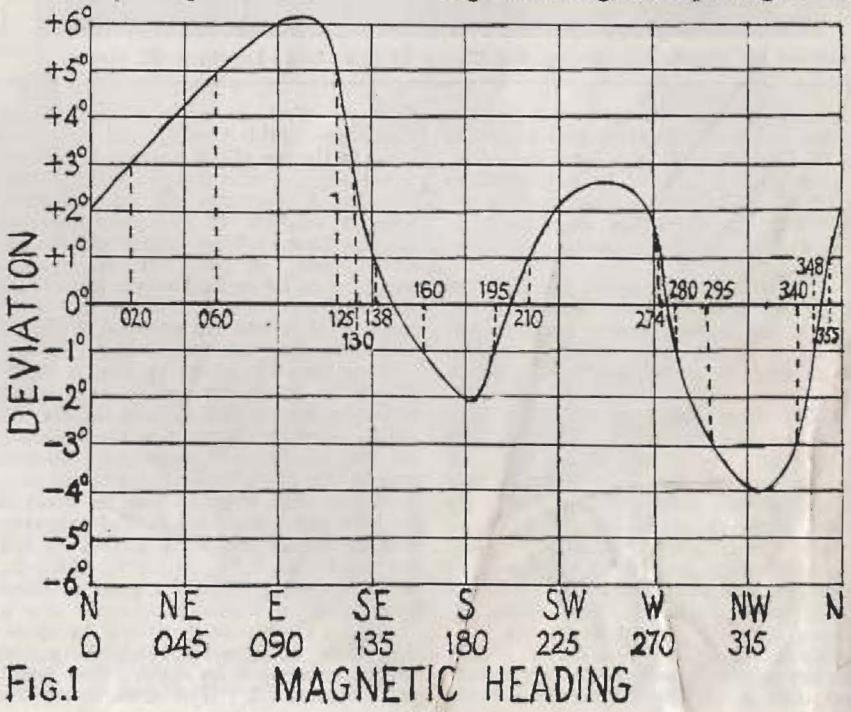


FIG.1

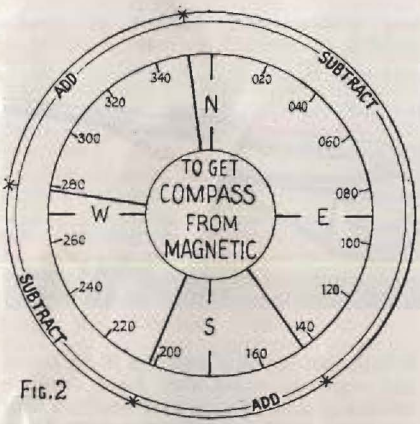


FIG.2

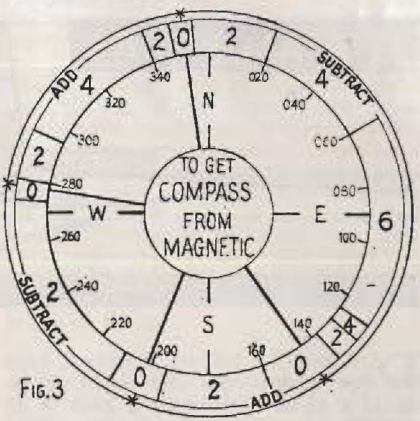


FIG.3

perpendiculars of Figure 1, and label the sectors in the outer ring 0, 2, 4, etc., as appropriate, and you should have a card like Figure 3.

This card will enable you to convert magnetic courses into compass courses, but don't forget that map courses have to be converted into magnetic courses by applying Variation. If you prefer, you can apply the variation to the deviation before plotting Figure 1 and work through with the combined figure. Then you will have a chart to convert True to Compass (should always be ADD in this country). Westerly Variation is Minus for the purpose of combination with deviation.

Finally

Before rejoicing in the fact that your compass does not have any deviation, don't forget that the turn-and-slip gyro has a permanent magnet, as do electric variometer indicators and radio headsets. Gyro horizons of nearly all makes in current use all have soft iron, and one or two may have permanent magnets (Some mark VI). Ah yes, you may say, all these were in position when I checked the compass—but did switching on make any difference? And has your camera a built-in exposure meter with its powerful permanent magnet? (National Health hearing aids only have magnets in the earphone!)

Meeting of Commission du Vol Sans Moteur

PARIS, SEPTEMBER, 1963

GREAT BRITAIN is to hold the next World Gliding Championships at South Cerney, near Cirencester, Glos., between May and June, 1965.

The Distance qualification for Silver C remains at 50 km. but the flight must be done in a straight line.

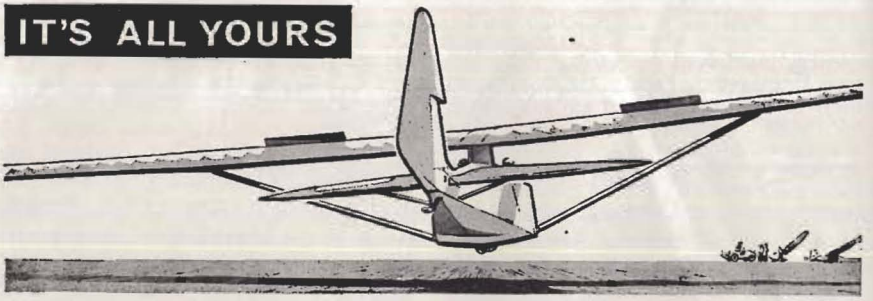
Goal and Diamond requirements have changed slightly, but Goal and Return flights will be permitted. The new regulations will be enforced as from the 1st January, 1964.

The proposal for permitting the overflying of Goals was dropped, as no satisfactory method of control had been submitted.

It was recommended that the 1962 Lilienthal Award should be made to P. F. Bikle of the U.S.A.

It was decided that the O.S.T.I.V. Standard Class flight tests should no longer be carried out during the World Championships as insufficient time was available, but that O.S.T.I.V. could use this period as they wished to carry out an engineering assessment of qualifying aircraft, making its own subsequent arrangement for flight testing on those aircraft passing the engineering assessment.

IT'S ALL YOURS



DURING the last six months I have met three people who would not go up in a glider again even if paid to do so. They gave the same reason. They had all been subjected to aerobatics on their first flights by thoughtless and thoroughly selfish instructors. In one case the passenger had even asked, before take-off, that there should be no aerobatics. These three, and there must be others, have been prevented from enjoying gliding by the very people whose job it is to encourage and teach it. Passengers and pupils should never be thrown about in the air when they first begin flying, and even if they ask for aerobatics, the instructor should try to stall them off until he feels quite sure that they will not be frightened or upset. The non-flier's idea of a loop is a graceful and gentle manoeuvre, because this is how he sees it from the ground. He can have no idea of the noise, the battering airflow in an open aircraft, or even the *g*, that is the real-life counterpart. Aerobatics are fun to do, but not nearly so often to be done to.

* * *

WHEN should a club transfer from weekend to full-time operation, and to what size should it be allowed to grow before employing a professional instructor?

These two questions have, of course, a close link, and are also dependent on what accommodation and security on its site the club possesses. The difficulty is that not only do these problems tend to come at the same time, but that they seem to arrive almost without warning. A small club is operating quite happily on a limited scale when quite suddenly it finds that it has grown out of its shoes, and must do some very hard thinking quickly to avoid being overwhelmed with too much work for voluntary spare time. Having thought, it rapidly discovers that to get itself on to an adequate basis for its increased size demands more money than it can lay its hands on, or be able to repay. This problem sometimes seems insuperable. If it gets a professional instructor he cannot be expected to work in a place with no dry or warm accommodation and nowhere to wash; on the other hand, it is barely worth while spending money on club buildings which are going to remain unused except at weekends. So when should a club seriously try to expand to full-time operation, and when should it restrict its activities and continue longer on the small-time basis?

Broadly, I feel that the changeover time arises when the club has five aircraft and/or does 5,000 launches a year. With less than this it is just still manageable on a voluntary basis, but beyond it the amount of work becomes quite unreasonable for any period over a few months for a voluntary C.F.I. The problem then lies in whether to develop by small steps over a longish period (less satisfactory) or whether to make an expensive all-out club effort, and do several things at the same time (more difficult). In either case, what are the priorities?

Since the object of the club is to fly, the acquisition of a resident instructor has the strongest claim. He can take all the day-to-day operations off the C.F.I.'s shoulders, run courses, keep flying records, and provide valuable continuity of instructing. This leaves the C.F.I. in

charge of over-all responsibility and supervision, detailed attention to difficult pupils, training of new instructors, and with even time to think about the future growth of the club. But to get the best from him there must be reasonable club premises. Apart from being necessary for him to work in during poor weather and the winter, and for the club and course members for the same reason, when members are on the spot flying can be started quicker and carried on more effectively.

With nearly equal priority, therefore, comes a clubhouse. This should be a properly insulated permanent building. It may be designed so that it can be built in stages as money becomes available, but the first stage should consist of full light, heat and water services with a club room and office attached, and not the other way round.

The next link in the chain is a feeding and residential addition to the clubhouse, and if the place is to make money, it must be staffed and they must have accommodation also. It is at this point that club members become vociferous and shout about unnecessary gin palaces, and "we want winches". To someone who has just spent his whole weekend trying to make some heap of ironmongery work, this is understandable. Nevertheless, those clubs which have comfortable buildings, however small, with regular meals provided, a welcoming cook-housekeeper with a husband who can drive the winch as well as run the bar, and a qualified and contented resident instructor, will find that they keep members, attract their families, improve their local standing, surprisingly are financially better off, and above all get more flying.

* * *

SHORTLY after this issue appears, the 1964 programme for the Coach and Capstan will be considered. Any suggestions for different sorts of courses or ways of using the aircraft to the widest advantage should be sent to me, c/o B.G.A. As soon as a schedule of courses has been drafted, all clubs will be circulated so that they can make their claims for the Capstan well before the end of the year.

ANN WELCH.

* * *

Just Another Case of Fools Rush In . . .

IT is alarming to hear how many relatively experienced pilots seem completely unaware of the risks they take. They often think that if their flying is good enough, it is safe for them to press on in any weather conditions. The result is a noticeable increase in the number of pilots who suddenly find themselves faced with a situation far beyond their control, usually a situation which they had not even considered at the start of the flight. The performance of modern gliders makes it much easier and more likely for a pilot to fly himself into a potential death-trap unless he has learnt to have a healthy respect for the elements.

Cu-nim flying, in particular, can be a very dangerous pastime and on many days it would be downright irresponsible to risk losing a club glider by attempting a cloud climb.

The first essential is that the glider must be properly equipped for serious flying and the pilot must be competent and experienced enough to be able to regain control from any attitude without the necessity of opening the air brakes. One or two short climbs during which no difficulties are experienced are not enough to prove the ability of the pilot to cope with the longer periods of concentration and more varied conditions in larger clouds.

However, there are a number of risks to be considered by even the most competent pilot, and which are outside the pilot's control once the flight has started.

Getting Lost

It is impossible for any glider pilot to make a high cloud climb and know exactly his position, and for this reason it is not acceptable to make cloud climbs where the glider could drift into controlled airspace. Unless frequent pinpoints can be obtained during the descent, errors in position of ten or twenty miles

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can easily occur, and this factor alone limits cloud flying to days on which any storms are isolated and there are clear areas between them.

Icing

Even slight icing may result in frozen air brakes and this makes it vital for the pilot to be able to manage any loss of control due to stalling or spiralling without using the brakes. Severe icing seems rare, but any jamming of the controls should be treated as a serious warning that the pilot should leave the cloud at once before all control is lost.

Hail

Damage from hail is common and is usually expensive to repair. Often it is too small to cause serious structural damage, but to fly into hail or very heavy rain deliberately in search of lift could never be justified. In most clubs the pilot is liable to pay the first £10 or so towards repairing any damage caused, and some pilots seem to take the irresponsible attitude that by accepting this liability they are entitled to take any risk they wish.

Lightning

In the past it has been considered that the chance of a glider being struck by lightning in cloud was negligible. There is now ample evidence to show that this was an over-optimistic view, and at Lasham, alone, there seems to have been at least one serious strike causing damage for every ten flights in storms to over 15,000 ft. Together with hail, lightning strikes must have resulted in several hundreds of pounds' worth of damage to Lasham gliders, and it has obviously been a matter of chance that no more serious accidents have occurred.

Clearly we should take heed of these warnings and never enter clouds which are already actively electric.

Winch or car launching in the vicinity of storms is suicidal and should never be allowed.

Anoxia, etc.

Probably the only really safe policy is to have portable oxygen equipment available and to insist on its use for any attempts at Gold or Diamond heights. At 15,000 feet no inexperienced and enthusiastic pilot is able to make the sensible decision to leave strong lift, particularly if he is already suffering from anoxia.

There is always a very real risk that the pilot may become unconscious, or at least incapable, from the combination of severe shocks, fright, hyperventilation together with the cold and lack of oxygen.

Until recently we knew of no pilot really upset by a storm flight. However, a few weeks ago a Lasham pilot landed in a very shocked state and it was clear to all that he had been through a harrowing experience which he would not willingly go through again. A difficult field landing in this state of health could have been disastrous.

Landing

In ideal conditions a field landing should present no difficulties; perhaps in poor visibility with a known wind direction the risks would be acceptable; but landing in poor visibility and perhaps torrential rain with a squally and unpredictable wind can only be a matter of luck for the most skilled pilot. If the cloud base is low, there is bound to be a risk of coming out under the cloud and being unable to reach an area where it is not raining. For a good chance of a safe landing, the ground must be seen from at least 1,000 feet so that there is time to select a field and assess the wind. In sinking air, even this would not be enough to allow for much choice and, of course, it assumes that the descent has been made over open countryside and not amongst hills or moorland.

There is always a grave risk of the cloud base lowering to only a few hundred feet in rain, and this can happen within a few minutes of the rain starting.

Suggested Rules

1. The clouds must be sufficiently isolated to ensure that clear air can be found by flying out of the lift.

2. The main cloud base must be at least 2,000 feet above the highest ground within 15 miles.

3. The visibility away from cloud must be 2-3 miles from 1,000 feet, or, if worse, the minimum cloud base must be greater than 3,000 feet. The visibility must be good and the base high if the flight is made over hilly or bad field-landing country.

4. The cloud should not be entered if heavy rain or hail is already falling from it or if lightning or thunder has already occurred in the cloud.

5. The prevailing wind (allowing for the possibility of much stronger upper winds) should not be sufficient to drift the glider near Controlled Airspace in a climb of up to 40 minutes.

6. Unless the day is one with clouds limited in height to 10,000 or 12,000 feet, no attempts at Gold or Diamond C heights should be made without oxygen equipment.

7. Clubs should ensure that individual pilots realise their responsibilities in risking serious damage or loss of club gliders during storm flights.

This all adds up to the one fact: the pilot attempting Cu-nim flights must know the risks involved and must make a reasoned decision as to whether they are acceptable on each particular occasion.

Every stormy day is not a day for cloud flying; a selection has to be made and the penalty for chancing to luck can be the destruction of both glider and pilot.

DEREK PIGGOTT.

Lightning Damage

SINCE there have now been several cases of gliders being struck by lightning when cloud flying, with consequential damage, the Technical Committee wishes to bring the following considerations to the attention of Senior Inspectors, Inspectors, club members qualified to carry out daily inspections, and owners.

1. When it is known that a glider has been struck by lightning, *all* control cables must be inspected for damage throughout their full lengths. In many cases it will be necessary to withdraw cables in order to do so.

The reason for this procedure is that damage may occur at points remote from the actual place at which the strike took place. For example, a Skylark 3 recently suffered a lightning strike on to the tubes which brace the rib at the outboard end of the centre-section. The elevator cable was severely damaged at the rear of the fuselage, leaving only about 1¼ strands to carry the load.

For similar reasons, all plain and ball bearings must be inspected throughout the control circuits to ensure that they have not been welded-up. Damage may also occur to the bolts which convey the motion across the aileron rocking levers at the centre-section/outer wing joints of Skylark 3's and 4's.

2. Lightning usually strikes at a metal component, but may pierce surrounding wooden structure in order to do so. The apparent damage to the timber may be very slight: there is commonly a hole through plywood skin about 1/16 in. in diameter, slightly singed at the edges, with fabric damage over an appreciably larger area. It often looks as if a small explosion had occurred beneath the fabric, blowing it away from the surface in a "petal" formation a few inches across.

It is important to examine the plywood and timber very carefully for a distance of several inches in all directions from the point of striking. It appears that the temperature of the flash is very high indeed, causing extremely rapid vapourisation of moisture in the surrounding timber and consequential weakening. In the case of the Skylark 3 mentioned above, the only obvious spar boom damage was a very slight singe mark near the point of striking. But an appreciable length of boom had been reduced to the consistency of balsa and had to be replaced.

3. Apart from obvious possible damage to magnetic compasses, it should be remembered that other instruments may be damaged by discharges across fine bearings. Electrical instruments, radio and wiring may also suffer.

4. Whilst the Technical Committee does not wish to discourage legitimately enterprising flights, it is clear from the above that flight in electrical storms involves significant risk of expensive damage to the glider and, in view of possible damage to control circuits, some risk of loss of control.

F. G. IRVING,
Chairman,
B.G.A. Technical Committee.

The Canadian National Championships

by T. R. BEASLEY, *President, Soaring Association of Canada*

THE 15th Canadian National Championships were organized by the Montreal Soaring Council, at Hawkesbury, Ontario; the writer acting as Contest Director.

The weather was not good for soaring, though fortunately not rainy. Due to this, there were only four scoring days out of a possible ten, from 16th to 25th July inclusive.

The contest was noted for the high standard of sailplanes, and we certainly had the best entry list yet seen in a Canadian contest, both in quality and quantity. We were particularly pleased to welcome Adam Witek from Poland, who, with his crew, brought a Foka 4. They came up from Elmira, having just competed in the American Nationals Dick Schreder, too, came up from Elmira where he had competed.

Dave Webb, of the host club, won a well-deserved victory. The scoring table does not show the whole story. On the first contest day Dave was the only one to complete the triangle, and as our rules required two finishers for it to be a speed task, he scored no speed points. On yet another day he was the only pilot to complete a triangle, and this time it was not even a scoring day. Dick Schreder, too, had this experience on the last day, being the only pilot to complete a triangle on a day that was so poor that some pilots did not even get away; again it was a no-contest day.

Dick was not the only competitor from the U.S.A., but he was the only American to fly for the whole contest period. We all hope that we shall welcome more American pilots in future years.

Before closing, I must mention that we were very grateful to our Polish visitors for allowing a large number of our pilots to fly the new version of the Foka after the contest. I, for one, was very agreeably impressed

	Pilots	*Sailplane*	*Pts.*
1.	Webb	Skylark 4	3524
2.	Witek (Poland)	Foka 4	3471
3.	Schreder (U.S.A.)	HP-11	2972
4.	Jurgeit Kelley	Ka-6	2349
5.	Yeates	Austria	2039
6.	Henderson Stoten	Skylark 2	1936
7.	Schieb Chabot	L-Spatz	1773
8.	Parsey Lockhard	Foka	1608
9.	Hicks	Fauvette	1435
10.	Audette	1-23G	1407
11.	Smith Tucker	Skylark 3	1232
12.	Chesbrough	Ka-6	1224
13.	Carpenter	1-23	891
14.	Boudreault Bienada	Skylark 3	843
15.	Deleurant	Austria	815
16.	Price	1-23D	774
17.	Soulsby Johns	MG-23	752
18.	Maskell	1-26	350
19.	King	1-26	78
20.	Jonah	Skylark 2	9
21.	Jull MacMillan	Olympia	0
21.	Mosher (U.S.A.)	1-26	0
21.	Perucci (U.S.A.)	1-23G	0

Daily Tasks and Leading Results

JULY 17TH.—200-km. Triangle, scored as Distance along a Line: won by Webb (Skylark 4), 125 miles. The Foka flown by Parsey and Lockhard went 87½ miles.

JULY 19TH.—Free Distance; won by Witek of Poland (Foka 4) with 196 miles. The Ka-6 entered by Jurgeit and Kelley went 148¼ miles, Schreder 147¼ miles, and Webb 147 miles.

JULY 21ST.—100-km. Triangle, scored as Distance along a Line; again won by Witek with 61 miles. The two Standard Austrias flown by Yeates and Deleurant each went 52 miles.

JULY 23RD.—Race to a 100-km. Goal; won by Webb (Skylark 4) at 39.9 m.p.h. Others to finish the course: Schreder (HP-11), 35.5 m.p.h.; Witek (Foka 4), 33.3; Skylark 3 entered by Smith and Tucker, 28.9; Yeates (Standard Austria), 22.6; Ka-6 entered by Jurgeit and Kelley, 20.3; Skylark 2 entered by Henderson and Stoten, 19.6.

The Northerns - Sutton Bank
July 27 - August 5, 1963

THE Northerns are Regional Competitions in the best sense. Put on the map by Derby and Lancs., they moved this year to the Yorkshire Club. Next year they will go back to Camphill, and in the future, as more clubs at the top of England reach the stature of these two, they will probably travel around still more. The Northerns are now established as fully organised 9-day competitions, and at both sites made civilised by permanent and attractive club premises. This year they were noted for 30 entrants, an anticyclone, five tugs, quantities of radio, and Toon's dhoti.

Launching was by aero-tow. On the practice day this took place from the long winch run, the dust from which produced some invisibly spectacular take-offs, and for the next two days from the new 600-yd. E./W. grass run. This would have been fine if there had been somewhere else to land the tugs, but the rate of launching was slowed down both by the restricted strip and the roughness of the surrounding ground. Nevertheless, grass has now been grown on the Bank for the first time for more than 100 years, and when this runway has been increased in width and the long runway improved, aero-towing competitions from the top of the Bank will be entirely practical in all wind directions. Unfortunately on cost grounds the club is forced to move slowly. Grass does not grow easily on the top, and three tons of lime to the acre is only part of the persuasive process.

On the fourth day launching was done from the runways on Wombleton airfield, which had been arranged as an alternative before the competitions started. The increased marshalling space allowed start times to be selected by the pilot, and the tall standing barley covering all but the runway surfaces removed the bleakness which is a dominant feature of most deserted airfields.

The weather during the week was remarkably consistent in both the appearance of the chart, and the comments of the met. man, Peter Wickham. It was dry and warm, with a light S.E. drift, produced by an anticyclone which imperceptibly weakened until on the final weekend it reverted to Standard English Summer, and we all disappeared home in a thick wet fog. The weather was interesting since it showed that a great deal of good flying can be had from Sutton Bank even when the wind does not blow on the hill, and also that in a combination of light airs and weak thermals hours and hours of soaring can be had without anyone going practically any distance at all. The longest task other than Free Distance was 100 kms., and this took between two and four hours, while other times even the pundits took three or more hours to do 30 miles. Considerable skill and determination were needed to succeed in these conditions, because the thermal distribution was microcosmically (if that is the right word) affected by towns, hills, damp valleys, sea, haze streams, etc., in a remarkably complex way, requiring much thought to sort out. Such flying contradicts the C.V.S.M. idea that in this day and age no flight of less than 100 kms. can ever produce a result which means anything. The Northerns results contained practically nothing in the way of luck, but a great deal in terms of skill.

Task-setting at Sutton Bank could be as difficult as it would be at Lasham in a roaring westerly, and there would also be problems in a howling easterly with the Pennines looming on the planning horizon; but in the weather we had, turning points were easily found where needed owing to the wealth of castles and prominent edifices in Yorkshire. My aged book of aerial photographs, published by the *Yorkshire Post* before the war, was invaluable. Mike Hoare, the observer, found himself involved in culturally exciting experiences such as climbing the roof of the Bowes Museum because the curator wanted to show him what the markers looked like from the air. In the event this proved unneces-

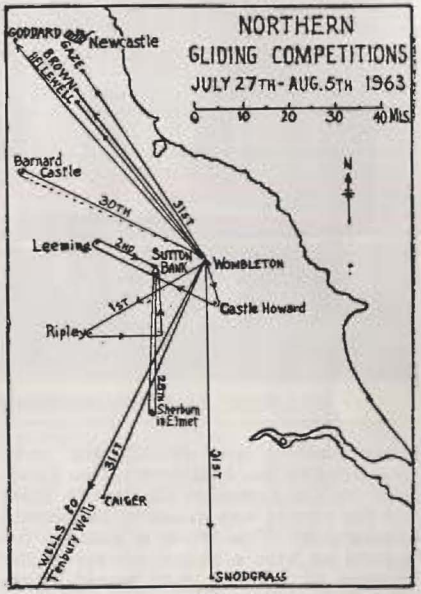
sary, since the only gliders that rounded the point did so at about third-floor level!

When flying from Wombleton, the start line was over the airfield, with the finish line back on top of the Bank. This produced some interesting moments such as when we suddenly saw a rude sign level with the cliff face. It turned out to be just the tail of the Austria, as Dennis Corrick made a hopeful stab at the top before going, like many others, to the bottom.

It was the first time that most of us had seen the circular Y.G.C. clubhouse in a finished state, and it is a great success. Built strongly of permanent materials, it looks good. The curved shape of the main room produces slight problems in audience arrangement for film shows, etc., but these are, after all, not a regular feature of clubhouse activities, and can anyway be done downstairs. From the point of view of eating, drinking, talking, or just sitting in the sun, the room is excellent. A most remarkable feature of the temporary overloading of facilities due to the competitions was that it was sometimes impossible to have a shower because the water was too hot!

No competitions are successful without preparation, work, and willing helpers, and the Y.G.C. needed all of these to run the equivalent of a Nationals ten years ago as their first big aero-towing event. It is always difficult to create spontaneously a slick launch point when neither the helpers nor some of the competitors have done it before, but inexperience was soon overcome and the meeting flowed on to seven consecutive and enjoyable soaring days. The helpers would be the last to want this article to end with thanks to a list of names, because it was a Club effort. Enough to say that they have firmly established Sutton Bank as a cross-country soaring site, with those other essentials to a successful club—a welcome to visitors and civilised accommodation.

ANN WELCH.



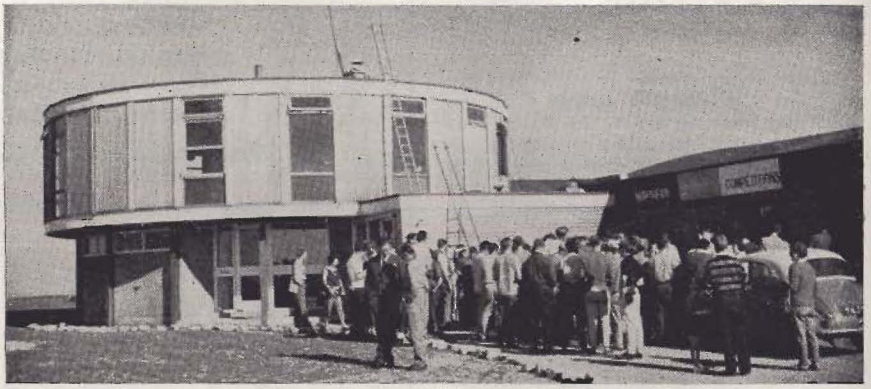
* * *

Flying at the Northerns

by J. C. RIDDELL

THE Northern Gliding Competitions presented a new challenge to us at Sutton Bank. This was the first time we had attempted to run a large meeting of this type in North Yorkshire. There was considerable enthusiasm for the meeting among the members, and five club-based aircraft and 12 club pilots took part, out of a total entry of 30 aircraft and 47 pilots.

Good communications are essential for administration, and Pye Telecommunications supplied an excellent VHF system. A master unit was placed in the Club-



Pilots selecting their take-off times. *Photo by A. E. Slater*

house Control and two mobile units were fitted to two Landrovers. One Landrover was stationed at the launch point and the second was placed at the second turning-point. This made it possible for Control to have a clearer picture of the progress of the task than would otherwise be possible. We are indebted to A. G. Wilson Ltd. for the loan of the Landrovers.

Launching operations at Wombleton went smoothly, and we maintained a launch frequency of one every 2½ minutes. As we worked on a frequency of one launch every 3 minutes, we were often ahead of time. At Sutton Bank, the more confined area slowed up operations slightly, and our frequency was one every three minutes.

Competition Record

SUNDAY, 28TH JULY.—Weather was fine, anti-cyclonic, and we had a light easterly wind. The task was an Out-and-Return to Sherburn-in-Elmet airfield —64 miles. Only Philip Wills did the task twice. His best time was just under two hours. He and Alfred Warminger were the first back and crossed the line within seconds of each other.

The total mileage flown was 1,196 miles and the total flying time was 65½ hours; 13 aircraft completed the course. A very satisfactory first day.

MONDAY, 29TH JULY was a non-competition day, but some pilots went up for exercise.

TUESDAY, 30TH JULY promised better than it turned out, and a task was set of an Out-and-Return to Barnard Castle—the Bowes Museum, 87 miles. Five aircraft reached the turning-point and the day was won by R. A. Sandford in his Olympia 2.

Three pilots, Alf Warminger, Ron Helliwell and Alwyn Findon, all ended up in the same field and signed each other's landing certificates!

Total distance flown, 954 miles; total hours 73.

WEDNESDAY, 31ST JULY gave similar anti-cyclonic conditions. The task declared was Free Distance. There was a large sheet of cirrus over the west of the country. Philip Wills flew to Tenbury Wells along the edge of this sheet where he found adequate thermals. Don Snodgrass went south to Gamston Airfield, Notts. Many pilots took advantage of the very light S.E. wind, but none went further north than John Goddard, who landed at Riding Mill, near Corbridge, 65 miles.

Total distance flown was 1,069 miles, and total time 68 hrs. 53 mins.

THURSDAY, 1ST AUGUST.—Although the weather conditions were still anti-cyclonic, convection was better. The task was an open-ended Triangle: Wombleton, Ripley Castle, Clifton Airfield, Sutton Bank. Distance 65 miles. 13 competitors crossed the finish line, but not all landed on the site. Three, Corrick, Hill and Griffiths, landed in the bottom landing field.

The best time was by Philip Wills in

2 hrs. 20 mins.

The new Clubhouse provided an excellent grandstand as aircraft approached the site from the south to cross the E/W runway which was the finishing line. Several gallant failures were noted, including R. Wilkin in the Eagle and Don Snodgrass in his Skylark 4, who thermalled down the south slope to the same field. The radio link with Clifton proved useful, and K. Brown's crew were told within five minutes of his landing at the turning-point.

Total distance flown, 1,288 miles; total hours 87.

FRIDAY, 2ND AUGUST was a contest day, but only just, due to the very limited convection. Task was a 51-mile race: Wombleton, Castle Howard, Leeming, Sutton Bank. Nobody got round. Only 16 of the 25 starters scored. The best performance was by J. A. Findon in his Oly 463 who landed only a mile short. Bill Shepard, R. Sandford, Anthony Edwards and Ralph Stothard all passed the second turning-point.

Total time was 46 hrs. 40 mins. and 585 miles were flown. Quite a surprising result in view of the weather.

BANK HOLIDAY arrived with very poor weather and no more competition flying was possible. The meeting was felt to be successful. We carried out 243 tows, flew 5,092 miles in 360 hours, and saw a good deal of Yorkshire.

NORTHERN REGIONAL COMPETITIONS: FINAL RESULTS

Final Place	*Pilot or Pilots*	*Date in July or August*					*Total Points*	*Sailplane*	*Comp. No.*
		28th	*30th*	*31st*	*1st*	*2nd*			
1.	P. A. Wills	937	742	1000	1000	23	3702	Skylark 4	1
2.	R. A. Sandford	870	1000	148	818	750	3586	Olympia 2	242
3.	J. J. Goddard & F. W. L. Shepard	885	548	354	825	720	3319	Skylark 3F	190
4.	J. A. Findon & R. I. Tarver	775	596	122	825	870	3188	Olympia 463	48
5.	J. P. Griffiths & A. W. F. Edwards	598	736	214	545	665	2758	Skylark 4	269
6.	A. H. Warminger	906	542	160	901	0	2509	Olympia 419	44
7.	H. Browning	654	751	220	772	12	2459	Skylark 4	266
8.	D. J. Corrick	1000	718	26	599	84	2427	Std. Austria	57
9.	D. C. Snodgrass	749	508	385	538	0	2180	Skylark 4	189
10.	M. T. Caiger	0	790	350	530	284	1954	Olympia 2	201
11.	M. J. C. Wilson & J. J. Iceton	184	731	76	924	27	1942	Olympia 2	69
12.	J. Provins & R. W. Pearson	699	752	136	0	300	1854	Skylark 3F	213
13.	F. A. O. Gaze	981	443	310	0	0	1734	Std. Austria	210
14.	A. D. Hill & R. C. Pick	689	0	9	820	177	1695	Skylark 4	98
15.	P. V. Grime	705	651	264	0	0	1620	Skylark 1	234
16.	R. A. Hellewell & L. Muncaster	396	596	254	331	0	1577	Olympia 463	24
17.	J. H. Blackmore	467	766	57	275	0	1565	Olympia 2	212
18.	J. Eccles & D. Johnson	406	352	80	388	328	1554	Sky	46
18.+	J. Everitt & P.2*	485	870	76	70	0	1504	Capstan	6
19.	R. E. Stothard & T. Smallwood	96	268	68	373	689	1494	Skylark 2	202
20.	D. J. Crabb, L. G. Crabb & R. Cousins	0	352	58	158	255	1418	Skylark 4	239
21.	L. A. Boyer	—	—	—	938	257	1195	Olympia 2	143
22.	S. B. Mead	0	835	11	137	0	983	Olympia 419	205
23.	C. D. Duthy-James	0	752	0	0	211	963	Olympia 2	156
24.	J. Tarr & J. Bower	369	485	—	—	—	854	Skylark 3F	45
25.	A. H. Baynes	0	0	36	737	0	773	Skylark 3B	37
26.	E. Reed & R. Wilkin	0	0	56	592	0	684	Eagle	159
27.	K. R. Brown	0	0	264	394	0	658	Skylark 2	33
28.	L. A. Boyer & G. Kemp	0	596	0	—	—	596	Ka-6	118
29.	K. N. Owen & M. Bagnall	152	0	107	205	0	454	Skylark 2	15
30.	Miss P. Buckley & A. G. Burne	—	403	0	0	0	403	Skylark 4	255

*John Everitt flew *hors concours* with various second pilots.

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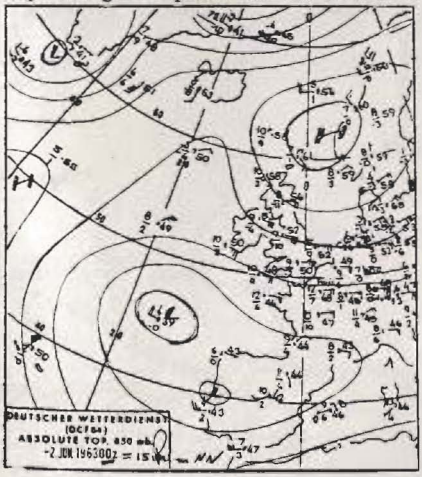
World Distance Record



On June 2nd three German pilots each flew 875 km. (543.7 miles) from Stuttgart to the French coast at Saint Nazaire, beating the record of 861.2 km. (535.2 miles) set up by Dick Johnson in the United States on August 8th, 1951. We are indebted to Herr H. Kellner, of the Baden-Württemberg Luftfahrt Verband, for sending this combined account of the flights of the three pilots, who were:—

RUDI LINDNER OTTO SCHAUBLE KARL BETZLER

THE forecast weather chart on the evening of June 1st showed a beautiful, impressive easterly weather situation. So it was no wonder that on Whit-Sunday the glider pilots of the B.W.L.V. especially were on their legs early and making preparations for cross-country flights at the flying fields of Teck, Hornberg, Hahnweide, Klippeneck, Schwäbisch Hall, Böblingen, Malmsheim and Karlsruhe.



It was with special interest that the soaring weather briefing was awaited; the met. station at Stuttgart, which kindly supplied it, said:

"Unstable layer with a weak inversion at around 10,000 ft., 3/8 to 5/8 convection cloud with base around 6,000 ft. a.s.l.; tops 10,000 ft. at first; in the afternoon local build-ups producing isolated thunderstorms, especially over mountainous country. Temperature for onset of thermals over the plain, 21°C. Surface wind easterly, 10 knots; upper wind between 3,000 and 5,000 ft. E., 20-30 knots; above that level falling off again to 10 knots. Freezing level about 8,000 ft. Similar soaring conditions over Eastern France; in the afternoon widespread thunderstorms over Central and Western France."

The accompanying weather chart of

June 2nd for the 1,500-m. level (5,000 ft.) shows the expected easterly situation. The centre of the High is over the North Sea, and a Low over Biscay. The easterly airstream prevailed from Southern Germany to Western France; stronger thundery activity was expected in Southern France. The temperature ascents from Stuttgart showed a weak inversion at 10,000 ft.; those from Paris and Chateauroux-Déels showed likewise a weak inversion at 6,000 ft.

WESTWARD HO!

The last doubts were removed. The high wind-speed would allow no triangular or goal-and-return flights. So the pilots picked up their maps showing points west, and courses of great length were optimistically ruled on them; some even led across ¾-million or 1-million maps as far as the Atlantic.

On the Teck flying ground Karl Betzler was preparing for an early start on a goal flight of 520 km. to Beynes, about 20 km. west of Paris. He was launched by winch at 9.30.

Thirty minutes later Rudi Lindner took off by aero-tow in his home-built Phoenix, and at almost the same time Otto Schäuble became airborne in his Ka-6 by winch launch. Rudi Lindner had cautiously declared for Bordeaux; Schäuble was rather more modest and announced a goal flight to Tours (about 680 km.).

On this day there was a preponderance of declarations for goals more than 500 km. away. From the Hahnweide, Björn Stender with his new BS-1, Alfred Röhm with the Ka-6 and Hermann Nägele with his Phoenix were also away.

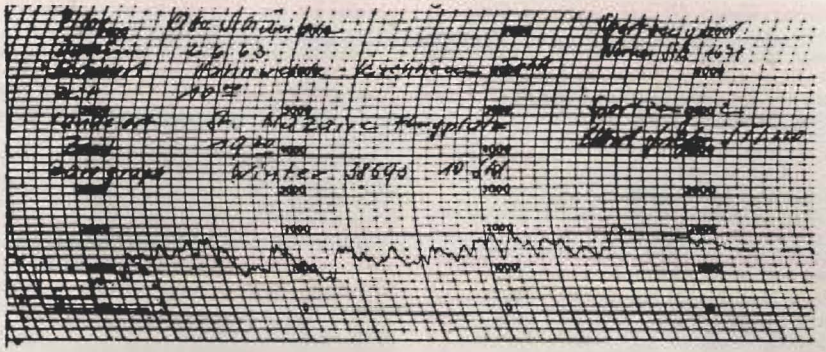
ON THE SLOPE

As is shown by the accompanying barogram, which is also characteristic of the flights by Karl Betzler and Rudi Lindner, in spite of all the optimism this was no "any idiot's" weather for sailplane pilots. For instance, Schäuble was only about 300 m. (1,000 ft.) above the ground at Böblingen. He reached the Vosges below the top of the slope at about 150 m. (500 ft.) above ground and had to recover height laboriously in the slope-wind. Again after crossing the Vosges he contacted a weak thermal and had to hang on to bits of 0-1 m/sec. lift.

Rudi Lindner had rather better success with his excellent Phoenix; he had half-an-hour's start to the Vosges.

Karl Betzler crossed the Black Forest in the neighbourhood of Freudenstadt and made for Strasbourg across the Hornisgrinde. At 10.40 a.m. he was already circling over Strasbourg Cathedral. He had also met difficulties in the Vosges, and for a long time was fighting for every metre in slope lift.



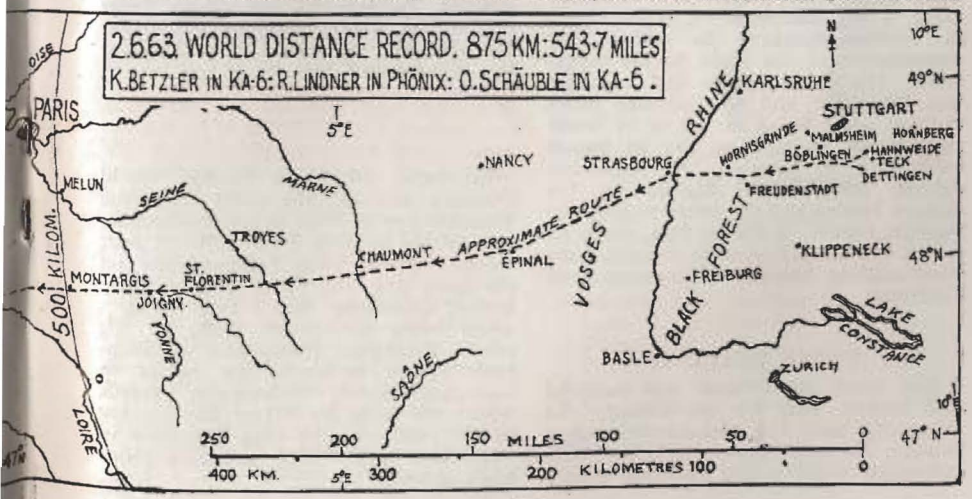


It was not encouraging to hear of landing reports from friends and acquaintances over the radio even at this early hour. Even the Freiburg pilots, Dr. Frowein and "Pit", decided to break off their flights and try to return, as vigorous thunderstorms had built up.

HARD LABOUR

After the crossing of the Vosges there began a four-hour period of laborious progress without any strong lift and at times under blue sky. Nevertheless the east wind produced a considerable ground speed, and the flights proceeded over Epinal, Chaumont, St. Florentin, Joigny and Montargis to the region of Orleans.

At this stage, what with the poor thermals, more and more landing reports came in over the radio. At around 17.00 hrs. radio contact was only being kept up between Lindner, Schäuble, Betzler and Röhm. Because of the clear reception, each had the impression that the others could not be far away. Betzler and Schäuble were the first to find themselves together through radio at about 17 hrs. Alfred Röhm announced a fantastic height, and then contact with him was lost. A short time later, Rudi Lindner also reported from a height of 3,000 m. (10,000 ft.); flying towards the north, he got a good view of a thunderstorm front running parallel to latitude 47° N. After exchanging news of positions, he then encountered Schäuble and



Betzler about 60 km. west of Orleans. Over the radio it was decided to continue the flight together. Schäuble and Lindner congratulated Karl Betzler on passing the 500-kilometre mark for his third Diamond.

COLLABORATION

As visibility was constantly deteriorating, the three pilots flew close together, sometimes side by side, sometimes in line astern, in order to grope their way along the line of the front. The course varied between 210° and 300° and it was possible to fly at 150 km./h. (93 m.p.h.) without losing any substantial height. In spite of the high ground-speed, France never seemed to come to an end. Meanwhile Rudi Lindner's radio battery gave out owing to excessive cooling, so that he could only answer simple questions by nodding or shaking his head—for instance: "Rudi, how much further is it to the Atlantic?" Answer: two nods = 200 km.

As the Atlantic was approached, visibility became noticeably worse and cloud base sank to 1,200 m. (4,000 ft.). Low stratocumuli partially hid the earth from sight. Owing to nearness of the low-pressure centre at ground level, a west wind was blowing at the coast. Heavy rain-showers came up, and suddenly the three pilots were over water. Furthermore, a big thunderstorm raged above St. Nazaire, blocking the way to any continuation of the flight to the north-west. The risk to pilots and machines was too great, and so the three pilots decided, after flying for 10 or 9½ hours respectively, to land on the jet fighter airfield at St. Nazaire. As previously agreed, Karl Betzler landed by the eastern border and the other two by the western border of the airfield, so as to cancel out the difference in distance from their starting points at Hahnweide and Dettingen.

RAINY WELCOME

The three pilots were well received and looked after by the French. In streaming rain the airfield fire-wagon brought the sailplanes under cover. The comradely welcome and readiness to help shown by the French flying personnel is deserving of the highest praise.

According to unconfirmed reports, on this Whit-Sunday about 250 Germans flew sailplanes into France. All of them were well received by the French population.

After it was established that our three pilots had broken the German record, they were on all sides plied with good French red wine and champagne.

While the aviators were celebrating in their own small circle in France, their retrieving crews, whose trust in their pilots' skill led them to set off immediately after the launch, were carrying on westwards kilometre by kilometre. They, too, became impressed by the breadth of France. The performance of these silent helpers deserves special mention. For almost 50 hours, with few interruptions, they sat at the steering wheel and covered more than 2,500 kilometres by road.

Precise measurement of the straight-line distance gave 875 km. (543.7 miles). This exceeded by 14 km. the former world record by the American R. H. Johnson, and by 163 km. the German record set up by Hans-Werner Grosse at the 1962 German National Championships.

Worthy of note is the unique circumstance that the three Swabian pilots came to an agreement in the air in a spirit of sporting fairness (*in sportliche fairer Weise*). A North German newspaper described this flight as a "World record in comradeship."

EDITORIAL NOTE.—A former World Distance Record, 313 miles from the Wasserkuppe to Brno in Czechoslovakia, was set up on July 29th, 1935, by four German pilots flying independently on the same day. However, one of them, Rudolf Oeltschner, had a fatal accident while being aero-towed back; so the others, Bräutigam, Heinemann and Steinhoff, agreed to credit the record to Oeltschner alone. Subsequent records were: 405 miles by Viktor Rastorguyev in 1937, 465 miles by Olga Klepikova in 1939 (both in U.S.S.R.), and Dick Johnson's of 1951.

R.A.F. Championships at Venlo

by STEVE WARWICK-FLEMING

THIS year's Championships of the R.A.F., Germany, G.S.A. took place on the airfield at Venlo in Holland. Eleven competitors, representing the Royal Air Force and Army clubs in Germany, took part, including a member from the Dutch club at Venlo, Ed Verpract, who flew *hors concours*.

TUESDAY, 2ND JULY, was the first competition day, and "Mac" Mackenzie, the met. man, set a Free Distance task in the direction of Denmark. The thermals were not very strong; however, everyone got away, and some good distances were covered. Flt.-Lt. St. Pierre won the day with 262 km. (163 miles); Sergt. Newholm came second with 242 km. to Bassum, south of Bremen; and Staff-Sergt. Somerville was third with 232 km.

The next day, WEDNESDAY, 3RD, a short Out-and-Return race to Wesel was set, 90 km. in all (56 miles). Again everyone managed to leave the airfield, but on approaching Wesel they found the Ruhr smoke had spread downwind, shutting of the thermals. Insufficient competitors managed to get beyond point "X," and so it was declared a no-contest day.

THURSDAY, 4TH, was again suitable for a Free Distance task. Conditions were not good, but the best possible use was made of the ragged thermals, and Flt.-Lt. St. Pierre won the day once more with 184 km. (114 miles). F./O. Tanner was second with 159 km., and Sergt. Newholm third with 134 km. to Samree, south of Liege.

FRIDAY was a day of light winds, and so Mac again set an Out-and-Return race to Wesel. This time over half the competitors went round the turning-point; however, nobody made it back to Venlo and the best distance was by Flt.-Lt. Lane in the Weihe, who got 6 km. of the way back. F./O. Tanner was second and Staff-Sergt. Somerville third.

On SUNDAY, 7TH, an unstable north-westerly airstream produced some strong convection and the task set was Distance along a line through Würzburg. The best distance for the day was by Sergt. Newholm, who landed at Giessen, north of Frankfurt, 198 km. (123 miles).

The last day's task was a race to Dinslaken in the Ruhr, 45 km. (28 miles). Conditions were difficult, but most of the gliders got beyond the halfway mark, and one flown by F./O. Prince reached Dinslaken.



FINAL POSITIONS

	Pilots	*Sailplane*	*Points*
1	Newholm	Ka-6	4238.6
2	Tanner	Ka-6	3115.4
3	St. Pierre	Weihe	2736.2
4	Somerville	Skylark 3	2520.4
5	Lane	Weihe	2036.8
6	Barrell	Ka-2	1737.2
7	Prince	Ka-2	1582.3
8	Verpraet*	Skylark 2	1496.4
9	Whittingham-Jones	Swallow	1177.0
10	Mitchell	Olympia 2B	1121.3
11	Scarfe	Rheinland	484.8

* *Hors concours*

IMPERIAL COLLEGE AT AOSTA

By Frank Irving



WHEN planning a club expedition to Foreign Parts (or The Abroad, as a certain eminent member of the Tiger Club would say), one looks for reliable interesting soaring conditions, warm sun, reasonable trailering distance, and *ambience*. Aosta seemed likely to provide all these, so I.C.G.C. set forth in mid-July, with an Eagle, a Skylark 4 and a slightly floating population of about a dozen members, in the hope of getting a month of spectacular soaring—plus



. . . spectacular soaring

some *ambience*. Our expectations were amply fulfilled: 140 hours, sundry Silver C legs, veins well flushed-out with adrenalin by day (and, for some, alcohol by night), and ankles well-bitten by horse-flies. And the underwriters are awfully pleased with us.

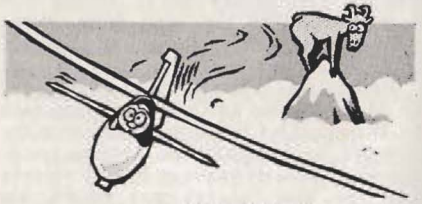
Since a more coherent account of the flying is appearing elsewhere, this is really a collection of odd observations. Since S. & G. gets to Aosta, I hope Signor Vitelli will not take it amiss if I try to convey some features of the trip which we found somewhat quaint.

Aosta Valley runs roughly east-west, with another valley branching off toward the north and the St. Bernard Pass (the *Grande*, as opposed to the *Piccolo*). The town lies at the junction of these valleys. For the first fortnight of our stay, the weather had a standard routine: calm and hot in the morning, with an easterly valley wind starting between 11.30 and 12.30. This rapidly freshened and was blowing at about 25 knots by mid-afternoon. Meanwhile, there was an inversion at 2,000 or 2,500 ft. above the bottom of the valley, itself about 1,700 ft. a.s.l. Before the wind got going, one could soar in thermals below the inversion, using the local steelworks as a source. You took your pick: white or brown thermals. The brown ones seemed better, until somebody shut the furnace



door and switched off the lift.

But once the wind starts, it becomes possible to slope-soar above the inversion, and eventually thermal lift re-asserts itself on the sunlit slopes due, as Vitelli put it, to "the hair sleeding up the mountain". The best lift is fairly close to the scenery, although it did not seem really necessary to indulge in alarming amounts of proximity. Eventually, the "hair" breaks away in genuine but very rough thermals and it becomes possible to circle—still keeping a wary eye on the local hunks of rock—until you find yourself above the tops. This is the genuine mountain soaring, perhaps the most exhilarating form of aviation,



. . . most exhilarating

and very good for the biceps if you happen to be flying an Eagle. The local mountains go up to about 9,500 ft. a.s.l., higher in the hinterland, and cloudbase may be between 9,000 and 14,000 ft. a.s.l.

Put like this, it all sounds very simple,

but the actual situation is often very complex. The valley wind tends to occupy a fairly shallow layer and the upper wind may be blowing in some entirely different direction. Superimpose on this the effects of varying angles of sunlight on the slopes, and the search for lift, or the avoidance of down, becomes an exercise of some subtlety. Local lore is important, and needs more than a few weeks to absorb. The potentialities of the site are clearly quite staggering, particularly in wave conditions, and much exploration remains to be done.

The thermals really are rough and it is no place for solo flying by the semi-competent. We were getting readings of 3*g* on the Eagle's accelerometer when thermal soaring, and aero-towing near the mountains is a fairly major exercise in skill, faith in the tug-pilot, and some-



. . . exercise in skill

times sheer strength. The tow-rope has a breaking load of about two tons and the use of a weak link is deemed imprudent: it might break. The requirement for visitors to fly solo in Italian gliders is 80 hours, and this seems very fair. Intending visitors must apply in very good time, since heaps of paper have to be sent to the Ministry in Rome.

The local gliders consist of a Canguro two-seater, in which the instructor is apparently intended to indulge in private meditation in a little cell under the wing, a Grunau Baby of great antiquity, and two M-100 Standard Class single-seaters stuffed full of oxygen and radio, and showing a refreshing lack of alarmist placards. There also exists a Blanik, but this was out of action due to an unfortunate encounter with the airfield jeep, which must have caused a splendid clang. For much of our stay, the M-100's were largely at our disposal, as well as our own machines. Incidentally, if you do take your own machine, oxygen is useful and radio pretty essential. A channel



. . . a splendid clang

on Aosta tower frequency helps.

Living was fairly cheap, with excellent meals at the airfield restaurant and specially arranged accommodation for us at the local College of Agriculture. Very comfortable, except for a minor earthquake and an exuberant midnight firework display by the local village. Aero-towing and soaring charges are comparable with those in the U.K., but tows to about 4,000 ft. were fairly common.

On the last Sunday in July, a *Manifestazione* was held, organized in a distinctly Latin manner. Parachutists thudded to earth whilst I.C. clutched the Skylark, ready to whisk it from under their big boots. An Italian gentleman in a Morane Rallye demonstrated its STOL capability across the bows of the parked gliders. Having been given the choice of performing "aerobatics" at 14.00 or 18.00, I found myself airborne at 15.30 with a tummy-full of high-density polymerised pasta. At 17.00, Ken Bignell and I did a repeat performance in the Eagle, including a good long spin. Vitelli, counting turns over the P.A. system roused



. . . near hysteria

the crowd to near hysteria when he got to *cinque*, albeit slightly prematurely.

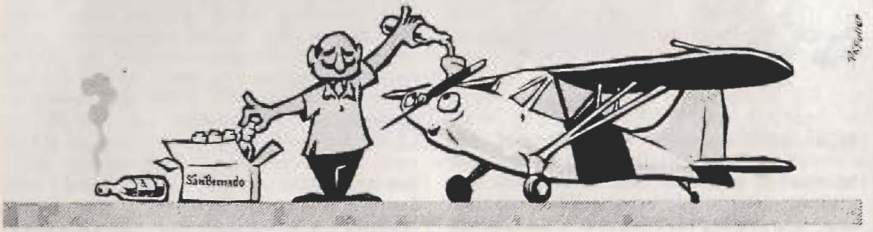
It is only fair to say that Aosta is not entirely free from frustration, but what gliding site is? The airfield does not operate at all on Mondays (fair enough, it works all week-end and the chaps need a "relax") and the pace is fairly gentle

at other times, due to a dearth of tug-pilots other than Vitelli, and a tendency for all ranks to vanish for a lengthy lunch at the best part of the day. The moral is to have a launch before lunch and stay up until siesta-time is over. In the calm of the morning, the airfield supports a large population of vigorous horse-flies, quite capable of boring holes through clothing. It can get quite hot: flies landing on motorcars exposed to the sun die like flies. When we arrived, the whole outfit was operating on a shoestring, in the form of one serviceable Stinson L-5 tug, which started showing signs of distress after a week of Eagle-towing. Two quotes: "Why are they worried about the cylinder-head temperature? After all, steel only melts at 800°"; and "It is not the engine which is wrong—only the carburettor". But these are really minor snags when the weather shows a strong tendency to be good, living conditions are better than at most U.K. clubs, and the soaring comes in large superb chunks at great heights. The overall result was a thoroughly successful visit and we are most grateful to Signor Vitelli, Luigi, and the numerous others who helped to make it so much fun.



. . . signs of distress

Finally, beware of "San Bernado". This innocent-looking fluid must have been the compound carried in those apocryphal kegs attached to the St. Bernard dogs from the hospice. It is certainly capable of reviving a frozen corpse in a snowdrift, and probably dissolves polyester paint. Treat it with great respect.



Lighting Requirements for Trailers

PAGES 16 and 17 of *Air Law* give the requirements for trailers, and in addition a regulation came into force on 24th July, 1963, from which date the following has applied:—

Any trailer other than one being towed by a passenger vehicle or a dual-purpose vehicle (Land Rovers, Estate cars, etc.) must, if it is on a road at night, carry "front corner marker lamps".

These lamps must be (a) white, and (b) one each side, (c) carried either on the front face or on the sides, not more than five feet behind the front (excluding the towbar), and (d) visible through an arc of 90 degrees starting at right angles to the longitudinal axis.

If the lamps are on the front face, no part of the trailer must project sideways more than 12 ins. beyond the outer edge of the illuminated part of the lamp.

All this means that no glider trailer may stand on a road at night uncoupled without lights at the front corners. Any trailer being towed at night by a commercial vehicle or a tractor must carry front lights of the right type.

Huit Jours d'Angers

by GEORGE BURTON

MOST glider pilots will have heard of the competition held annually at Angers in North-western France called the "Huit Jours d'Angers." The "Eight Days of Danger," as it is affectionately called in England, is organised by the "Aero Club de l'Ouest de la France". Each year sees a more ambitious competition than the last, and the president, Monsieur Bellanger, and Chief Instructor Monsieur Evsan are succeeding in making the contest into a true "Coupe d'Europe," as they now call it. It is most famous for its "six heures" task in which pilots have to complete as many legs as possible of a 50-km. triangle. Perhaps this task was inspired by the 24 hours' race at Le Mans, which is only 50 miles from Angers. This year's was the exception, however, for in spite of having seven tasks in nine days, a "six heures" was not among them.

My entry was only made possible by Mrs. Enid Paget, who telephoned the organisers to persuade them to accept a very late entry, and who assisted financially toward the cost of getting my Skylark to Angers.

Kathie Ramsdale and I arrived late on Wednesday evening to find the team from Germany already encamped, together with pilots from Belgium and Italy. The Germans had brought with them their latest dream glider, the BS-1. It is a step further in the line ending with the SB-7 which they flew in Argentina, and has a claimed glide ratio of 45:1.

Thursday was a practice day. Lacheny, of Edelweiss fame, went off at 10.30 to attempt a 500-km. triangle. He was flying the Foka owned by Mrs. Paget. I took things more leisurely and, "booking in," I took a launch to do some local soaring. Most of the tugs used were Storchs powered by a 350 h.p. radial engine. At 50 knots they climbed at 600 ft./min. and in half a circuit one cast off, while they carried on to land in the other half.

The French countryside looked very similar to the English from the air, but with a higher percentage of fields under cultivation. Most of these were corn, vineyards or root crops, and, I decided, not landable. The possibles were hay fields, cut but not yet stooked, and cattle pastures.

Friday dawned a similar day to Thursday. I did not understand much of the met., and with only one isobar shown, vaguely wandering over Europe, I

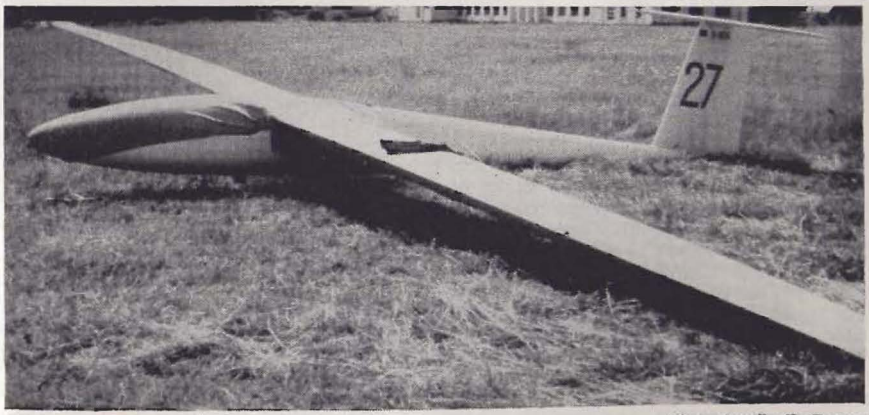


Photo by G. E. Burton

The BS-1, 18m. span; 45:1 glide ratio; retractable wheel; all-flying tailplane; Eppler wing section; water ballast can be carried to change min. sink speed, etc. Developed from SB-7 which was flown in Argentina.

wondered what made the 8 to 10-knot wind blow. The gliders had been lined up on the *piste* (grass runway) at 9 a.m. in a pre-determined order which was then rotated each day. I was in the front row which, as it turned out, was a disadvantage for me on that day. There was no starting line, time being taken from release, so it behove one to press straight off from launch. Briefing was at 10.15 and the task announced was a 300-km. triangle, Angers—Le Mans—Chenonceaux—Angers.

First launch was to be at 11.15. The Michelin road maps are the most popular air map in use, and five minutes before take-off I was busy using my wing as a support to pencil in the triangle on my map. I drew Angers—Chenonceaux (a castle on the Loire)—Le Mans—Angers and that was the way I flew. The absence of other gliders on the first leg didn't worry me; I imagined them having re-lights because of the low cloud base. Half-way down the second leg I met my first companion, a Ka-6, in a thermal. At cloud-base he dived off—in the direction from which I had just come!—and then I realised the dreadful truth: I was going round the wrong way. I finally landed halfway down the last leg, from where Kathie did a very efficient retrieve. The organisers were both sympathetic and generous; they scored me as if I had in fact gone round correctly.

Another rule of the competition was brought home to me the next day. It was that, as in Argentina, re-lights are only allowed after landing back at the aerodrome. The task was a 150-km. triangle, the first leg being into the wind. The wind had increased to 25 knots at 2,000 ft., and with what appeared to be the same languid isobar wandering over the map, I again was at a loss to explain what made it blow. The day was somewhat similar to the Chivenor day in the Nationals, with strong thermals, strong sink and often no obvious connection between a thermal and the clouds. Ninety per cent. of the effort in the task was, in fact, in the first leg, and I sank to earth only 10 km. out along it. My position on the scoreboard sank in sympathy—33rd out of 44. No point in a mad rush back to Angers, and this, I think, is much to be said for the rule in these days of crowded roads. The landing was one of the bumpiest I have ever made; heaven knows how the Skylark survived.

The next day was superb, with a 6,000-ft. cloud-base and 8-knot thermals. The fastest time round the 200-km. triangle was made by Labar of the French international team in 2 hrs. 56 mins. I did 3 hrs. 15 min., and one must remember that these were from time of release at 1,600 ft.

Other tasks set were a 160-km. out-and-return to Le Mans, a 250-km. out-and-return to Poitiers, 260-km. double dog-leg, and a 190-km. double dog-leg. Navigation was easy with large rivers and straight roads. I won one of the remaining days, came second on another, and was in the top six on two others, thus succeeding in raising my position to a final fourth. In front of me were Lacheny in the Equipe Paget Foka, who won, Labar in a Breguet 901, and Wolfgang Gross, of Köln, in a Ka-6.

The competitions were rounded off in the most pleasant way of any that I have had the privilege to fly in. First there was a prizegiving with prizes which made the Nationals look like a jumble sale, and then there was a magnificent banquet which went on for about three hours. In the course of it I perceived a cry of "*L'Anglais—L'Anglais*," and eventually it dawned on me that I was required to sing. This, I'm sure, was more torture for the audience than for me. The comps. as a whole were most enjoyable, and if I can paraphrase the song I had to sing, "For it's a jolly good competition; long may it go on."

Leading Final Results

	Pilot and Country	*Sailplane*	*Pts.*
1	Lacheny (Fra.)	Foka	5763
2	Labar (Fra.)	Breg. 901	5192
3	Gross (Ger.)	Ka-6	4420
4	Burton (U.K.)	Skylark 4	3820
5	Bucher (Ger.)	Phoe ix	3809
6	Delapparent (Fra.)	Mésange	3793
7	Biagi (Ital.)	Breg. 901	3759
8	Quemere	Breg. 901	3521
9	Peter (Ger.)	Ka-6	3413
10	Wuillai	Foka	3310
11	Gavillet	Breg. 901	3307
12	Bottcher (Ger.)	BS-1	3248
13	Frowein (Ger.)	Zugvog. 3	3242

Flying at Aosta

* * *

by K. BIGNELL

IN spite of the impressive flying record, analysis shows that the period 19th July-9th August was not particularly good for soaring at Aosta. A very uniform pressure field lurked around Aosta almost throughout, and the upper winds, essential for waves, were negligible until the end of July, so that the standard pattern was repeated day after day — morning sunshine set off the local valley wind which lived in the bottom 3 or 4,000 ft., and powerful mountain thermals above the valley wind. Occasionally days departed from this routine owing to over-building of cumulus which cut off the sunshine, leading to premature failure of the valley wind.

On first seeing the scenery, we had visions of interminable briefings and long familiarisation flights in the local two-seater — but no — competence is assumed until proved otherwise. Those who would rather have a check first, and that means nearly everybody, may do so in the Canguro. Whilst a few aero-tows can be smooth throughout, several nightmare episodes are usually to be expected, sometimes linked to form one continuous episode from beginning to end.

The main decision to make before flying was whether to have a low tow to the slope and hope to get through the wind shear in a lucky thermal, or to be towed directly to the mountain thermals. The latter course proved to be by far the best bet, though expensive and exciting.

It was from a high tow that I had my first taste of mountain soaring, and, incidentally, also of the M-100s. C.F.I. Renato Vitelli, who must surely have been born clutching a microphone in his right hand, ordered me to be ready in the M-100 as he spiralled the tug down after a tow. Five hectic minutes later after a ten-second briefing from ground engineer Luigi, who has an unbelievable knack of making himself clearly understood using nothing but hand signals and subtlety of expression, we were off. Initial trepidation soon passed, for she handled beautifully: which was just as well because we now indulged in some gully flying, characterized by the craggy scene in all directions but up. A few frantic circles here and Vitelli sadly signalled "The lift is not good here — we will go somewhere else", straightening up towards a precipice. As if by magic, the towering rocks fell away as we flew into lift just in front of the cliff; Vitelli waved me off at 5,000 ft. and plunged earthward, telling me to wait for a thermal. Feeling dazed, I didn't bother to enquire exactly what sort of lift I was in at the moment, but just waited. Sure enough, a thermal duly appeared, weak at first but improving, and rough as hell all the time. The lift was better close to the mountain, and it sometimes paid to fly straight, as if using hill lift. This procedure seemed to be the answer when an attempt at circling yielded nothing but sickening manoeuvres of doubtful category, very probably prohibited in British gliders, but who cares, there are no placards in Italian gliders.

Eventually the mountain tops passed by at 10,000 ft. and the thermals became more organized and very strong — probably due to convergence of all the small ones towards the tops. Another four minutes and we're up to cloud-base at 14,000 ft, where I had decided to stop, for although the glider had a vast cargo of oxygen, I had taken off without a mask. Never mind, the view was splendid, including the fascinating sight of the Skylark on tow, a minute speck 10,000 ft below, but soon to carry Bill

Kronfeld on his flight to the Matterhorn.

Becoming aware of freezing toes and frying nose, an exhilarating 6,000 ft. burn-up restored the heat balance and still left as much again for some stalls, a spin and some irresistible "contour flying" in gulleys and over ridges.

A change of weather type occurred on 1st August when moister upper south-westerlies brought in occasional sheets of medium cloud, interfering with or preventing the development of the valley wind, but not weakening the thermals too much. A few fleeting waves were seen, but not contacted, late on 3rd August, though some very interesting hill soaring to 9,500 ft. was to be had until darkness fell.

The 8th August produced truly magnificent soaring as N.W. winds poured over the Alps, and the next day, our last, developed into a glider pilot's dream. As we were saying farewell to Aosta, we watched the Italian two-seater climb from a low tow to the mountain tops in one straight beat along the mountains to the south.



Photo courtesy A. Forno

Various members of Imperial College at Aosta.

* * *

Out and Return—THE MATTERHORN

by BILL KRONFELD

PERHAPS some of you will have read the report which occurred in "The Times" and elsewhere, in which it was alleged that I flew over the Matterhorn. Regrettably this was very inaccurate, and it is necessary to deny this story very nearly in its entirety. The account which now follows should be taken as a true record of the flight.

The morning of 24th July, 1963, was fine with small cumulus cloud obscuring the mountain peaks from sight. A haze from the town of Aosta (1,750 ft. a.s.l.) in northern Italy, filled the valley, but this was soon cleared as the wind sprung up from the east. By 12.30 the valley wind was blowing strongly at about 25 knots, and cloud-base had risen well clear of the local peaks.

At 13.00 I was launched in the Skylark 4, behind an antiquated device called a Stinson L-5, piloted by Signor

Vitelli. Initially the tow was smooth, but above 4,000 ft. a.s.l. a good deal of turbulence was encountered. The tug waved me off at just under 6,000 ft. in a good thermal of 6 knots, which steadily increased to 10 knots as the mountain tops were approached at 9,000 ft. The lift continued through cloud-base at 11,500 to 13,300 ft. in shallow cumulus.

The panoramic view on emerging from the cloud was, perhaps, the most beautiful that I shall ever have the good fortune to see. The mountains stood out vividly against a deep blue sky speckled with pure white cumulus. To the north-west stood Mont Blanc, and to the north-east the Matterhorn, both with their summits in cloud. Southwards could be seen the Gran Paradiso range, even now covered in snow.

Somewhere at this point I began to err, and the fascination of the Matterhorn lured me away from the airfield at Aosta. By using a combination of mountain lift and thermals, the town of Chatillion was reached at 8,500 ft. This little "castle town" lies 24 kms. east of Aosta, and stands at the junction of the Vallee d'Aosta and the Valtournanche, which runs north to the foot of the Matterhorn. The summit was still obscured by cloud, but by soaring the western slope of the valley a position was reached to the south-west which enabled the snow-capped peak to be seen. The mountain was approached at 13,000 ft., some 1,500 ft. beneath the top. About 30 minutes were spent in the vicinity of Monte Cervinio (to give the mountain its local name), taking photographs and watching the skiers on the slopes of Monte Rosa, which lies to the east of the Matterhorn and is some 500 ft. higher.

By flying back directly over the mountains a considerable distance was saved on the return flight. However this frequently meant flying with one wing tip 100 ft. over a jagged peak and the other 6,000 ft. out above the valley. This sort of soaring can be a little unnerving, and one wonders what would happen in the event of an unpremeditated landing. For the peace of mind of pilots who attempt similar tasks, it is strongly recommended that the glider carries a first aid kit, food and some warm clothing. Our radio, needless to say, was quite useless away from the airfield, the mountains putting an effective stop to that brand of Hertzian wave.

Cloud base, by now, was up to 12,000 ft., giving 3,000 ft. above all but the highest peaks. With 4/8 ths of very workable Cu, the return flight was fortunately without incident. The landing at 16.50 concluded a round trip of 90 kms., and a wonderful experience, but left the nagging thought, would it really have been possible to fly over the top?

DUNKESWELL REGIONAL COMPETITION RESULTS

Final Place	*Pilot or Pilots*	*1*	*2*	*3*	*4*	*5*	*6*	*Total*	*Sailplane*	*Comp. No.*
1.	Meddings & Mac. A. Bacon	634	1000	1000	0	181	474	3293	Oly. 403	90
2.	Simpson & Martin	553	676	600	0	207	432	2468	Oly. 1	108
3.	Stark	0	718	951	468	0	200	2337	Oly. 460	348
4.	Vaughan & Hood	222	—	—	518	528	1000	2263	Skl. 3	52
5.	Trott	0	676	364	528	0	136	2104	Skl. 3	200
6.	Seth-Smith	0	535	780	201	0	332	1848	Oly. 460	111
7.	Donald & Cornell	568	533	709	0	8	—	1818	Skl. 3	268
8.	Reilly & Allerton	579	755	—	—	—	—	1334	Oly. 400	249
9.	Lowe & Roberts	0	445	459	0	0	362	1266	Oly. 2	170
10.	Chubb	0	640	426	0	0	0	1066	Oly. 2	245
11.	Lapham	0	526	109	0	0	0	635	Swl.	151
12.	O'Riley	0	329	109	0	0	0	438	Skl. 3	68

Tasks — Day 1: 80-km. Triangle. Day 2: Free Distance. Day 3: 105-km. Race. Day 4: 200-km. Out and Return. Day 5: 120-km. Race. Day 6: 100-km. Out and Return.

Weekend Competitions at Portmoak

by W. A. SHANKS

A PRELIMINARY poll of would-be competitors in the Scottish area, early in 1963, proved that there was an interest in week-end competitions; the proposal that the competitions be handled in this fashion resulted from earlier attempts to organize weeks in 1961 and 1962. It was suggested that crews should leave aircraft and equipment at Portmoak over a period of two weeks, thus helping travelling arrangements.

The organization of the events was greatly helped by the generous offers of Tigers of both Aberdeen and Yorkshire Clubs and we were able to have the fullest use of the Aberdeen Tiger with Pilots Angus Macaulay and Bill Dunn, the second Tiger being our own, with the Yorkshire tug as stand-by but not used.

At first briefing on SATURDAY, 8TH JUNE, it was noted that 12 teams representing Yorkshire, Dumfries, Arbroath, Lossiemouth and the Scottish Gliding Union had entered, two being *hors concours*. It is best not to dwell upon the met. conditions of the 8th and 9th, as the east wind and stable sunny conditions proved to be unsuitable for contest flying, and as a result both days were No-Contest Days. The tasks were respectively Out-and-Return and Free Distance.

JUNE 15TH.—This proved to be the best day of the series, as nearly all the competitors scored. At briefing, the task was declared to be Free Distance, and as forecast by the meteorologist, Peter White, the early mists cleared at 11.30 hrs. and thermals started soon after. Wind strength was light and westerly. An early departure from the area was the A.T.C. Weihe (Henshaw), this aircraft proving to be quite a consistent performer, several Skylark 2's following minutes later with Riddell's Skylark 3 in the lead. This lead was maintained by Riddell, who landed at Dyce Airport (83 miles); four other aircraft landed within a few miles of one another, Docherty (Olympia) and Thorburn (Skylark) at Fordoun Airfield (61 miles), Rae (Skylark 3B) south of Stonehaven, and Alty (Skylark 2) north of Stonehaven, 64 and 69 miles respectively.

JUNE 16TH.—Task: Pilot-Selected Goal; wind westerly, 20 kts.; convection not as good as on the 15th. Launching for this task was by winch, as the necessary starting height could be achieved from slope-soaring on the Bishop Hill; after sampling this lift, some pilots returned for later starts and to dish out fresh instructions to crews.

Three pilots achieved their declared goals: J. C. Riddell (Skylark 3F), Fraserburgh, 114 miles; J. O'Donnel (Weihe), Kinnell Airfield, 42 miles; J. A. Dandie (Swallow), R.N.A.S. Arbroath, 38 miles; and a fourth, A. C. Boyce (Skylark 2), overflew his goal at Kinnell Airfield and logged an extra 25 miles.

FINAL RESULTS: PORTMOAK

				Dates in June					
	Pilot	*Club*	*Sailplane*	*8*	*9*	*15*	*16*	*22*	*23*	*Total*
1.	J. C. Riddell	Yorks.	Skylark 3F	—	—	1000	800	—	—	1800
2.	D. G. Alty	Fulmar	Skylark 2	0	0	854	0	0	0	854
3.	T. P. Docherty	S.G.U.	Olympia 2	0	0	781	13	0	0	794
4.	A. C. Boyce	Dumfries	Skylark 2	0	0	384	341	0	0	725
5.	A. J. Thorburn	S.G.U.	Skylark 2	0		717		0		
	C. B. Sutherland				0		0		0	717
6.	J. Rae	S.G.U.	Skylark 3B	0	0	700	0	0	0	700
7.	T. A. Moffat,	A.T.C.	Weihe	0	0					
	R. G. Henshaw,	No. 661				332				
	J. O'Donnel,	G.S.					197			
	G. Berry							0	0*	529
8.	J. A. Dandie,	S.G.U.	Swallow			0	184	0	0	
	J. E. Duthie			0	0					184
9.	R. Stothard &	Yorks.	Eagle	0	0	18	0	—	—	18
	E. Reed									
10.	G. A. Glennie	Condor	Skylark 2	0	0	—	—	—	—	0

*Only pilot to complete the task.

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JUNE 22ND.—Task: 100-kilometre Triangle; wind westerly, 10-15 kts. In this task again the Bishop Hill proved a useful marshalling point, after a winch launch, but unfortunately convection on the first leg did not prove to be of acceptable strength and only one pilot, Boyce (Skylark 2), reached the first turning-point at Methven (20 miles), and another No-Contest Day resulted.

JUNE 23RD.—Task: Speed (to Kinnell Airfield), 42 miles; wind south-westerly, 20-25 kts. Five aircraft managed to set out, but only one reached the goal, this being the Weihe (Berry); the nearest to him was Alty (Skylark 2) at Craigton (33 miles). No Contest.

At the conclusion of the series, competitors and organizers agreed that the event be repeated next year in a similar form, as the contest had proved of considerable benefit to all.

BONUS.—It was noted that the instructors among the competitors had benefited to the extent of five Silver C's, and that among the crews five had gained 5-hour duration legs.

A Gliding Club in Eastern U.S.A.

by JOHN FIRTH

AFTER finding myself posted to Washington, D.C., last September, to care for a small piece of satellite, one of the first things I did was to look for some gliding. An encounter with a commercial enterprise cost me $8.00 for fifteen minutes wallowing around in a Schweizer 2-22. (This two-seater makes one feel that the T-21 really has quite a high performance.)

I eventually found a club 60 miles away at Westminster, Maryland. This has many members from around Washington, and also operates a 2-22, but there seemed to be scope for better things, so I went along to meetings and got to know some of the pilots. When it came to actually joining, I was somewhat taken aback by the $75 initiation fee, but compromised by becoming an associate member for $10.

The club consists almost entirely of private owners with widely varying experience and achievements. This is not one of those parts of the U.S.A. where one releases into 1,000 f.p.m. and, after half a dozen thermals, comes down for a beer to celebrate a Diamond Goal! Conditions are rather British, with more thunderstorms. Cloud flying in the region is officially prohibited, due to the heavy powered traffic. However, V.F.R. prohibited areas are surprisingly few, even around Washington with its busy airports.

The club airfield is a small grass strip shared, apparently amicably, with a number of powered aircraft. The members own a variety of ships (American for aircraft). Here are some of them:—

A Wolf, Grunau-like, but without spoilers, is now *hors de combat* after an inadvertent cross-country flight.

Two Laister-Kauffmann two-seaters, built as war-time trainers, easily spun and nightmares to rig, are quite good performers for all this.

There are several Schweizer 1-26's, all metal, mid-wing ships, comparable with an Oly, but again complicated to rig.

A B.G. 12, twice rebuilt by its enthusiastic owner after unfortunate incidents,

is heavy, fast and flapped. It's locally thought a hot ship and appears to be rather difficult to land.

An Air 100 [M-100S?—ED.], a more sophisticated Italian approach to the 15-metre class, is beautifully constructed and finished, but again, surprisingly, the removal of the wing is unnecessarily complex. Of course, while assisting at such operations I go around muttering: "You should have bought a Skylark, they are much easier", etc.

Lastly, a Pratt-Read, a side-by-side war-time trainer, is much like an Eagle in size and weight, pleasant to fly, but a little fast for comfortable thermalling, stalling around 50 m.p.h. I haven't even dared to think about derigging it.

After a few weekends of turning up to help, and occasionally coaxing the 2-22 up a few hundred feet, I was enlisted as a helper in the annual regional competition. Later I found myself on the Task Committee and then, 15 minutes before pilots' briefing, was made Chairman. I thus had to give an unprepared briefing, and later found how long it takes to do the marking! I was somewhat embarrassed by my ignorance of many of the local regulations, when the questions started to pour in.

I had persuaded an English friend attached to the Met. Office to do the forecasting, which, with the co-operation of the local Weather Bureau, he did admirably. Val Brain, ex-Lasham, was also on the Committee, and I heard remarks like "This meet is being run by Englishmen."

After initial misgivings about handling 30 gliders and five tugs on a small airstrip, things went well. A cold front cleared the region just before the first day. We had three days of good soaring weather, followed by rain on the last day, when the task was to derig in the rain and go home, after the trophy presentations.

The tasks were an 89-mile Out and Return followed by Free Distance; Free Distance (required by S.S.A. rules); and a 77-mile Triangle.

Winning performances were respectively 175 miles; three tied with 202 miles; and 2 hrs. 8 mins.

There was no handicapping, which was a pity, as there was a wide spectrum of performance present.

The over-all winner was Stan Smith, twice National Champion, in a 1-21; well to the fore were two Ka-6's and a Standard Austria.

Trailers were mainly of the open type; they varied from crude wooden beam construction, to an aircraft-type frame, covered with a streamlined shell, which could be raised in one piece by turning a handle. Appropriately it housed the elegant Austria.

Altogether I had an interesting weekend, albeit rather hard work. The pilots grumbled little, and paid the organisers many compliments, so all were well pleased.

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U.S.S.R. CHAMPIONSHIPS

IOZAS YARUSHAVICHUS, of Lithuania, won the 25th U.S.S.R. Gliding Championships, which were held "by tradition" at Sumy in the Ukraine. He also captained the Lithuanian team which won the Team Championship. Yarushavichus is head of the Vilna Aero Club, and has trained many glider pilots to a high standard.

Runner-up at the Championship was the world record holder Mikhail Veretennikov, of Dniepropetrovsk; he was followed by Romas Visackas, an engineer from Vilna.

Thunderstorms and violent winds frequently interfered with the competitions. During a Goal Race the pilots ran into a violent storm after covering 18 miles: on this day the victory went to Albert Durnov, of Dniepropetrovsk. First place in a 29-mile Triangular Race, also flown in strong wind and rain, went to Alexander Kurile of Zaporozhe, who took 1 hr. 48 mins.—SOVIET INFORMATION SERVICE.

GLIDING CERTIFICATES

DIAMONDS FOR ALTITUDE

No.	*Name*	*Club*	*Date*
3/35	H. R. Dimock	Surrey Gliding Club	7.6.63
3/36	W. N. Tonkyn	Imperial College Gliding Club	9.6.63
3/37	L. S. Hood	Army Gliding Club	9.6.63

DIAMONDS FOR GOAL FLIGHT

2/148	B. J. Davey	Imperial College Gliding Club	2.6.63
2/149	J. R. W. Kronfeld	Imperial College Gliding Club	2.6.63
2/150	K. R. Aldridge	Bristol Gliding Club	2.6.63
2/151	A. Somerville	Phoenix R.A.F. Gliding Club	2.6.63
2/152	R. Griffiths	London Gliding Club	12.4.63
2/153	J. H. Wilson	Surrey Gliding Club	4.6.63
2/154	C. C. Donald	Perkins Sports Association Gliding Club	2.6.63
2/155	P. E. Berriman	Devon and Somerset Gliding Club	21.6.63

GOLD C CERTIFICATES

No.	*Name*	*Club*	*Completed*
106	G. R. Barrell	Phoenix R.A.F. Gliding Club	9.6.63
107	D. R. Hooper	Army Gliding Club	7.6.63
108	J. R. W. Kronfeld	Imperial College Gliding Club	7.6.63
109	J. Redman	Cambridge University Gliding Club	13.7.63

GOLD C DISTANCE LEGS

Name	*Club*	*Date*
B. J. Davey	Imperial College Gliding Club	2.6.63
J. R. W. Kronfeld	Imperial College Gliding Club	2.6.63
K. R. Aldridge	Bristol Gliding Club	2.6.63
R. G. Griffiths	London Gliding Club	12.4.63
J. H. Wilson	Surrey Gliding Club	4.6.63
C. C. Donald	Perkins Sports Association Gliding Club	2.6.63
P. E. Berriman	Devon and Somerset Gliding Club	21.6.63

GOLD C HEIGHT LEGS

Name	*Club*	*Date*
J. R. W. Kronfeld	Imperial College Gliding Club	7.6.63
C. M. Greaves	East Midlands Gliding Club	12.6.63
A. R. Ismail	Cambridge University Gliding Club	6.6.63
B. E. Warner	Cambridge University Gliding Club	11.6.63
C. M. Labouchere	Clevelands R.A.F. Gliding Club	5.7.63
J. Pickett-Heaps	Cambridge University Gliding Club	4.7.63

SILVER C CERTIFICATES

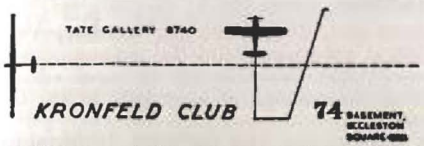
No.	*Name*	*Club*	*Completed*
1279	P. R. Green	B.E.A. Silver Wing Gliding Club	17.5.63
1280	H. S. Tee	Phoenix R.A.F. Gliding Club	12.5.63
1281	T. P. Quinn	London Gliding Club	25.5.63
1282	B. J. W. Wise	Yorkshire Gliding Club	19.5.63

1283	Elizabeth Hargrave	London Gliding Club	25.5.63
1284	C. J. Ridley	Phoenix R.A.F. Gliding Club	18.5.63
1285	A. J. Newton	Handley Page Gliding Club	26.5.63
1286	I. G. Pratt	Oxford Gliding Club	26.5.63
1287	D. W. G. Carter	Cambridge University Gliding Club	26.5.63
1288	A. W. Barker	Surrey Gliding Club	8.6.63
1289	S. H. C. Marriott	Army Gliding Association	11.6.63
1290	Florence Wood	Surrey Gliding Club	11.6.63
1291	A. C. Boyce	Dumfries and District Gliding Club	15.6.63
1292	R. Bradley	Wessex R.A.F. Gliding Club	8.6.63
1293	D. G. Alty	Fulmar Royal Naval Gliding Club	16.3.63
1294	K. L. Edwards	Moonrakers R.A.F. Gliding Club	2.5.63
1295	C. Wray	Windrushers R.A.F. Gliding Club	23.6.63
1296	B. J. Willson	Bannerdown R.A.F. Gliding Club	8.6.63
1297	C. R. Simpson	East Midlands Gliding Club	23.6.63
1298	G. Iley	Fulmar Royal Naval Gliding Club	22.6.63
1299	G. Bulmer	Cambridge University Gliding Club	19.6.63
1300	J. W. A. Webster	Bristol Gliding Club	19.5.63
1301	A. E. Burgess	Windrushers R.A.F. Gliding Club	23.6.63
1302	L. E. Beer	Chilterns R.A.F. Gliding Club	23.6.63
1303	J. A. Bennett	Nimbus R.A.F. Gliding Club (Germany)	29.6.63
1304	J. A. Dandie	Scottish Gliding Union	16.6.63
1305	J. Bridgewater	Imperial College Gliding Club	9.6.63
1306	Mrs. M. P. W. Watson	Army Gliding Club	23.6.63
1307	W. M. Alexander	Cambridge University Gliding Club	27.6.63
1308	P. J. Pratelli	Oxford Gliding Club	13.5.63
1309	D. P. W. Johnson	Midlands Gliding Club	22.6.63
1310	R. B. Hill	Coventry Gliding Club	19.6.63

C CERTIFICATES

Name	*Gliding Club or School*
S. G. Davies	Silver Wing
C. S. Trotman	Swindon
D. J. Marpole	Fulmar
D. E. R. Deacon	Chilterns
G. K. Cooper	Blackpool & Fylde
K. R. Turner	R.A.E.
D. Davenport	Avro
G. F. O'Donnell	644 G.S.
D. C. Longden	Cranwell
P. J. Stanley	Scottish
S. L. Perry	Swindon
G. A. Morris	662 G.S.
P. A. Treseder	Phoenix
R. T. Babbage	621 G.S.
L. B. Pym	624 G.S.
J. E. Eatwell	Heron
R. F. Foreman	Laarbruch
D. H. Woods	Kent
A. J. Williams	Portsmouth Naval
S. R. Fouracre	624 G.S.
M. A. Greaves	Ouse
N. F. Appleton	611 G.S.
K. Massey	Ouse
K. Longstaff	Coventry
A. McMillan	Chilterns
C. P. Morgan	Silver Wing
A. Brier	Doncaster
A. J. Dowsett	Handley Page
R. D. Thomas	624 G.S.
P. G. S. Whitmore	621 G.S.
F. Williamson	Kent
M. Pickthall	621 G.S.
B. W. Landes	Windrushers
C. Stothard	Yorkshire
H. McE. Anderson	Northumbria
S. G. Matthews	624 G.S.
T. S. Rayner	Kirton-in-Lindsey
E. Walker	Aden Services
T. Hammer	London
R. Nicholson	Midlands
F. A. Gonzalez	Bristol
D. G. Shepherd	Fulmar
J. R. Hayes	Midland
G. R. Dobson	Imp. Coll.
P. G. Champion	Fulmar
M. Bailey	Imp. Coll.
J. E. Malloy	Newcastle
C. Dews	London
W. H. Grice	Silver Wing
A. S. Barmby	White Rose
D. T. S. Ware	Cambridge
R. H. Brown	Midland
J. A. Sellars	Derbyshire & Lancashire
J. A. March	Perkins
G. C. Mansfield	Midland
B. Taylor	Avro
K. F. Evans	Surrey
B. E. Pell	Doncaster & District
R. K. J. Whaley	Cranwell
M. C. Roberts	Cranwell
B. J. Tracey	Midlands
J. Thorpe	Clevelands
T. M. Holloway	Windrushers
S. W. Ing	Handley Page
L. P. Bowles	Portsmouth Naval
R. G. Earp	Perkins
J. S. Abrams	Devon & Somerset
A. M. Cameron	Scottish
E. C. Castell	Swindon
J. H. Sturrock	Blackpool & Fylde
Miss S. E. Messent	Doncaster
J. E. Reeve	Portsmouth Naval
J. M. Fish	Blackpool & Fylde
C. Brooks	Perkins
A. Warner	621 G.S.
J. Collins	Chilterns
A. Cawthorn	Northumbria
V. G. Holland	Windrushers
I. Paget-Brown	644 G.S.
E. Reed	Yorkshire
W. Marshall	E. Midlands
D. N. Masters	Devon & Somerset
B. T. Taylor	Phoenix
J. L. Griffiths	Bannerdown
D. J. Sheen	E. Midlands
A. W. Dicker	Phoenix
P. M. Trivett	Kent
R. G. M. Thomas	West Wales
B. W. Pritchard	Fulmar
D. A. Heathcote	E. Midlands
O. F. Eddy	Surrey

F. Norman	Southern Command	T. Galler	Polish	C. A. Wheatley	Phoenix
		W. J. G. Coyne	Hildesheim	R. Rumsby	Moonrakers
C. D. Lovell	Surrey	A. R. C. Mathie	Cranwell	R. P. Bentham	Empire
J. C. Walker	Oxford	G. W. Constantine	Surrey		Test Pilots



THE negotiations for the 88-year lease of No. 74 Basement and plans for redecorating the premises are continuing apace.

On the financial side an appeal under cover of a letter signed by Lord Brabazon and Philip Wills has been sent to all gliding and flying clubs, the services and industry. The initial support to this has enabled us to obtain a short-term loan from our Bankers to purchase the actual lease and this loan the Shaw Slingsby Trust have promised to help with in two years time. We are therefore left with finding £2,000 for the essential repairs, redecoration and refurbishing. So far we have received £1,000 in loans and £500 in donations from supporters.

If you have not already sent us a loan or donation we would ask you to seriously consider us, we still need £500 and any amount, however small, will be most gratefully acknowledged.

Among the speakers at the Club's Dinner and Dance on Friday, 4th October, will be Group Captain Norman Reider, C.B.E., D.F.C., John Furlong, M.B.E., D.F.C., and Mike Bird.

Double tickets at £3 10s. are still available from the Club. Dancing to Bill Savill's orchestra will continue until one a.m. The Club will be open from six p.m. onwards for pre-dinner drinks.

Terence Cuneo, R.G.I., President of the Industrial Artists Group which incorporates the Society of Aviation Artists, has kindly consented to open our 6th Annual Art Exhibition at 8 p.m. on Wednesday, 13th November. As usual, Roy Nockolds and David Shepherd both also of the Society will judge the competition. The Kronfeld Challenge Trophy for the best overall entry, which was won in 1962 by Margaret Kahn, will again be awarded. There will also be quite a number of other prizes to be won. Artists, don't forget entries must be in by 31st October. The Exhibition will be open each weekday evening from 6-10 p.m. and on Saturdays from 3-6 p.m.

We have a very interesting and varied programme of lectures ahead and the following I think are worth a special mention: Wing-Cdr. Wallis' talk on his home-built autogyro on the 2nd October. Some of you may remember seeing this machine at the National Championships. On 30th October we hope J. C. Wimpenny will be able to come and tell us about "Puffin" the man-powered flight aircraft. On 6th November we shall hear and see all about the thrilling sport of "skydiving" from Sgt. Don Hughes of the Special Air Service Free Fall Club. On 20th November Philip Wills' subject will be "Why are we bottom Nation in Private Sporting Powered Flying?"

Another date to note is 27th November when Peter Scott will be telling us about winning the Nationals.

Visitors and new members are always welcome on Wednesday evenings at the club. Subscriptions are £1 annually.

Y. C. B.

Diary of Lectures and Film Shows
Wednesday at 8 p.m.

Sept.	25.	Wing-Cdr. G. H. (Buster) Briggs, D.F.C. "The front end of a tow-rope, 1940-45."
Oct.	2.	"Home-built Autogyro" by Wing-Cdr. K. Wallis.
,,	9.	"The Technics and Methods of Air Survey" by John Wright, with slides.
,,	16.	The Air Force Story 1918-1923, film. 8.30 p.m. The Club A.G.M.
,,	23.	Gliding in the French Alps, by Peter Hearne.
,,	30.	"Puffin", the man-powered aircraft, by J. C. Wimpenny (Provisional).
Nov.	6.	"Skydiving" by Sgt. Don Hughes of the Free Fall Club, with film.
,,	13.	Opening and Prize-giving Aeronautical Art Exhibition by Terence Cuneo, R.G.I.
,,	20.	Philip Wills. Art Exhibition continues.
,,	27.	Peter Scott on winning the Nationals.

BOOK REVIEW

Report on a Tornado at Malta, 14th October, 1960, by T. H. and D. T. J. DEAN. Geophysical Memoir No. 107 (Second Number, Vol. XIV). Published by H.M. Stationery Office, London. Price 7s. net.

THIS geophysical memoir describes in detail the passage of a tornado across the centre of Malta on 14th October, 1960.

A study is made of the main synoptic features, and also the wind, temperature and pressure fields which existed before and during its passage. A close parallel was found with conditions which normally prevail when tornadoes form in America.

Most glider pilots will find this account too technical, but conditions which favour the development of tornadoes are given in simpler terms. Although this violent product of Nature is very rare in England, this paper does give some indication of conditions which would favour exceptionally strong convection. However, conditions in England which favour the development of small tornadoes do not entirely agree with those listed in this paper. The Dunstable tornado in October, 1958 (see SAILPLANE AND GLIDING, April, 1959) was associated with a sharp cold trough, light winds below 20,000 feet and an unstable moist air mass to 30,000 feet.

M. P. G.

The Wright Brothers, by C. H. GIBBS-SMITH. Published by H.M. Stationery Office, London, 1963. Price 2s. 6d.

THIS booklet, published on behalf of the Science Museum, is a most excellent concentrated history of the pioneering work of Wilbur and Orville Wright, and has the supreme merit of being absolutely accurate, as would be expected from its



THROW OUT TWO HANDS

by Anthony Smith

Complete silence, involvement in the atmosphere, and dependence on air currents and fate, are the common factors that link gliding with ballooning.

Here Anthony Smith explains in great detail how he and his companions set out to fly over Africa in a balloon. He tells of the many problems, hazards and adventures that befell them, and describes with the aid of many vivid photographs the abundance of wild life they encountered. *32 Colour Plates 30s.*

Allen & Unwin 40 MUSEUM ST., W.C.1.

author. There are a great many illustrations, starting with the biplane kite of 1899, and all the gliders from 1900 to 1902 inclusive and that of 1911 are shown in flight. There are a great many photographs and drawings of the first aeroplane and subsequent versions up to 1911, a page showing European imitations of the Wright glider, and finally a page of photos of the earliest European aeroplanes.

It was not until the Wrights fitted a movable rudder to their 1902 glider and then coupled it to the wing-warping control that they mastered the difficulties caused by the drag of the down-warped wing-tip, corresponding to what we now call "aileron drag". And it was not until they brought this machine into use again during 1903 that they succeeded in making several soaring flights of over a minute. When Mr. Gibbs-Smith states that the brothers chose to fly at Kitty Hawk "not for its secrecy but for its steady constant winds," he might have added (for the non-gliding reader) that these winds were wanted for soaring, because Wilbur had stated that the object was to put in as much flying time as possible on gliders before trying to fly with an engine, and soaring was the obvious way of doing so.

A standard reply to people who ask "Why don't you put a little engine in?" is: "The Wright Brothers did that in 1903—hence the aeroplane." But this is not strictly correct. It is true that the 1903 aeroplane differed little in shape from the 1902 glider, except that both the elevator and rudder were doubled; but it had its engine installed, according to McFarland's "Papers of Wilbur and Orville Wright", before it ever came out of the shed where it was built.

A. E. S.

Throw Out Two Hands, by ANTHONY SMITH. Published by George Allen and Unwin, London, 1963. Price 30s. (Also obtainable from B.G.A.)

"TWO HANDS" in the title means two handfuls of sand thrown out of a balloon to check its sink, for this book is about flying a balloon over Africa to observe and photograph the wild life without disturbing it.

The book is entertainingly written by one of the participants in the expedition and includes a fine collection of colour photos. It shows up many similarities between the two kinds of motorless flight. Just as every glider landing is a forced landing, every balloon landing, the author says, is a "controlled accident", even at the best of times.

Modern balloonists know quite a lot about thermals and areas of sink; they have to, when trying to maintain an even height not far above the ground, for the ups and downs must be anticipated. So the balloonist must know that a lake, a wood, marshland or sea will "tend to lower his height in the daytime"; and "if you start going up, for instance, you have to decide whether this move is being caused by the two handfuls you threw out four minutes before, or the sun becoming slightly brighter, or the farmyard you have just passed over, or if it were none of these three and instead a thermal has taken hold of you."

Since cu-nims are always to be seen in that part of Africa, they had to disregard the advice of the instruction manual: "On sighting cumulo-nimbus formations, deflate at once" — with what results you can read in this book.

A. E. S.

WORLD GOAL RECORD TWICE BEATEN IN U.S.A.

BENJAMIN GREENE, of Elizabethtown, North Carolina, flew 456 miles from Marfa, Texas, to his goal at Boise City, Oklahoma, on 7th August. He flew a Standard Austria.

On 27th August this was exceeded by Alvin H. Parker, owner of a soaring school at Odessa, Texas, who flew 490 miles in a Sisu 1A from Odessa to his goal at Great Bend, Kansas. Both records await homologation.

The previous Goal-flight record of 443.7 mles was set up by Mikhail Veretennikov in the U.S.S.R. on 18th June, 1960.

S. S. A.

CORRESPONDENCE

THE DESIGN OF BRITISH WORLD-BEATING GLIDERS

Dear Sir,

The current pattern of airworthiness certification makes no distinction between a glider to be flown by the chosen pilots of the British Team and one to be used by club members who have not yet reached Silver C standard. The resulting compromise, although it may have done so in the past, is in my view less likely to produce a world-beater of the future. I would therefore propose that a pilot competence factor be introduced into the C. of A. structure so that the B.G.A. Technical Committee when judging the airworthiness of a competition sailplane can forget about Fred Fumble's early attempts at cloud-flying, and ease up a little on such things as stability requirements, and terminal velocity air-brakes.

Once they are freed from these inhibitions designers should, I believe, consider rather heavier wing loadings than have been fashionable hitherto, and preferably provide some flexibility by means of Fowler flaps or similar devices.

I believe it to be of vital importance that Britain should produce exciting new glider designs for competition purposes as well as good solid British work-horses.

Slimbridge, Glos. PETER SCOTT.

THE O.S.T.I.V. PRIZE

Dear Sir,

The letter published in SAILPLANE AND GLIDING, page 256, translated from *Aviasport*, May, 1963, commenting on the OSTIV prize, underlines the need for a test case for the interpretation of the various clauses and qualifications. For instance, some of the excellence of the Ka-6 is, no doubt, due to the minimum of frontal area and ratio of wing to fuselage. A Ka-6 which catered for a larger pilot in accordance with a different interpretation of the OSTIV requirements would not have the same all-round harmony. This criticism probably applies to the Vasama.

Two glider pilots from Africa, having ordered EoN Type 460 (463) gliders, went to Junin and saw the range of entries. Following the OSTIV prize award, Pilot "A" cancelled the EoN Type 460 and ordered a Vasama. Pilot "B" was too large for the other Standard Class machines, and is now taking delivery of his EoN.

The pendulum may swing away from the abbreviated cockpit by 1965 (at South Cerney?).

Speenhamland, Newbury, Berks. J. E. CRAMP.

UNFAIR TO TEAMS

Dear Sir,

It has been recognised from the start that the present Rating System discourages team flying in competitions. The requirement that six scores shall be included means that a pilot who flies on alternate days in League 2 cannot collect his entire rating in League 2 in one year, and must therefore include at least one, and generally more, devalued scores from a Regional Competition, or from a previous year. It is therefore more difficult for him to get into League 1 than for a pilot who flies on his own; and if he does get in, it is almost impossible for him to stay in if he continues to fly with a partner. Similarly, pilots who fly as a pair in Regionals must enter twice as many competitions if they are to have the same chance as the lone pilot of getting into League 2. Consequently, there is strong pressure on pilots at all levels to enter by themselves, since they know that until they can afford to do so they cannot hope to make much progress up the rating ladder, however good they may be.

The disadvantages of entering solo are felt most acutely by the younger pilots. In the first place the basic costs of a ten-day competition—entry fee and retrieving —often exceed £40, plus hire costs if a club glider is entered, and there are many good pilots who cannot afford to pay on this scale, although they can cope with half. Secondly, a pilot who is neither in the Services nor equipped with a wife and rigging-sized children is obliged to find at least one skilled bod who is prepared to give up to ten days solely in order to crew, plus another who can learn what to do during the competition, and he will be lucky if he can have the same confidence in his crew as the team pilot who is being retrieved by his partner. For many of us, the practical result is that we must enter as a team, or not at all, and consequently we strongly resent a system which discriminates against us for reasons in no way connected with our flying ability.

It seems that the discouragement of teams was introduced as a deliberate act of B.G.A. policy, and we have heard it justified on the grounds that the object of League 1 is "to select the National Champion". Now, if the "National Champion" is just the winner of League 1, then we can see no reason why anyone should resent the top competition being won jointly by a team; if, on the other hand, he is the man who represents us at the Internationals, then we think he should be the top man on the rating list rather than necessarily the current winner of League 1, and instead of discouraging team flying we think that the rating system should be modified to make it possible for a team pilot to get to the top of the list.

We should like to propose the following very minor modification to the method of computing ratings for the purpose of selecting National entries. We propose that, instead of using the rating of the top pilot only in a team entry, a *team rating* should be computed by adding together the best six scores which the two pilots can collect between them, with the proviso that each pilot must contribute at least two scores. This system would neither help nor hinder a pilot who *always* flew in a team as compared with one who *always* flew solo, but care would be needed in rating one who wished to change from one to the other: there are two possible difficulties:

(1) A pilot who had always flown solo, and who under the present system have dropped out of the bottom, could, by combining with another in the same situation, stay in for another year. However, if neither pilot were really any good, they could clearly only gain a temporary respite by this subterfuge, and we do not think this would be a serious difficulty.

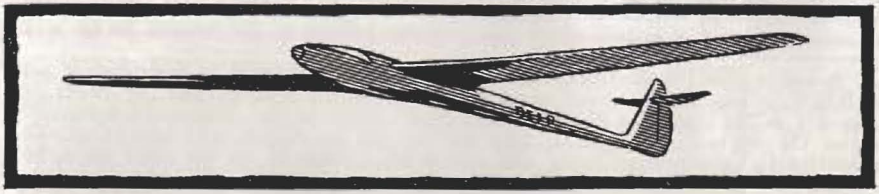
(2) A pilot who wished to change from team to solo flying, or who wanted an individual rating for other purposes, would have the same difficulty in collecting a rating as under the present system. This could be avoided by allowing him to collect his six days over *two* years without devaluation— *provided he had not flown in any competition other than in a team during that period.* This would clearly call for a strict definition of what constitutes flying in a team, and we would suggest that pilots who wish to be considered as a team for rating purposes must fly on alternate contest days, except by special permission of the organisers.

We hasten to point out that the work of computing team ratings would fall on the pilots, not on the organisers. Team applicants would be required to list their six individual scores on the form, and the organisers would then merely have to check that they had in fact got the scores claimed.

Although the rating system for next year's Nationals has already been published, we urge most strongly that this modification, which does not call for any administrative upheaval, should be introduced without delay. We think that it would allow more pilots to fly in the Nationals without making the competition any more unwieldy, that it would rank pilots in order of merit more accurately than at present, and that it would remove a purely artificial obstacle to the progress of many good pilots who are otherwise doomed to be suppressed. Although we hardly dare to say it, we also think team flying is more fun.

C. J. PENNYCUICK
G. S. NEUMANN
J. B. BRENNER
A. W. F. EDWARDS
R. A. NEAVES
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MORE STOCHASTICISM

Dear Sir,

I find it difficult to understand why Mr. Edwards should get so heated himself; perhaps he would have been well advised to leave his own pipe unlighted. Whatever the weakness of my theoretical arguments, they have the merit of fitting the experimental findings; after all, the Poisson distribution is purely a normal distribution where the variance is large in comparison with the mean or more exactly where $\mu = S^2$.

In the classic oft-quoted example of Bortkewitch, where ten Prussian Corps were exposed to mule kicks for 20 years, the frequency of deaths per Corps was as follows:

Deaths per Corps per year ...	0	1	2	3	4
Frequency	109	65	22	3	1

This is the sort of result one would expect from a gliding contest on a very bad day, replacing deaths by miles flown × 10 and frequency by number of gliders. This is the negative exponential quoted by Mr. Edwards and is the limiting case; however, I cannot see how, "if everybody is equally likely to fall out of the sky all the time," "the probability of coming unstuck increases steadily as the launching point recedes". Surely the probability remains the same, but the number of sailplanes upon which that probability will act falls exponentially.

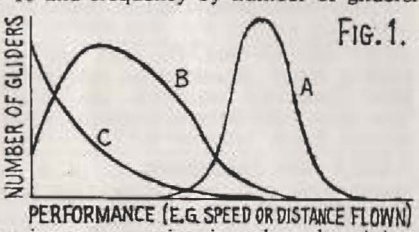


FIG. 1.

However, this is all a digression; the important point is, what do gliding contests measure, considered as a test of human abilities? Experimental work suggests that there are only three main intellectual attributes to be measured: *V* (verbal), *G* (general intelligence), and *K* (kinaesthetic or pure physical skill). It is hardly likely that *V* is significant, so that it should be possible to measure *G* and *K* with simple laboratory tests, and on the basis of these results predict with fair accuracy a pilot's potential. Quite early in one's gliding career, however, one exhausts one's possibilities in this direction since one encounters fairly massive obstacles in the nature of one's own temperament which tend to make performances wander from the maximum in the Yerkes-Dodson Law curve,* and improvements can only be attained by monitoring and adjusting emotion to stay on the maximum.

In practice there seem to be two factors in pilot performance: k_1 and k_2; k_1 is related to *K* and involves simple skill in thermal finding and circling, and in a pilot's experience reaches a steady figure after about 100 hours and does not vary much from pilot to pilot. This explains why people all seem to climb at about the same rate in thermals. k_2 is related to *G* and involves decision-making, etc., in which knowledge and intelligence come to play a larger part; this explains why League 1 and League 2 climb and fly at the same rate, but why League 1 usually go farther and faster. As most human qualities, e.g. height, weight, intelligence, have a Gaussian distribution, in a task set in a gliding contest their performance (and therefore scores) should have a Gaussian distribution (curve A in Fig. 1); however, when factors of chance in the weather overwhelm the factors of individual variations in skill, a Poisson-like distribution (curves B or C) will result. Under these circumstances it would be fair to discard the results of a task, and fortunately, due to the operation of the 2X rule, this is at the moment the case.

Marlow, Bucks. BRENNIG JAMES.

[*The Yerkes-Dodson Law, as described by Prof. H. J. Eysenck, is: "For complex tasks optimum performance is achieved when the drive (or motivation) is relatively low; only for simple tasks is the optimum achieved with relatively high drive." He adds: "The validity of this law is widely recognized in everyday life; for example, by the coach who tells an athelete that he is trying too hard."—ED.]

Mr. ANTHONY EDWARDS replies: Dr. Brennig James's smokescreen of erroneous statistics ill-conceals the truth.

Advertisements, with remittance, should be sent to Cheiron Press Ltd., 3 Cork St., London, W.1. (Regent 5301). Rate 1/- a word. Minimum 15/- Box numbers 4/- extra. Replies to Box numbers should be sent to the same address.

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EAGLE with instruments, C. of A. to March, 1964, and trailer if required. Seen Long Mynd. £1,100 o.n.o. to Mansell, 32 Waverley Crescent, Romsley, Nr. Halesowen, Worcestershire (Romsley 497).

GLIDER T21b. Excellent condition. New in 1959. C. of A. to April 1964. Modified for optional solo flying. Recent respray white and B.R. green. £875. V. C. Carr (Telephone Oadby 5273).

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MARK 1 Olympia with altimeter, A.S.I. Vario. Horizon and 2nd turn and slip. Open trailer. Flying now at Camphill. £500. New trailer suit any machine. £200. Chute and barograph extra if required. Haynes, 247 Walton Back Lane, Chesterfield.

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SKYLARK 3F. New April, 1961. Hours flown 226. Beautiful full blind panel oxygen. Professionally built trailer, all in excellent condition. C. of A. December, 1963. £1,300. Jack Tarr, 13 Station Road, Doncaster.

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WANTED, Olympia IIb or Skylark II. Full details and past history please to Goldsbrough, Peel Park, Brandsby, York.

WANTED. Damaged Sailplane in repairable condition. Olympia, Skylark, or similar. Box No. 156.

PERSONAL

INTRODUCTIONS to interesting new friends — U.K. and overseas. Victory Club, 34 Honeywell Road, London, S.W.11.

It will, of course, be understood that the British Gliding Association cannot accept responsibility for the claims made by advertisers in "Sailplane & Gliding".

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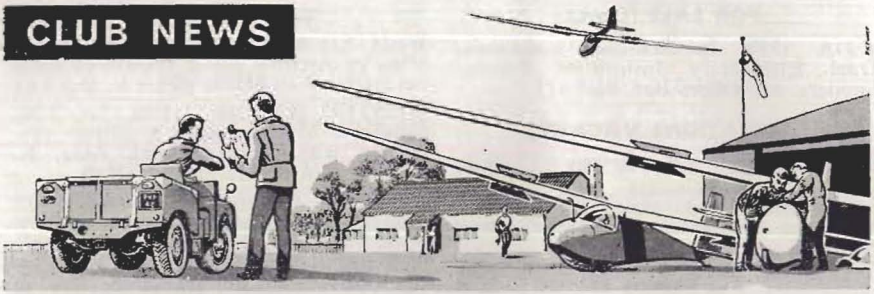
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CLUB NEWS



IN this issue after a long lapse we have the R.A.F.G.S.A. Chilterns Gliding Club who operate at Benson and boast the cheapest gliding rates in the country! Also back are the Heron Naval Club at Yeovilton, and Handley Page.

We say goodbye to the R.A.F.G.S.A. Wessex at Andover, and Windrushers Clubs. The former has closed down and the latter has been absorbed into the R.A.F.G.S.A. Centre at Bicester.

In spite of our very spasmodic summer the clubs appear to have made the best of it and clocked up the usual good batch of certificates and badges.

Closing date for copy for the Christmas issue is Wednesday, 16th October; typed double spaced on foolscap, please. We still are not getting enough good photos for the section.

Apologies to all Aberdonians for having encroached on your preserves last issue.

YVONNE BONHAM,
Club News Editor.

ABERDEEN

FLYING at Litterty continues at a modest rate. The hangar floor has also been completed and once again we can roll the aircraft easily to and fro.

The Tiger Moth has been installed also, and aero tows are in progress off the north end of the main runway.

At the time of writing, six courses have been completed and on one particularly good day, even the T-31 was thermalling to 2,500 feet. The most notable flight of late was one of 1 hour 10 minutes made by Ian Robertson in the Olympia. No cross countries have been attempted from Litterty, everyone being content to explore the air locally, but away landings will come in due course.

We were pleased to see Ray Stafford-Allen on an official visit on 10th and 11th August.

Great interest is being shown by the people of the surrounding districts, many of whom have been given their first taste of gliding.

F. C.

AVRO

OVER the past three months the launch rate at Woodford has continued to increase, with the two-seater doing most of the work, and thanks to a great effort by Bill Scull the recently acquired Cadet Mk.1 has been made airworthy to replace the pranged Tutor.

Congratulations to Lawrence Sidebotham, who obtained his A and B on the 15th June. On the 14th August D. Stockton, P. Lock and D. Joy all went solo at an evening flying session, and 30 pint pots were emptied in the hour of festivities that followed. This evening's activities must rank as a club record. Congratulations to Dave, Pete and Dave.

During the course, held in conjunction with Newcastle Gliding Club, our members experienced the complexities of flying at a difficult hill site, and also paid a visit to Slingsby Sailplanes Ltd.

The most notable achievement of the week was when Tony Knight, who was launched at 5.25 a.m. one morning, flew

five miles down wind of the site and completed his five hours in the "Bowl".

After a field landing and a noggin in a pub to celebrate, the retrieve crew and Skylark were back on Carlton Moor by 12.30 p.m.

Our sympathies are extended to the bewildered tug pilot who mistook Carlton for Sutton Bank. On climbing out of the Auster he was confronted by a bearded gentleman dressed in sandals and shorts, running and waving a carving knife at him. This was our own duty cook.

J. E.

BRISTOL

APART from our summer, which occurred during the latter part of July, conditions have been very variable, including more than our share of low cloud and drizzle. However, the courses have been proceeding well, especially the Club courses, which have resulted in a goodly bag of solos and C's.

Our T-49 has arrived at last and is proving very popular among the solo pilots as an advanced trainer.

Several parties of members made their way to the comps, at Sutton Bank and Dunstable and a good time was had by all. Congratulations to Ron Sandford on his second place at the Northerns, to Peter Scott on his first place at Dunstable, and to Roger Barnett and John Daniell on their third place.

A new cup, the Shaun de Salis Memorial Trophy, has recently been donated by members, and will be awarded annually for the best closed-circuit flight in a Club aircraft.

Jim Stuart-Menteth set off for Yarmouth in the club Skylark on 23rd June but was unlucky to flop a mere 6 miles short. Pete Simmons made no mistake about his Silver distance, landing near the Mynd in the Eagle. No other distances have been recorded, but Brian Walker and Des Rich both got Silver height, to be confirmed, in the Ka-6.

C flights have been made by Ann Wales, Joan Walker, Messrs. Barrett, Batchelor, Garland, B. McLeod, Malpas and Martin.

Brian Mumford's new cable retrieve car, which looks like an overgrown go-kart with a 350 cc. engine, was eagerly seized by members to try their hand. Enthusiasm waned when they discovered that it was deliberately unsprung to limit the speed at which it can be driven along the tracks!

In the Matched and Hatched section we congratulate on their engagements Dave Wales and Mary Kerridge and Derek Stowe and Glenys Williams. Best wishes to Peter and Caroline Philpot on their marriage an 17th August. Recent proud parents are Tony and Pat Morgan, who produced a daughter, and Ted and Lucy Chubb, who produced a son.

A. L. S.

CAMBRIDGE

FOR a fortnight in June we once more enjoyed the hospitality of the Midland Gliding Club at the Long Mynd. The camp was one of the most successful we have had there.

Cambridge aircraft flew 270 hours, Ted Warner gained his Gold C height in the Olympia 460, and John Bushnell and Giles Bulmer managed 5-hour flights.

Giles thereby completed his Silver badge. David Braham did a splendid flight of 150 miles into Suffolk, flying Penguin, one of the syndicate-owned Swallows.

Back at Cambridge, Bill Alexander finished his Silver C with a 60-mile dash to the East Coast in the Olympia.

Much cloud-flying was done in July. Jeremy Pickett-Heaps and Simon Redman logged Gold C climbs. This completed Simon's Gold badge, the fourth so far obtained on Club-operated sailplanes.

One of the finest soaring days we have known was the 27th July. After Lionel Alexander had swished round a 32-mile triangle in the Olympia 460 in 57 minutes, Siegfrid Neumann took the same aircraft round the 100-km. Slazenger Triangle at 34 m.p.h.

Meanwhile Geoffrey Dowling completed his Silver badge by reaching his goal, Podington, in the Swallow. On the same day the Skylark 2, the Sky and the Penguin were flying 100-km. triangles at Dunstable where they were taking part in the Regional Contest.

The Skylark 2 was entered by John Brenner and Ralph Ismail, the Sky by Simon Redman, and the Penguin by Colin Pennycuick and Stewart Waller. Stewart won a contest day by urging the Penguin to Anglesey.

Most of our sailplanes have a red finish, so that they can be spotted easily in the air. Ray Haddon recently found that this colour has disadvantages on the ground.

After landing in a small field in Hertfordshire, he had to defend the red Swallow against a herd of cattle for two hours before help arrived. Surprisingly, the bull was quite friendly G. S. N.

COVENTRY

WE held our Annual Camp at the site of the West Wales Club, where we were made most welcome. At the end of the camp a very unfortunate accident occured, when the club Olympia, making an away landing, hit and killed a bullock. Despite extensive damage to the glider, the pilot suffered only minor injuries.

In the Regional competitions Alwyn Findon and Ivor Tarver, with their Olympia 463, went to Sutton Bank, where they were placed third.

Reg Neep and Chris Duthy-James, flying an Olympia 2 came in 23rd and Ken Owen and Mike Bagnal, in a Skylark 2, were 29th. Meanwhile, south at Dunstable Gus Cunningham and Bill May gained 22nd place in the club Skylark 3 on their first competition venture.

Phil Winkley and Chris Duthy-James went to Twinwood and Rearsby respectively and were aero-towed home. Ken Owen almost made gold height at Podington in his Skylark. Mike Smith startled everyone by catching a wave over Coventry one Sunday evening.

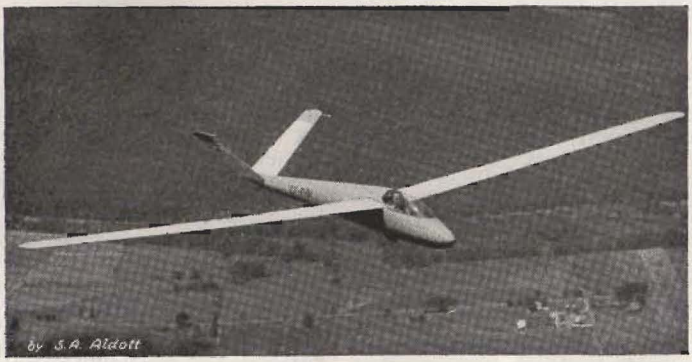
Two recent sorties to hill sites yielded Silver Durations for Ron Gardner at the Long Mynd in the club Prefect and Richard Hill in a private Olympia at Camphill.

We congratulate Eric Miller and Irene MacCleland on their marriage and Richard Hill and Susan Collins, who have become engaged.

C. D. D.-J.

CROWN AGENTS

THE main event since our last notes has been the success of Ken Edgar



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in completing his Silver C distance leg by a flight from Lasham to Keevil on Saturday, 27th July. Ken is, of course, Chairman of the R.A.E.G.C., but is also one of our members, and on this occasion he was flying our "Swallow". This combined success of pilot and aircraft augurs well for the amalgamation of the two clubs mentioned in the last issue. The proposals have now received the approval of the Senior Crown Agent, Sir Stephen Luke, and Dr. M. J. Lighthill, Director of the R.A.E.

Three of our members attended the R.A.E.G.C. summer camp which was held by courtesy of the Swindon G.C. at South Marston aerodrome. Despite wet and windy weather there was a good deal of flying, and we are all grateful to the Swindon club and Messrs. Vickers-Armstrong for the use of the airfield and launching equipment.

J. E. G. H.

DERBYSHIRE & LANCASHIRE

ON 27th July Mick Kaye and John Taylor, in the Eagle, made an attempt on the two-seater out and return record with a flight to Dunstable. On the return, one thermal and 15 miles short of home, they had to land at Ashbourne, after a flight of over 200 miles.

Congratulations to David Pillans on completing his Silver C on 26th July with a flight to Kirton-in-Lindsay.

It is with great regret that we have to report that we are to lose the services of Arnold and Ena Allcroft this Autumn.

J. M. N.

DEVON AND SOMERSET (Dunkeswell)

ON Friday, 21st June Peter Berriman achieved his 300 km. Diamond Goal Flight in a flight to Tuddenham. Peter really deserves his Diamond, which was carried out in very difficult weather, spending some time on the ridge at Dunstable.

The next day, after an all night retrieve, John Hancock set off for the same goal, but this time the lure of Dunstable proved too strong and he landed in good company.

John Fielden and Alistair Shovelton did another all night retrieve and John took off on Sunday morning to visit Dunstable's "At Home", duly arriving about 2 p.m.

The London Club kindly presented him with a picture card featuring their latest high performance "Britannia" type glider. Skylark 200 did 500 miles in three days!

Splendid work by club members has transformed the control tower into a club house of which we can be proud, telephone, electric light, etc., and most important of all, a bar! We now all approach winter flying with pleasure, knowing we can thaw out in comfort.

Plans being completed and preliminary work carried out, we will shortly have a hangar to house some of our fleet, together with a home for the Tiger Moth tug on the site.

A Skylark has been bought, bringing our total to 11 aircraft :— T-21, T-31, Kite, two Tutors, two Swallows, two Skylarks, Olympia and Eagle.

N. P. H.

DUMFRIES & DISTRICT

WELL, we have had the Capstan, and John Everitt and the T-49 are off back to the South. The verdict? A gentleman and a gentleman's aeroplane.

We had realised that to make the most of the week-end allotted to us aerotows were essential and made very satisfactory arrangements with the Border Flying Club at Crosbie for the use of an Auster tug. After an afternoon excursion to Crosbie with the Skylark and Prefect for some initial towing practice we had a couple of hours towing at Dumfries first to make sure that our fenced runways, loose stones and general facilities were satisfactory. Everything went very

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well and although we have to pay for the tug's flying time to and from Crosbie it worked out quite well in cost. Then we were all set and just hoping for decent weather.

Meantime our usual flying continued with a heated winch v. tow-car argument which the winch is winning at present, resulting in fewer but better launches. We have also run our first course, which was very successful, in spite of indifferent weather and difficulties with cable and instructors.

The Capstan arrived on the Saturday morning as the course ended and just to make matters really difficult a big dog show was being held on the airfield in "our" hangar! We managed, however, with various barricades, to keep gliders and dogs and cars apart and turned out in force to welcome John Everitt.

In spite of a poor weather forecast the week-end was brighter than we had feared and we got in as much flying as possible, the Capstan having absolute priority. Inevitably only a favoured few flew the T-49 and its first flight of over an hour in a bit of wave pleased everyone who wasn't waiting for the next flight. We were, of course, delighted with it and with the kind words of wisdom and experience from John. By special request he finished up with an aerobatic display to show those who could unfortunately only watch how a glider can be flown by an expert.

We have thoroughly enjoyed the visit and learned a surprising amount in the time, but we want John and the Capstan back soon for at least a week.

G. J. K.

EAST MIDLANDS (Rearsby)

SINCE our last report quite a lot has happened at the E.M.G.C. First we should like to offer our congratulations to Vic Carr, our CFI, who finished third in League 2 at the Nationals.

In the spring we held a competition over two week-ends at Rearsby by kind permission of Beagle Auster Ltd., for which we had 24 entries.

The first week-end was spoilt by the weather, but Mike Hunt, of Coventry, managed a flight of 70 miles. Unfortunately no one else scored. The second week-end was excellent and both days were won by an Olympia 460 from Coventry flown by I. Tarver and A. Findon. A good time was had by all, mainly thanks to Ivy Moseley, Renee Sly and the other lady members who worked like Trojans to organise the refreshments.

Despite the weather we have had a fairly successful summer. Chris Simpson completed his Silver C by staying up 5½ hours and eventually landing at Skegness. He was joined by Mike Smith, who landed there for his Silver distance. Congratulations also to Roger Shepherd, who got both his Duration and Distance on his flight to Barnsley, and also "Willie" Bailey, who flew to Moreton-on-the-Marsh for his Silver Distance.

Phil Smith shook everyone (including himself) by taking the Grunau Baby 81 miles to Oswestry to get both Silver Distance and Height.

Congratulations to Heather Atkinson, Ray Tomlinson and Eric Whittle on their A and B's and to Ian Byrne and Denis Heathcote on their C certificates.

We are all eagerly waiting the arrival of the new winch, which has a 9.6 litre diesel engine under its bonnet.

J. R. F.

ESSEX

FOLLOWING a miserable June and first half of July the weather improved and summer arrived and with it, the first really good soarable days we have had.

Pete Treadaway immediately took advantage of the improved conditions and gained his Silver C height and endurance leg, soaring over North Weald for five hours and 19 minutes.

On the following day, 27th July, Ron Collins also gained his Silver C height plus his cross-country leg, incidentally making the Club's first cross-country flight, by flying from North Weald Aerodrome to the London Gliding Club at Dunstable in 2 hours and 15 minutes.

A few days later Pete Treadaway tried to complete his Silver C by a similar flight but had to come down near Hatfield.

During the same memorable week John Unsworth got his C, thus showing that all good things occur in threes.

The two cross-country flights proved conclusively that Reg Goldsmith's efforts in designing and building the trailer had

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been time well spent.

Standing by and rarin' to go in pursuit of one or more of their Silver C legs are Brian Hockley and Mike Bishop and if only the weather will remain kind I am sure that when I type my next report these two names will be highlighted.

J. W. R. U.

GLASGOW & WEST OF SCOTLAND

WITH only one Sunday "rained off" during June and July, our members have had a fair quota of airborne time. Each Sunday, with its different weather conditions, brings further proof that our move to Balgair area was a wise one.

It says a great deal for the local lift when our Instructors have to limit each flight in the T-21B to half an hour or so.

A welcome visitor recently was Bengt Micrander, of the Gothenburg Aero Club, who, with his wife, dropped in to see us. Within minutes, he had his sleeves rolled up and was pulling and pushing with the rest.

Our Autumn drive for Club funds—per a Weekly Football Treble—has started; as the sightseers who line a nearby roadway every Sunday know to their cost!

During July we were pleased to welcome Charlie Ross with his Skylark. After a good launch, he soared round our area reaching above 6,000 feet and, after two hours, finally landed in his own "back yard".

D. C. S.

HANDLEY PAGE

ALTHOUGH no news of our activities has appeared in these columns for several months we have not, in fact, been idle.

On 4th May "Sandy" Ing gained his C certificate with a 26 minute flight in the Tutor. On 26th May Tony Newton flew to Cambridge in the Skylark 3, spending three hours over Cambridge before landing in order to qualify for the duration and distance legs to complete his Silver C Mick Goodwin did his first solo on 23rd June and gained his A and B certificates. On the same day Alan Dowsett soared the Tutor for 23 minutes to gain his C. Also on the same day Alan Wordsworth flew 50 miles in the Skylark 3 climbing to 7,000 ft. on the way to gain the distance and height legs of his Silver C.

Both Laurie Frakes and Alan Vincent passed their instructors' test to become categorised instructors.

Our Skylark 3, flown by Geoff Wass, was to have taken part in an air display at Elstree on 6th July but unfortunately rain caused the whole display to be cancelled.

A more recent solo was by John Read on 5th August and on 28th July Barry Masters gained his C certificate.

A. J. N.

KENT

THE work goes on busily at the K.G.C. these days. We have one eye on the weather as we work, thinking of the approaching winter. Meanwhile the courses are going well, all our customers seem very satisfied. Over a dozen new members have joined from the first four courses alone. At this rate we shall soon have to close the list. The ridge works well we find, it triggers off thermals very nicely and numerous extended flights have been made. Unfortunately

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the stones are still coming up through the grass and shortening the life of the aircraft skids.

The new diesel winch is standing up nobly to its work, starting with unfailing regularity — a delightful innovation! It's like driving a Rolls — almost.

P. J. T.

LAKES

THIS summer will be remembered as being something like the "parson's egg". Parts of it were excellent, and most of our regular members have sampled good thermal and ridge conditions.

The weather seriously interfered with two courses run in June The first got off to a good start with eight launches per member on the first day. The second, flown in the following week, was a disaster, with only seven launches in all.

We congratulate Ernie Dodd on his promotion to instructor. With four more of our flying members under training we look forward to a time in the near future when we shall have enough instructors to organise Saturday flying as a regular thing.

It is pleasing to report that on 23rd June Jack Paley flew his five hours in the Olympia, and two weeks later John Head gave a really polished performance on his first three solos in the Tutor.

Peter Craven and Eric Dixon, who had previously soloed at Walney, flew the Tutor from Tebay for the first time on the same day.

The final item of club news concerns the retrieving winch which was mentioned in our notes last month. It has been tested thoroughly and is now regarded as an indispensable item of the club's equipment.

Three of our members have just returned from Lasham, where they enjoyed some first-class flying.

F. G. R.

LASHAM

BY September the builders should be hard at work erecting our new clubhouse. After one false start earlier in the year, it really looks as if we have solved our problems and designed a building to cost less than the National average price of approx. £4 per square foot.

The all-important Lasham Appeal Fund now stands at £22,000 and we have high hopes of more to come. We have spent £7,200 on the hangar, £500 on the mains water supply. After the clubhouse scheme, we will start on the bunkhouse and then the M.T. workshops. Does anyone know a rich friendly patron?

Due to the resignation of John Cochrane, our General Manager, the Committee decided to split that office into two parts. Derrick Goddard, our Deputy C.F.I., becomes the Operations Manager in charge of all aspects of gliding operations and we are currently looking for a Secretary/Administrator to take charge of all financial and domestic issues.

Derrick's great aim at the moment, apart from making Lasham really efficient, is to complete 500 launches per week-end. So far we have done 250 on one day but have always been beaten by the weather.

Lasham is now the home of fifty assorted gliders and although fifteen of them were away at Regionals elsewhere, Saturday, 27th July proved to be a record day. 2,050 miles cross-country were flown.

Records broken — U.K. Out-and-return by Alan Purnell 244 miles Lasham-Long-Mynd-Lasham; British 300 km. Triangular Speed for two-seaters, Wally Kahn and Bernie Davey Lasham-Frome-Banbury-Lasham thirty miles per hour.

Gold C distances — triangle by Roy Smith, Out-and-return by David Lowe. Two pilots missed their Gold C (triangle) by less than 20 miles. Silver C legs too numerous to mention.

The next day almost the same story, though only 1,500 miles flown. Three pilots just missed breaking Alan's new record — Rocky Stone, Peter Ibberson and David Ince.

A new idea was tried, though unsuccessfully, on Saturday. Pilots on Silver Distance flights were told to land at a certain aerodrome. A tug was sent to that aerodrome with two more pilots who need their distance with instructions to fly the gliders back to Lasham.

As it turned out, one pilot landed at the wrong aerodrome (Weston-on-the-Green instead of Kidlington) and the other one arrived over his goal and

stayed up until he had completed his five hours. However the idea is interesting and we are waiting for the next good day to try it again.

On Friday, 9th August Derek Piggott made minor history by sending four pupils solo in our T-49. The first to do so in this new two-seater. The pupils, who had been on a week's course, included a girl and Justin Wills, Philip Wills' youngest son. This "double first" is rather exciting as our venerable T-21 "Daisy", which has now flown over 60,000 launches was the first T-21 to be used for first solos.

Derek Piggott, our C.F.I., is going out to the Instructors' Meeting at Varese in Italy in September and we are eagerly awaiting his report on his return.

W. A. H. K.

LONDON

DUNSTABLE now operates 15 club gliders and 25 privately owned ones, including so many rare types that we are not surprisingly treated as a museum by our many visitors.

The character of our membership is rapidly changing, and in particular the affluence of today's youth has brought more young people, both boys and girls. Our prangery this year could perhaps be attributed to this change of atmosphere.

Dunstable has always previously shown low accident returns, and we may now have to revise our well-tried methods of flying discipline to counter the changing psychology of our membership. We wonder whether other clubs have this problem?

On 23rd June we held a Gliding Carnival, when we were open to the public, to make money out of them.

Aerobatics were skilfully performed, parachutists made drops (no connection with the aerobatics), and the pundits tackled an out-and-return task which had an exciting neck-and-neck finish. There were several sideshows and well over a hundred joyrides were given.

Another successful venture this season was the Dunstable Regional Contests, an account of which appears elsewhere in this issue. 25 sailplanes entered, half of which were resident gliders, and half visitors.

By the time you read this the Aerobatic Contest on 22nd September will



Photo by A. E. Slater

The Mayor and Mayoress of Dunstable opening the Carnival.

be over, and cross-country flights will have given way to hill-soaring. We invite you, particularly if you have your own glider, to come and fly with us sometime.

G. C.

MIDLAND

THE decision to offer reduced subscriptions to young members combined with a pro-rata subscription for members joining during the year has resulted in an encouraging number of new members. The increased membership has, in turn, meant greater utilisation of the club.

Syndicates have been active again. The old 41 syndicate now has a Skylark 4, most of the members of old 67 have transferred to 18 whilst other would-be syndicates just wait for 15 metre machines.

We were pleased to see competitors from Dunstable en route for Holyhead. A few landed on the Mynd but many more went over at respectable altitudes on a day when soaring on the Mynd was almost non-existent.

The "Glorious Twelfth" was all the more so this year for it was on that day that work began on the foundations for the new bunkhouses. With better accommodation and the possibility of mains electricity the coming winter will not seem so bleak.

Early in November we shall be hold-

ing our usual Trogs Party, at which King Trog will be pleased to welcome members of other clubs.

K. R. M.

NEWCASTLE

SITE development at Carlton is proceeding at a steady pace. An offending hill has now been removed from the middle of one runway and quantities of grass seed are being sown.

The visit of the group of Avro members who we welcomed at the end of July saw the beginning of three weeks of continuous flying which has helped compensate for the poor start to the year, and made our total number of launches look more respectable.

Unfortunately August Bank Holiday was a complete washout, the only bright spot being the visit of Philip and Kitty Wills, Alf Warminger and Co. from the Northern Comps. at Sutton Bank.

Our small band of lady members are now coming more to the fore. Rita Shepherd and daughter Carole both flew their C on Carole's 17th birthday, Carole having soloed only one week earlier.

If Tom Shepherd had been successful in his five-hour attempt the same week-end it would have been quite a family affair.

Among the mere males, John Pearson and Jim Grainger have joined the ranks of Tutor pilots, and Ken Saddington,



The clubhouse in progress.

Tony Knight and Keith Walker have all completed five hours.

So far this has been an excellent year for wave conditions, and some good flights have been reported. Latest of these was Bill Dyer's climb to 8,800 ft. in the syndicate Swallow. Unfortunately he was just unable to contact the next band of lift and reach the "gold" lenticular above him.

B. W. B.

NORTHAMPTONSHIRE

SOARING conditions have not been very good during the period under consideration, but a few have managed cross-country flights. Mike Miller took the Skylark to Oxford, thus completing two parts of his Silver C and Bill Petch reached Kings Lynn.

E. G. Collins, D. Old and R. A. Bispham have all gone solo.

John Everitt and the Capstan visited Podington in early July but poor weather restricted flying. Those fortunate enough to fly the Capstan were favourably impressed.

For the first time for some years a flying week was held in August under the direction of Brian Brown. This was favoured by good weather and was very successful. A small article in the local paper at the same time created quite a local interest in gliding.

The position regarding the use of the airfield is again insecure as we have recently heard that it is to be put up for sale. We are keeping our fingers crossed.

A very successful barbecue organized by Des Dunmore was attended by over 100 members and friends in July.

R. N. W. K.

OXFORD

THE long-range forecasters' promise of a super-August raised great hopes for the only two weeks in the year when we can fly every day, but alas, we enjoyed only marginal conditions with almost unbroken top-cover which dropped the occasional "Windrusher" cuckoo-like into our nest.

However, the day the G.S.A. competitors went home was one of the best of the year and two of our aircraft each made two flights in total in excess of 7½ hours, one being a Silver Duration by

a margin of one minute by Brian Beale, an ex-member visiting us from Lasham.

No. 171, our second Skylark 4, has been with us only just long enough to be fitted to its trailer for a trip to France where Julian Temple missed Diamond Goal by less than 25 km.

Other near misses were scored by Malcolm Roberts, who again missed Diamond Goal by landing 9 miles short on a 300 km. triangle and by John Adams, who climbed to 10,400 feet to miss Gold Height by 100 feet. Both flights were made in No. 168.

Equally unsuccessful were Tony Taylor's two Silver Distance attempts. Tony is getting to know the country just short of Henlow rather well.

Our modest successes include C for Roger Mawson, John D'Arcy and Barry Perkins, a Silver Triangle for Joy Taylor, a Silver Duration for Stan Green and another for Gerald Weeks whilst on holiday in Germany.

Noteworthy is Peter Pratelli's leisurely flight from Lasham concluded by local soaring after 6½ hours and John Ellis's trip in the Gull III to "see the racing at Silverstone" from which he returned a little before 8 p.m.

Dave Roberts and Donald Lowe flew Olympia 170 into 9th place at Dunkeswell.

A. S.

PERKINS

A significant feature of our activities at Westwood both last year and this year has been the number of five hour flights completed. A total of ten duration flights have been recorded in the two seasons, which is a very good reflection on the standard of flying of our Olympia pilots.

Since our last newsletter, Ken Tinkler, Peter Gray, Aubrey Waltham and John Brown have flown 5-hour legs, and Doug Phythian missed his by fifty-one minutes.

On our last flying week in July, Ray Bardsley gained his C with a useful flight to 3,500 ft. and Harry Benton made over 4,000 ft. in the Eon Baby.

Gordon Cornell and Colin Donald entered the Skylark 3 in the competition organized by the Devon and Somerset Club at Dunkeswell, and gained some valuable experience in spite of five "no contest" days.

C. C. D.

SCOTTISH

THE week-end competitions in June proved to be most enjoyable, with J. C. Riddell, of Yorkshire G.C. (Skylark 3F) notching a fine win overall, second D. G. Alty, of Fulmar G.C. (Skylark 2), and third place T. P. Docherty, of the S.G.U. (Olympia 2B).

During this period a record number of Silver C legs were logged — 5 Silver C's and a dozen Silver C legs.

The rate has now returned to the normal 3 or 4 per month, although at times this has been boosted by visiting pilots, principally from RNGSA Fulmar whose T-31 has been very active on Bishop Hill.

One of our landmarks has now been removed, namely the yellow tramway pole at the south west corner of the field.

Our courses have drawn to a successful close and the score of certificates this year ranged from A's and B's to completed Silver C's and a new system of double courses (two instructors, two aircraft and one winch driver) proved most acceptable both in profitability and flying.

W. A. S.

SWINDON

AS expected, the former spacious clubhouse has been reclaimed for business premises. Plans have been submitted for a clubhouse on the airfield, making use of a concrete area close to the usual entrance on the east side. It is hoped to start construction before the winter.

For the present, the converted milk float is towed to the launch point and acts as flying control tea waggon and clubhouse, proving that the show can carry on without alcohol.

A most successful week's course was supervised by D. Ford during which a few more fearless diesel winch drivers were converted. Winching on the short runway has been producing 1,300-1,500 ft. launches.

The convex nature of this runway calls for conscientious signalling, as the glider is already climbing well before it comes into view of the winch.

Consistent light signals are now obtained with a semi-automatic signal producer of cams and limit switches devised

by S. Perry to give the proper time intervals.

M. B. H.

WEST WALES

AT last; the Clubhouse! In somewhat embryonic form at the time of writing, but nevertheless a palpable, tangible clubhouse. The building is the now vacated control tower at Withybush and it should be fully operational by the end of August.

It was, in fact, used in its present spartan state by members of the Coventry Club, who held a fortnight summer camp here in July.

We were delighted to meet them, to compare notes and in particular to fly their Ka-2, which has set us all thinking very hard about the pleasures and uses of high performance, closed cockpit two-seaters.

The weather has not been kind to us. Our open days were clamped out and cross-country flights have been very few and far between. Steve Chinnock and John Thomas managed Silver C distance legs, Steve to Bryn Amman and John to Morriston.

Lloyd Edwards also went to Morriston, landing in the same field — the only one, backing on to the crematorium. Howard Jones got to Aberporth, about five miles short of his distance.

It was thus both delightful and frustrating to see Colin Donald arrive from Peterborough, having previously declared Withybush as a goal, apparently without realising there was a gliding club here. Our sincere congratulations, anyway.

Ab-initio training is still going strong and new members keep arriving. Tom Williams, Dickie Baldwin, John Lockett, David Owen and Jim Saunders have all soloed and Gwyn Thomas and Tom Williams have made their C flight.

We are saddened by the departure of Steve Chinock on posting from R.N.A.S., Brawdy.

H. J.

YORKSHIRE

THIS spring has shown a surprising shortage of westerly, but our soaring effort has been helped by Henry Doktor's skilful tugging, and the east-west runway. We were pleased to welcome a party from Norfolk with their own Swallow, together with two Olympias from Dunstable.

While our minds have been preoccupied with preparations for the Northerns, held on the site in July and described elsewhere, two aircraft from the site went up to Portmoak to take part in their week-end competition. The visit was very enjoyable and Chris Riddell was delighted with the whisky — the first time he had ever won anything in gliding.

Our summer courses are again popular this year and we are pleased to have Toon Ghose with us as second instructor for the season. Visitors are always welcome, and it is refreshing to find that Sutton Bank is getting known as a good holiday spot. After the Northerns we were pleased to have Pat and Ben Watson stay with us with their Sky. Their best day gave them over seven hours' soaring. However, the best local performance was by Mike Wilson, our secretary, who ascended upwards to get his Gold C height in his Olympia. Let us hope the distance comes up soon as well

J. C. R.

SERVICE NEWS

BANNERDOWN (R.A.F. Colerne)

TUG Willson and Roy Gaunt each got their Silver duration and distance, Vince Griffiths went off on a maiden cross-country to Calne and Eric Hales declared Lasham, 53 miles, arrived safely but with an awful 'ush in the barograph dept., so the lad has to do it again.

Chris Gildea missed a gold distance by 18 miles, landing near Norwich after five hard hours. Hugh Bellingham arrived near Oxford and Mac Macintyre went to Devon, both for Silver Distance.

Two-seater types to graduate to Mistress Tutor include Malcolm Hinder, Vic Carnoh, J. D. Smith, S. Lodge, while P.

Finch and Doug Collins notched their C's.

On 14th July a small group frustrated by weather conditions on the home site and believing in the old adage — Never wait to aviate — seized and dismembered the 2B and the Baby, fled for Huish, rigged and flew eight hours on the ridge. We are delighted to record this because expeditions are a sure sign of hard-core enthusiasm, which is infectious.

A review of our fleet shows that all aircraft are now spoilered or braked and in full serviceability. The MT fleet has been rationalised and is ready to cope with autotow or Daniels autopulley launching whenever the wind direction allows, while the Callnan winch is a tremendous asset for the aforementioned expeditions.

The mobile flight office is now fully operational with all mod. con. including automatic light signalling, effective windsock, stair to the 1st floor and anemometer. It certainly makes a businesslike contribution to our operations making no secret of its function in displaying a stern admonition PAY AS YOU FLY in large red letters, but only 2/6 per launch takes the sting out of that. Membership increase during the period was 19 and the club total stands at a healthy 194.

P. H.

CHILTERNS (R.A.F. Benson)

NO news of this Club has appeared in these columns for several seasons. The Chilterns is an R.A.F.G.S.A. club situated about midway between Oxford and Reading. Unfortunately we are too far from the Chiltern hills to be able to ridge soar, and sufficiently close to the Thames to experience its lack of thermals.

The C.F.I. is Wilf Pickles, who is also responsible for the maintenance of winches, tractors, etc.

We have three self-propelled winches that start "on the button" and our aircraft fleet is two T-21's, one Tutor, one Grunau, one Olympia and a Skylark 4. We have six regular instructors. Our average launch rate is 100 a day.

We have been sending first solos regularly, and there have been a few C's this year. The "pundits" have been especially busy. Wilf Pickles performed well in the Nationals flying an Olympia 463, having the distinction of being practically the last to land each day.

Laurie Beer and Jack Harrison have each completed all three legs of their Silver C's this season, and Bill Hemmings his Height and Duration. Ted Deacon and Tess Shet achieved their heights, and Bob MacFarlane his distance.

Tess and "Mac" are now awaiting a 5-hour day to complete their Silvers. Jack Collins also reached Silver Height, but as this was his first soaring trip, he had to count it as his C.

Regrettably, there are no vacancies at present for civilians, but Service personnel (of all three Services) and those still on the active Reserve who live in the area are welcome to come along to Benson one Saturday or Sunday.

K. A. H.

EAST MIDLANDS (Swinderby)

ON the week-end of 27th-28th July the club's senior member, "Pop" Rigall (62 years old), set the ball rolling by going solo. Five C certificates were then gained. Our youngest member, Barry Pickers, also qualified for his C at 16 years and 5 months.

Bill Harrop and Thom Thomas completed their Silver C's with a five-hour hop each. They proved once again that pairs soaring pays off. That was on the 27th July, and on the 28th Bert Ottley became the first club hero to do a duration in the Eon Baby.

Silver C Heights were achieved by Pete Rickwood, Barry Cohen, Bert Ottley and Bob Kirkland, and Silver Distances by Bob Kirkland and Jim Wild.

Ian Hamilton landed near Corby, 40 miles short on the last leg of a 300 km. triangle.

The most notable success in June went to Con Grieves, who took the club Skylark up to 12,600 feet — off a 1,000 foot winch launch — to get a well deserved Gold C height.

Other successful pilots during the period under review are John Shorter — with a Silver C Distance — and Glen Saunders, Bob McGinn, Howard Cox, "Tubby" Jordan, Ted Barker and Bob Rushby, all with C's.

So far this year E.M.G.C. members have gained 18 A's and B's, 18 C's, 17



"Siggy" Romrig, Deputy C.F.I., emphasizes a point to one of the new members.

Silver C legs, 4 completed Silver C's and one Gold C leg. We have accepted the Clevelands Club challenge for the title of "Top Dog" of the R.A.F.G.S.A. and we hope these statistics will give them something to think about.

B. I. L. H.

FOUR COUNTIES

EARLY in the year, Flt.-Lt. Barry Gould took over as C.F.I. on the departure of Dave Brooke, and following the solution of a few administrative problems, the club was flying again as soon as the weather permitted.

C certificates have been gained by Mike Mercer, Paddy Galbraith, Simon Morrison and Tony Lamb. Congratulations also to Alan Fox and Chris Lister on their recent solos.

We now have a spoilered Tutor and our T-31 has also been spoilered, and we have already appreciated the advantage of shorter retrieves. Fred Slater has done sterling work on the servicing side, and the Prefect is now resplendent in red and white.

Our categorised instructor strength is now up to four, Fred Slater and John Teesdale having successfully completed the course at Bicester earlier this year.

Paul Lea represented the club with the Olympia at the R.A.F. Competition over the August holiday, with Dick Barrett and the Millard twins as crew.

Finally, our congratulations to John Teesdale on his engagement.

S. N. H.

R.A.F.G.S.A. CENTRE (R.A.F. Bicester)

SINCE the last report certain administrative changes have been made by which the Windrushers Gliding Club has been totally absorbed into the Centre and has now ceased to exist.

Since the last report we have flown over 800 hours from nearly 5,500 launches. Silver C cross-countries have been flown by J. T. Morris from Halton, Squire Hoyle, Colin Wray, Geoff Jones, Wg. Cdr. Campbell, A. A. Perris and Farmer, a visiting air electronician from Ballykelly. Also by two staff members of the Centre, Bill Andrews and "Chiefy" Williams.

Aerotow retrieving has proved economic up to 60 miles and is now used whenever possible for Silver C retrieves. It is simpler, quicker, there is less risk of damage and aircraft utilisation is improved.

Silver C Durations have been achieved by Frank Burgess, Squire Hoyle, Perris and Johnson.

Silver C Heights were gained by Cpl. Barrett, Sgt. Bellingham, J. T. Mathews and Staff Sgt. Miller, who is from nearby Strategic Air Command.

Several Gold C cross country attempts have been made but with no success, Frank Burgess took the Ka-6 to Yorkshire and Doc Robinson the Skylark 4 to Syerston.

The next day Ron Newall and Doc Saundby declared St. Mawgan but they were forced down by sea air in north Cornwall and after spending the evening drinking in the village pub went to sleep in a haystack waking to find their crews waiting indignantly beside the aircraft.

At the other end of the scale training has not been neglected and we have achieved 7 C certificates and 30 A and B's.

R. P. S.

RED HAND
(R.A.F. Ballykelly)

THE 12th July being a National Holiday in Northern Ireland, it was decided to spend a day on the beach. Instead of a bucket and spade, however, the syndicate towed out the Skylark and trailer.

From three launches behind Gordon Mackies Volvo, Col. Christy, Pete Dale and Gordon had seven and a half hours soaring along the 300 ft. cliffs at Magilligan.

This survey shows that with as little as 8-10 kts. N.W. wind, five-hour legs will be possible. Dave Ellis, in the Olympia, picked up a thermal from the sand dunes and flew over Downhill and Castlerock for an hour. Blue thermals on duty a week later to around 3,000 ft. gave Grenville Hill an hour's local soaring also in the Olympia, together with Tom Heslip on his conversion to the Skylark.

Allen Farmer has returned happily from Bicester with his Silver C distance.

Congratulations are due to Mike Collins and Cambell Donaghy for their solos in the Tutor and to Joe Taggart on his conversion to the Olympia.

We have adopted the cross runway method of auto tow launching with a marked reduction in wear and tear to the clutch of the tow car. At the same time we are using 11 W.G. 70/80 ton tensile piano wire instead of 14 W.G., 140/150 ton.

The softer heavier wire shows no sign of work hardening and the first test cable has given over 300 launches on runways.

G. M. H.

FULMAR NAVAL
(R.N.A.S. Lossiemouth)

BRITAIN'S most northerly outpost of gliding has had a good flying season so far, despite a lack of summer weather. Soaring conditions have been better than usual and a good crop of A, B and C certificates have been produced. Also Dave Alty and George Iley have completed their Silver C's.

In July John Harris flew the Skylark from Milltown to Stonehaven using strong lee wave formed by a southerly wind off the Grampians. He completed his Silver C and claimed a Gold C height with a climb from 2,300 ft. to 16,500 ft.

Our C.F.I. Dave Innes and Dave Alty took the Skylark 2B to a rather damp Easter Rally at Bicester. However, Dave Alty's next venture with the Skylark at the Scottish Gliding Union's competition was successful and he gained second place.

Our T-31 was down at Portmoak for a number of week-ends ridge soaring and Robin Bremner, George Iley and Derek Marpole have got their 5-hour legs.

Phil Champion made good use of a small bonfire in March, which gave him some 26 minutes of soaring time. To his disgust the Fire Brigade appeared and put an end to the matter!

Many members have spent a lot of their spare time and worked hard on the club's equipment and special mention must be made of Sammy Sansom, Derek Marpole and Ted Barrat. Nick Taylor, our secretary, leaves in October to take up professional aviating and Phil Champion is preparing to take over the reins.

Anon.

HERON NAVAL
(Yeovilton)

THIS is the first time that we have appeared in print since the club was reformed three seasons ago. In 1962 our two founder-members and prime movers, Topsy Turner and Stan Turton, left us for pastures new, so that we began 1963 under new management.

Flying began this year in March, with the club fleet augmented by a syndicate Skylark 3F. The T-31 has sprouted spoilers.

The Tiger being maintained by the club's ground engineer meant that aerotows could be laid on most days, and in fact March and the Tiger between them produced a great deal of local soaring for the Olympia and Skylark.

Ray Foot got his C with a cool 90 minutes in the latter. Meantime, the T-31 was kept busy pounding round the circuit.

April brought more local soaring for the two sailplanes, also some cross-countries; Nick Humphries took the Olympia 42 miles to Redlynch for his

Silver distance, and Ray Foot on his first cross-country declared Lasham and got there in a couple of hours.

He then soared locally until his five hours were up, watched his trailer arrive and landed beside it. Shortly afterward Bill Foster took the Olympia to Salisbury for his Silver distance.

Other flights of note have been John Eatwell's trip to Verwood in the Olympia (42 miles), followed rapidly by a five-hour stint in the same aircraft during which he reached 9,500 ft. in a cu-nim which covered half of Somerset.

Ray Foot commuting to Bovingdon in the Skylark collected his Silver Height *en route*. Bill Foster local-soared the Olympia for four hours and John Osborne did an out and return to Salisbury in the Skylark.

Cox, McConochie, Cooper, Morris, Milner, Childs and Young have gone solo, and there are several more hovering on the brink. Statistics until July:— 2 complete Silver C's, 2 Silver distance legs, 6 C's, 7 B's, 250 hours, 1,000 launches, with a membership of not more than 40. J. E. O.

PORTSMOUTH NAVAL

THE T-21 has at last emerged, after her 10-year inspection, resplendent in fresh colours.

The Olympia has had an annual, and the Skylark a new tail skid, so that only the Tutor is now u/s, having a damaged wing.

None of our pilots was entered for the Naval Competitions at Lasham, but several of our members gave help with the competitions in various ways.

Our C.F.I. gave a flying display during Air Day at Lee recently, though conditions were rough and the cloud base was very low.

Humphry Dimock won two days of the Dunstable Competitions but was, unfortunately, out for two days due to landing in an uneven field. L. D. V.

OVERSEAS NEWS

PHOENIX

(R.A.F. Brüggen)

THIS has been one of the best soaring seasons the club has ever had, due partly to the excellent German thermals and to the ground equipment.

Our new winch has proved most reliable, and has adequate power to cope with our varied types of aircraft. It also has an automatic braking system on the winding gear, giving a very smooth launch in all conditions.

Our new clubroom has been decorated and the bar is now open.

Every soaring day has been put to full use, and to date our successes include the following:— Fourteen members have gained their A and B certificates, sixteen their C badges. Sixteen Silver C legs gained include eight height legs, five distances and three five-hour legs.

Sid Tee, Bill Ridley, Mitch Mitchell and Jerry Wheeler have all completed their Silver C badges. Geoff Barrell has finished his Gold C with a flight to Celle, getting his diamond goal at the same time. Alan Somerville also did the "milk run" to Celle to get his diamond goal.

As the soaring season draws to a close we look forward to the winter wave project which we hope to hold on one of the French wave sites early in the new year. S. W.-F.

EAST AFRICA

SINCE our last newsletter we regret to report the loss of our two-seater, the T-31. The C.F.I. was flying an air-test, following C. of A., and unfortunately caught his port wing on a thorn bush, which caused the aircraft to ground-loop. The pilot was not hurt, but the aircraft was damaged beyond repair.

We are now operating our new winch, which has been built by the Forces element of the club, in particular John Welch and Ron Mills.

It is built on a Pontiac straight eight car chassis, with completely automatic gear change, and to date has hurled the Cadet Mk. 1 to 1,650 ft. without any effort. We hope to be sending a complete report, with pictures in the near future.

C. R. E.

ADEN

"OUR man in Aden" reports: Breathing space having now passed since the completion of our first full season, we have produced some facts and figures. We are very pleased and a little proud of our achievement.

From September, 1962-May, 1963 (165 flying days):—4,863 launches, 545 hours flown, 43 solos, 19 C's, 10 promoted passenger carrying and 4 promoted instructors.

The season was marked by an ambitious training programme run by Tom Bobbin (C.F.I.).

The club's aircraft, two T-21's (one syndicate owned), one T-21 and one T-45 were kept very busy, flying taking place all Sunday and every afternoon except Monday (maintenance). New pilots slowly graduated to the T-21's and eventually crowded the use of the T-45 with the "elder" members. Our converted Humber Super Snipe (honorary tow car and founder member) was soon started on the first of what must have amounted to over 5,000 sprint starts down the dusty mile of our rutted and wind-duned runway, a mammoth fatigue test for car and drivers. A Zephyr bought to relieve the load couldn't stand the pace.

The early soaring weather was very promising. Thermals, generally strong, narrow and frequent had a ceiling (or cloud base) of 4,000 ft. which gradually reduced to as low as 1,500-2,000 ft. During the season pilots often found that at low levels, below 1,500 ft., best rates of climb were achieved with as much as 45-50 degrees of bank. Many flights were ended by the 30 minute time limit mostly employed due to the demand for our only solo aircraft. Several flights were made up to an extended one hour limit. Ambitious flights are denied us by the generally low cloud base and the limitation of being surrounded by endless seas of soft desert sand with ever-changing rough dust tracks not suitable for trailer retrieving.

The local buzzard-hawk-kites (?) proved very useful thermal markers and weather men, but seemed to resent our sharing their thermals. The passive resentment indicated by stories of being led into patches of "down" by birds flapping round in mock circles, was later extended to definite aggressive "passes" and ultimately to an attack on the Swallow. The bird impaled itself, talons foremost on to a leading edge near the cockpit and was picked up with a broken neck. The impact felt so heavy to the pilot he came straight in for an inspection, which revealed only talon marks.

Other forms of lift we enjoyed included a powerful cloud street which crosses the site on the few occasions when the wind veers behind 'Sham Skim' (the 1,800 ft. main peak of the volcanic rim which forms the Aden peninsula). This is thought to be initiated by wind shadow thermals remaining active after crossing five miles of harbour, or wind turbulence sweeping up patches of warm air. This street on occasions appears to extend 20-30 miles inland, but alas we can make little use of it for down-wind flights.

Nose and tail skids need constant replacement due to the severe crushed gypsum surface of the runway.

One problem we had was due to a large turnover of new members. Many came to us only to obtain solo's and others came shortly before returning to the U.K. Thus we had good training figures, but it was a terrific struggle for the "hard core" of experienced members to maintain efficient operation. Many avoidable hitches and mechanical failures appeared as a result causing inevitably a certain amount of frustration.

We have plans to attempt some Silver C distance flights early next season, a triangular flight with the minimum risk of coming unstuck in an awkward spot is proposed, and a trailer suitable (we hope) for desert tracks has been constructed for emergency use. The new distance requirement will be impossible, so we will be making big efforts before December.

We have been able to continue flying on Sunday mornings only through the summer, starting at 5.30 a.m. (on the field) to avoid the mid-day heat.

There is one incident that occurred during the flying season I haven't mentioned, on Sunday, 3rd February, for the first and only time in the memory of the club we were unable to fly due to . . . RAIN.

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