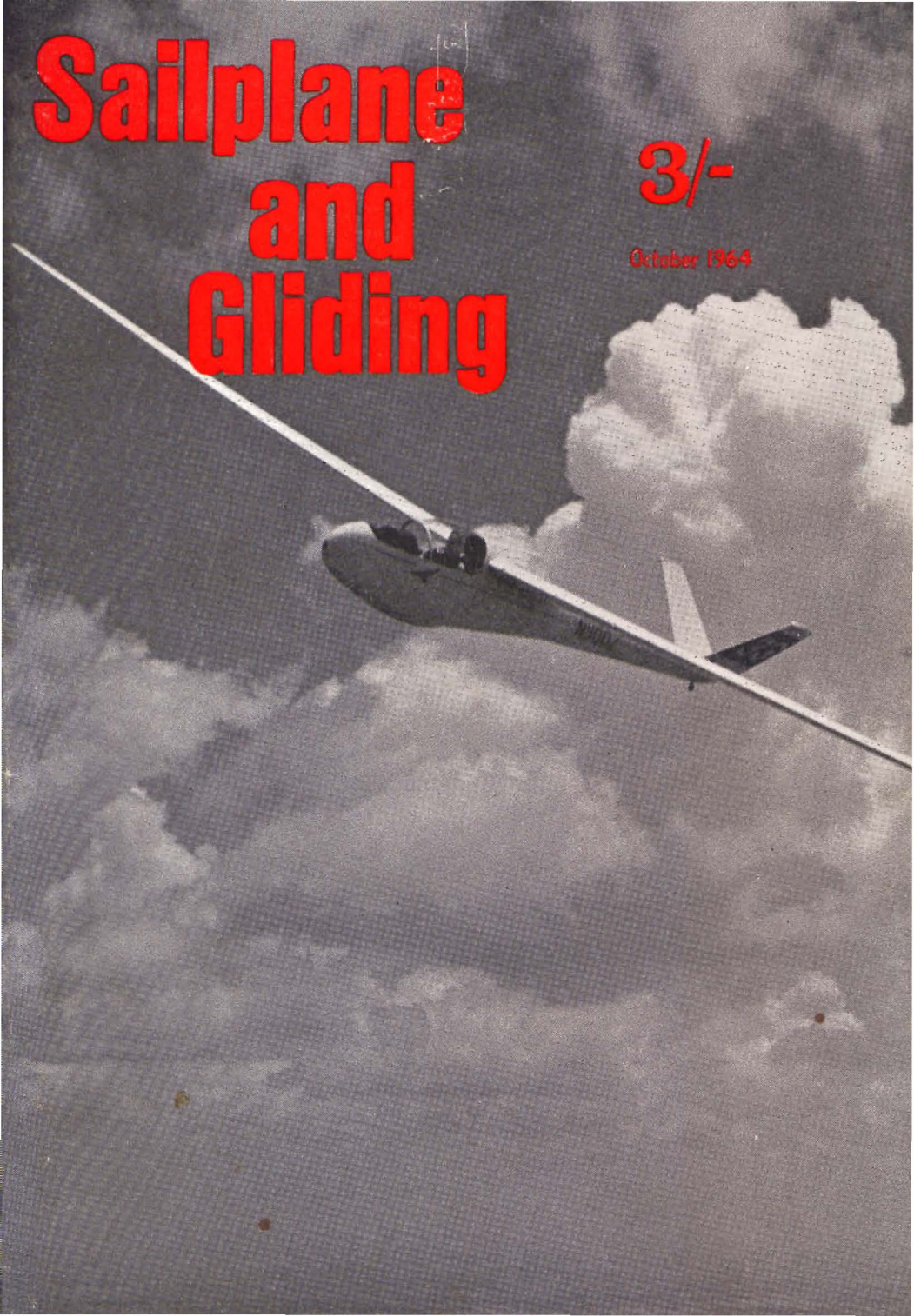
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October 1964





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SAILPLANE AND GLIDING

OFFICIAL ORGAN OF THE BRITISH GLIDING ASSOCIATION

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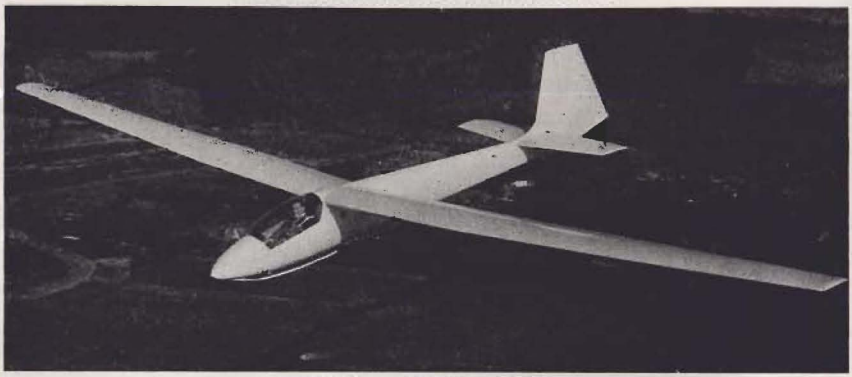
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Cover photograph:— Al Parker flying his Sisu 1A. *Photo by* S. A. Alldott.

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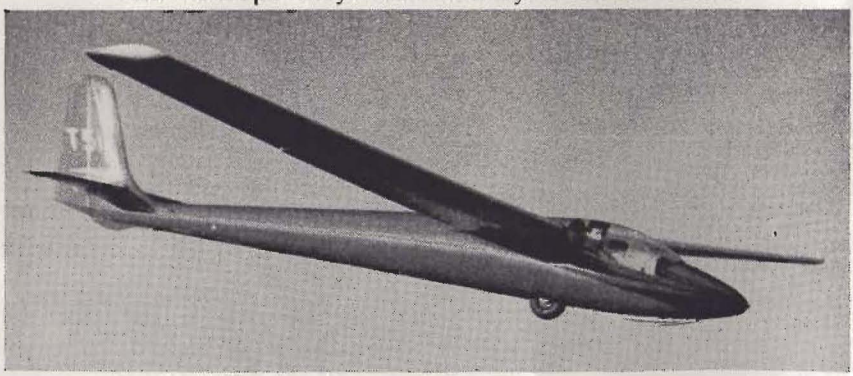
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1965 World Championships News

THE great news — just too late for our last issue — that, through the support obtained from the great tobacco firm of W. D. and H. O. Wills, of Bristol (no relation, alas, to the writer), we have been able to reduce the entry fee from £250 to £150 per glider, removes our last-but-one worry on the success of the 1965 World Championships. (Even W. D. and H. O. Wills can't entirely exorcise the final one — the vagaries of the British climate, still scarring our subconscious from the days of Camphill. But reason keeps on her comfortable whisper — even in 1954 it was only in the Pennines that the weather was so bad; it would be an unwelcome record for all time if we were washed out in Gloucestershire in early June in 1965.)

It is an interesting example of the virtues of a capitalist democracy: for hundreds of years the arts and sports flourished under the patronage of a few wise and generous aristocrats. Now the rich individual has nearly gone and this very necessary service to the community is taken over by far-sighted firms able to see that their interests and their duties in this field coincide. The international gliding world will remember this act for many a year, for it will enable the smaller and poorer countries to fly in 1965, and may open the door in future to countries which have in the past been unable to offer to hold World Championships because of the cost involved.

As soon as we got the news we cabled the 30 countries involved, to ensure that they had it before starting to discuss their budgetary problems. By 30th September we shall know the number of participants, for by that date entries are due with the initial entry fee of £60.

In our next issue, therefore, we expect to publish the final entry list and it may well show that these will be the largest World Championships ever held. For we set the entry at a maximum of four aircraft per nation because, from the initial advices we received of intention to enter, it looked as if, because of the high entry fee, this would be necessary to achieve the required minimum entry of 60 aircraft. Now the fee has been reduced, we obviously cannot go back on our tracks, so the final field may well exceed 60. This will not dismay us, but it increases the possibility that we may set different tasks for each class on a number of days.

Nicholas Goodhart has done a statistical exercise on traffic density which shows that the concentration of aircraft at South Cerney will not produce A.T.C. hazards. It also produces the surprising fact that, during a Championship task, around half of the aircraft flying over the U.K. will have originated from South Cerney. Perhaps this mainly shows how empty is our British air, but for these three weeks of our meeting our neighbours will be able to see for themselves what a comfortably furnished sky looks like. And they won't be worried by the noise. P. A. W.

1,000 km. IN SISU 1A

Alvin H. Parker

Photograph
S. A. ALDOTT



By this flight Alvin Parker became the first sailplane pilot to exceed 1,000 kilometres and beat the official world distance record by 100 miles and the unofficial one by 87 miles.

AT 6 a.m. C.S.T on Friday, July 31st, looking out of my bedroom window in Odessa, Texas, I saw what I took to be indications of an early start. It looked like a chance to fly Len Niemi's Sisu 1,000 kilometres, and achieve my burning ambition to break the world's distance record. (The wife says "Addiction", not "Ambition"!) My wife cooked breakfast while I dressed; then she sent me to the barber-shop for a long overdue haircut. Neverless, by 8.15 I was on my way to the airport.

Ian Burgin, an Australian who has just graduated from Abilene Christian College as a Bible student, is crewing for me for the last of four summers before returning to Australia in September. Also, he preaches each Sunday at Garden City, Texas, and I try to see that he has Sunday free. I felt, along with other pilots and the weather-man, that tomorrow would be a better day; but for some reason I have to be psychologically ready for a flight. That day everything was in my favour and my wife said I was jumping around like a grasshopper. Also, in my experience, many good days have been missed while waiting for a better day that never came. So I decided, since I had the approval of both Ian and my wife, that the weather was a minor factor!

After collecting a quart of water and two bars of candy, I moved the Sisu to the flight line around 9.40. Ian piloted my L-19 towplane, and I released at about 2,400 ft. (5,200 ft. a.s.l.) over the crossroads of Golder Avenue and 42nd Street in North-West Odessa. I attempted to work the lift I had just been towed through, but could not. I finally found a workable thermal on the north-west corner of Ector County Airport, after descending to 500 ft., worked up to about 1,800 ft. and moved north to a small, wispy Cu just forming and went to 2,300.

COMMITTED

Now I was committed to an off-airport landing! I gradually worked north along the Andrews Highway, then to the west of Andrews, and up to about 2,800 ft. north-west of Andrews. From there, I could look down to the family ranch land where I spent so many hours as a cow-puncher during my youth. If someone had told me then that I would some day pilot a sailplane across that area, I would have told him he was "loco"!

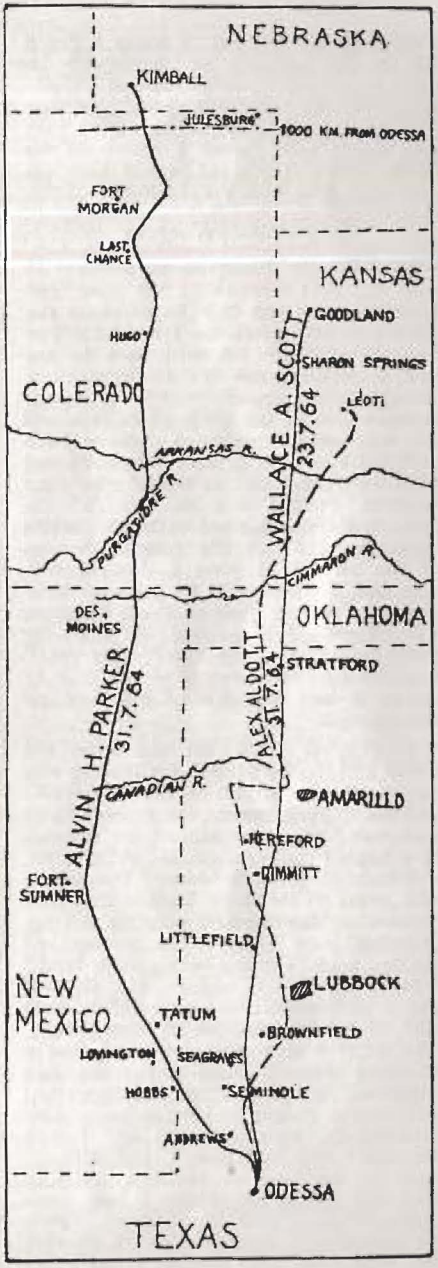
I worked on north-west to near Hobbs, N.M., and a low of about 1,100 ft., then up to about 3,300 ft., and on east of Lovington, then just west of Tatum. Here I learned, by radio, that J. C. ("Red") Wright and Wally Scott had decided conditions did not warrant a cross-country effort that day; and that with tomorrow's promise of better weather, they were returning to Odessa. True enough, my average ground speed was barely 50 m.p.h., but I still had that feeling "it" (1,000 km.) could happen! Alex Aldott was up in "Doc" Mullen's Prue Super Standard, but not until I called in from Kimball, Nebraska, that night did I learn he flew to Leoti, Kansas, a distance of about 465 miles.

DOWN TO 700 FEET

As I struggled east of Fort Sumner, I spotted the Dan Crenshaw ranch house and decided these lifelong friends would feed me lunch if I were forced down anywhere nearby. But I made it on east of a very green 8,720-ft. mountain near Des Moines, and down into some canyons on the Cimarron River — down to 700 ft. above ground here!

Again, as on the north-west corner of the home airport, the quite desperate thermal technic of McCook enabled me to get up and away again! Being number 38 in a contest has its advantages — sometimes! I crossed the Purgatoire River in Colorado, climbing to 8,000 ft. above ground in the east end of a cloud with rain falling out of the west end; on across the Arkansas River just east of La Junta; then a westerly curve up across Hugo and a run for some "dust devils" south-east of Last Chance, Colo. I found little lift here and continued on in another desperate glide to the south end of a roll of dust (2,000 ft. a.gr.) in front of a thunderstorm about 25 miles south of Fort Morgan. Again heavy rain just west of me and muddy rain on me, and then the best lift of the day — 1,000 ft./min. up to cloud base! If I can ever average this for any length of time — Canada, here I come!

I was afraid to enter cloud, as thermalling in an even turn meant being blown into the shear, which was very rough; but it seemed that a tight thermal turn with a break headed east for about



5 seconds worked out. I know I could not do this precisely on instruments, so away to the east towards Julesburg, Colorado — my declared goal. Another thunder-shower developed across my path and would have forced a detour to the south, which I guessed would lose me both the goal and the 1,000-km. flight.

ABANDONED GOAL

Over Prewitt Reservoir at about 7.55 p.m. C.S.T. I abandoned my goal and turned toward the N.N.E. to cross the 1,000-km. arc. Here, as I suddenly ran into 400 ft./min. lift with rain to the east, a thunderstorm to the south-west, a thunderstorm to the north, a larger thunderstorm to the north-north-west, and the sun going down — I climbed back to 8,300 ft. above ground. These frontal conditions were just as the weather-man forecast. Feeling that this was all the altitude I could use before black dark, I "drew a bead" on the rotating beacon of the airport at what I thought was Kimball, Wyoming. At 85 miles an hour indicated, after a glide of about 15 miles, *Len Niemi's Sisu carried me over the 1,000-km. arc! "Yip-Yip-Yip-Peeeeee!"* I glided into the beacon with ½ mile to spare. It was 8.19 p.m. C.S.T. and no one in sight.

I struggled out of the Sisu after 10½ hours and looked around for landing witnesses. There was still no one in sight — just the rotating beacon, the runway lights and me! I staggered around the hangars to a lighted trailer-house and called from a distance, "Anybody home?" Two young men came to the door. I asked that they witness my landing and help me put my sailplane in a hangar. The younger of the two said, "I didn't hear a plane land." I told him that it was not an airplane but a sailplane. The young fellow then said, "I did not hear one of them either!" The other young man remarked that a sailplane doesn't make any noise and suggested they go and look. As we walked toward the sailplane I remarked, "This is Kimball, Wyoming, isn't it?" I then learned I was in Kimball, Nebraska — back in the land of McCook 4,900 ft. a.s.l. He asked me where I had come from. When I told him Odessa, Texas, he seemed very sceptical . . . I'm not sure but what both boys thought I was either drunk or crazy! After seeing the sailplane, they became more friendly but seemed to doubt my story. However, they did sign my landing witness form, helped me hangar the ship, carried me into town to a motel — on to a café, and were late for their evening dates!

While I was waiting for my food at the café, I called home a second time to see if Ian had called in. The hostess at the café overheard part of my conversation, noticed my Sagebrush Soaring Society patch, and after asking questions as to who I was, where I was from, and what flight I had made, seemed to be the only person in town who actually believed my story of a 646-mile sailplane flight!



Al Parker, of Odessa, Texas.
Photo by Philip Wills.

EDITORIAL NOTE.—The first sailplane flight of 100 kilometers was made by Robert Kronfeld on May 15th, 1929, along the Teutoburgerwald range in N.W. Germany, passing over Oerlinghausen. The first of over 10 km. was by Arthur Martens on August 25th, 1923, and the first to exceed 1 km. by Wolfgang Klemperer on September 4th, 1920, both from the Wasserkuppe in Germany. Otto Lilienthal exceeded 0.1 km. in 1891.

Record Distance Flights: Comparison and Comments



by RICHARD H. JOHNSON

I offer my apologies at the start for my rather impersonal dissection of the data from Al Parker's superb flight. My only excuse is that I was trained as an engineer, and probably because of this I wanted to know from a fact and figure analysis just how Al carried out his flight.

First of all it should be known that Al Parker was at Odessa during the two weeks that I and others were trying for records in 1951, and that he and his tow-plane were of considerable assistance to us all. I never dreamed at the time that he would be the one to exceed my record; however, I did notice he was much more inclined to listen and look than to talk.

Now to the analysis of Al's flight and the comparison of it to my 1951 record flight of 535 miles. We both planned to go almost due north from Odessa. My goal was Colby, Kansas, 527 miles on a course 6° east of true north, and Al's goal was Julesburg, Colorado, which is 630 miles due north of Odessa. I think we both knew a fairly good south wind was needed, so we waited for a day with wind and good thermal convection. As to early convection, I think Al's day was better because he was able to start soaring soon after releasing at 9.52 a.m. On my day in 1951, I made an aero-tow at 10.15 a.m. and found no indication of convection. It was just as well because *I had forgotten to turn on my barograph* for the first tow. I made my second take-off at 10.29 a.m. and found that by then the air had changed from smooth to bumpy. Al's early start gave him an even 45-minute head start over my less spectacular flight of 1951. Had Al not made this early start, his flight probably would not have been able to reach the 1,000-km. goal he sought.

From here on, my analysis and comparison centres principally on the barograms. The barogram cannot tell everything that I would like to know, but it does contain a wealth of data. Fortunately, both Al Parker and I carried Peravia barographs, and this makes the analysis easier because of the rectilinear plotting system used in these fine instruments.

Al's barogram shows that he utilized a total of 43 thermals to carry out his record. Here I counted only those places on the barogram where a climb lasted for more than one minute. It is appreciated that he probably circled on more than 43 occasions during the flight, and this is necessary in evaluating thermals, but if a thermal is rejected as unsatisfactory it is generally done in less than one minute. With one possible exception where he averaged 600 ft./min. for 8.0 minutes, the thermal strengths were by no means outstanding. Except for length, Al's barogram looks almost exactly like mine. My best thermal averaged approximately 600 ft./min. for 8.5 minutes.

Al's barogram indicates that he spent approximately 198 minutes of his 10.5-hour flight climbing in these 43

thermals, and that through these thermals he climbed a total of 69,200 feet during the flight. This resulted in an average rate of climb of 349 ft./min. for the flight — clearly not exceptionally good for summer-time West Texas conditions, but still not bad either. In comparison my 1951 flight consisted of 37 climbs of over one minute duration, 186 minutes spent circling in these 37 thermals, 63,300 feet total altitude gained, and an average rate of climb of 342 ft./min.

This amazing similarity in climb performance experienced during the two flights is quite noteworthy.

As to winds, I have reviewed the weather maps for both flights, and I cannot really determine that there was much difference in average wind velocities at the flight altitudes. It does appear that during Parker's flight they did stay out of the south during the entire flight; whereas on my flight they veered to S.W. after I passed Amarillo, Texas. Because of this wind shift I gave up my goal of Colby, Kansas, and headed straight downwind towards Salina, Kansas, landing at 19.21 hours.

The only significant difference I can see in the two flights is that of duration. Al was able to start 45 minutes earlier than I did, and that he was able to fly for an additional 57 minutes after I was forced to land. Al's average ground speed for his 10 hr. 48 min. flight was 61.5 m.p.h.; mine averaged 62.3 m.p.h. for 8.73 hours from release. My landing place was, however, 3,000 ft. below my official tow release altitude, so my credit distance was 8.5 miles less than flown and this reduced my official average groundspeed to 61.2 m.p.h., which is slightly less than Al's 61.5 m.p.h. Al actually landed at an elevation that was about 50 feet higher than his release altitude, so he received full credit for all his distance.

I estimated that I had an average tailwind component of approximately 20 m.p.h. during my 1951 flight, and I would not be surprised if Al had somewhat less tailwind than I did.

I think that Al Parker was at least as skilful at thermalling and cross-country flying during his flight as I was in 1951 (and now for that matter), so let's call the comparison a draw on this point.

The only other point that needs comparing now are the sailplanes. No one can argue that the Sisu is not a superb cross-country machine, but then the RJ-5 was a fine high-performance sailplane also. Fortunately, for the comparison I did, with Dr. Raspet's assistance, make six performance test flights early during the summer of 1951. From these tests we were able to obtain a fairly accurate performance polar for the RJ-5 in its then current configuration. The summer, 1951, polar for the RJ-5 is shown plotted in Figure 1.

At this time the RJ-5 did not have its flush skid modification and the wing forward surfaces needed additional smoothing, so its measured maximum glide ratio was 37.9. Most people recall that the RJ-5 tested to almost 40:1, but this performance level was not achieved until 1952.

Although I do not have an accurate flight-test polar for the Sisu 1A in its completely finished configuration, I did help Len Niemi flight-test the prototype

1965 DIARY

CHRISTMAS CARDS

Orders are now being accepted for the 1965 edition of the B.G.A. diary, and the new 1964 Christmas Cards.

THE DIARY is this year covered in dark green leather-cloth and contains information on the World Gliding Championships 1965. The price is again 5/- plus 3d. postage.

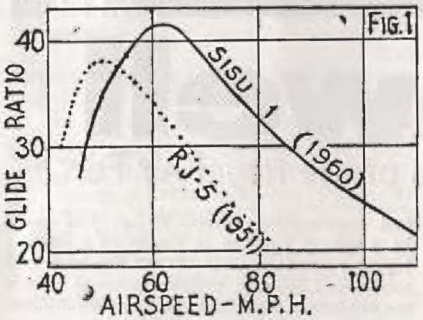
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Sisu 1 in 1960, where we measured a maximum glide ratio of over 41:1 at 62 m.p.h. The Sisu 1 data from the 1960 tests are also shown plotted in Fig. 1. It should be appreciated that the performance data shown in Fig. 1 are those measured in very smooth early morning air, and that the sailplane's glide ratios when flying in turbulent air between thermals are not nearly this good. Also, that a number of small changes exist between the prototype Sisu flight-tested and Al Parker's production Sisu 1A. The changes were very small, and in my opinion they would not reduce the performance by more than 1 or 2 per cent.

As Fig. 1 shows, the maximum glide



ratio and high-speed performance of the Sisu is quite outstanding. At airspeeds above 55 m.p.h. the older RJ-5 was no match for a Sisu. However, when it came to thermalling, the RJ-5's longer wings and lighter wing loading did give it some advantage there.

According to my cruise calculations, I compute that Al Parker should have been able to average a maximum cross-country speed of approximately 45 m.p.h. plus wind, considering his average climb rate of 349 ft./min. If he flew as I do, he probably flew at somewhat less than that for maximum cruise in order to conserve altitude. If he averaged 95 per cent of theoretical maximum, his average cross-country speed was about 43 m.p.h. plus wind. Since he averaged 61.5 m.p.h. for the flight, his average tailwind must have been approximately 19 m.p.h. Some allowance should be made here for the extra distance that the flight's ground track made good over the straight-line distance credited. However, in this case it appears to amount to only approximately 6% of the credited distance.

After performing this analysis of Al Parker's flight, I conclude that Al skilfully flew his superb sailplane, the tailwinds were not strong, and except for the unusually long convective duration encountered that day, the thermals were only moderately strong for that part of the country. I believe that Al both can and will be able to exceed this record within the next year or two.

ANNOUNCEMENT TO OUR READERS
SAILPLANE and GLIDING

As from the issue dated December, 1964, the price of SAILPLANE AND GLIDING will be:

Single copies 3s. 6d. plus 6d. postage and packing

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Cadetships are also available in the Equipment and Secretarial Branches and R.A.F. Regiment.

Joining ages, 17½–19½. Next entry, April 1965. Time to find out, now—closing date for applications is October 31st.

For full details, please write, giving date of birth and educational qualifications, to Group Captain J. W. Allan, D.S.O., D.F.C., A.F.C., R.A.F., Adastral House (SAA 169), London WC1.

The Royal Air Force

1965 World Championships Report

PREPARATIONS are going ahead slowly, but steadily, and they will speed up as soon as the soaring, and holiday, season is over and the heads of the various departments return home to settle in for the winter.

The organization at present consists of:—

Chairman, and Director of the Championships	Ann Welch
Deputy Director	F. G. Irving
C.V.S.M. representation and liaison with N.A.Cs.	P. A. Wills
Station Commander, South Cerney	Gp. Capt. P. G. Ottewill
Administration, South Cerney	Wg. Cdr. G. Strange
Chief Meteorologist	C. E. Wallington
Assistant Meteorologists	P. Wickham, R. F. Johnson
Chief Tasksetter	Ann Welch
Assistant Tasksetters	J. S. Fielden, J. B. Jefferson
Public Relations Officer	Caroline McQuade
V.I.P. and Guest care	Sir Roger Conant, Bt.
Treasurers	B. A. G. Meads, G. W. Mackworth-Young
Secretary, British Gliding Association	Frances Leighton

Heads of Departments and Sections

Flying Department	F. W. N. Jensen
Chief Marshal	E. E. Reeves
Assistant Marshals	E. Meddings, S. B. Mead
Distant Marshals	Margaret Jolliff, A. W. Barker
Tug Squadron	Sqn. Ldr. E. Morris
Tug Squadron Deputy	Flt. Lt. D. S. Bridson
Displays and non-contest flying	R. A. Neaves
Operations Department	Joan Cloke
Timekeeping	Boel Williamson
Scoring	A. McConnail
Retrieve Control	Ann Vince
Observers	L. A. Speechley
Barograph Office	Bristol Gliding Club
Communications Department	D. L. Hart
Radio Section	R. Brett-Knowles
Engineering Department	Air Cmdre. Cleaver
Acquisitions	A. L. L. Alexander
Advertisements	Peggy Mieville
Design and Decor	F. Kinder
Equipment	A. E. Burgess
Hospitality	Mamie Bruce-Gardyne
Information Office	J. C. Riddell, Yorkshire G.C.
Interpreters Office	Jane Cole
Press Office	Christina Rosenorn-Lanng
Printing	Rika Harwood
Trade Fair	J. Ward
Transport	B. Hartness
O.S.T.I.V. Representative	A. H. Yates
O.S.T.I.V. Jury, Chairman	L. Welch
O.S.T.I.V. Technical Assistant	F. J. Purchase
Rules and Regulations Sub-committee	L. Welch, H. C. N. Goodhart, R. Harper, C. J. Pennycuick, A. McConnail, C. R. Simpson, G. Cleminson, J. B. Jefferson, J. de F. Thompson

ANN WELCH

London Regionals

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.*

ONE Air Traffic Census, three Purple Airways, approximately 600 hours and 9,000 miles later we can look back once again to a most successful contest.

No doubt one of the highlights was the persistence of the organisers to call us back for second and third briefings, which proved to be well worth while and gave us at least two contest days which we might have missed otherwise. We also flew 9 out of the 10 possible days, and on the only day we were not given a task, crews and helpers had a lovely afternoon local-soaring. Obviously the lesson learnt during the Nationals had paid off.

This time 22 gliders and 35 pilots flew in the competition, some of them old hands and some rather new to competitive flying, but all were eager for battle to commence when Ron Watson opened the first briefing at noon on Saturday 25th.

Task: Race to Ipswich airport, 75.5 miles. $X=15$.

A westerly airstream covered the British Isles between a high-pressure belt to the south and low to the north. A cold front moved east across the country during the day, but the cloudier weather did not affect eastern districts. The air was unstable up to 3,500 ft. a.s.l., but by mid-afternoon the temperature and humidity rose sufficiently enough for cumulus to pass the main inversion. A 15-knot wind helped pilots along the course.

The forecast at briefing was different from that shown above; in fact, at the time Mike did not expect any cumulus at all, but rather thought blue thermals would be the order of the day, and one would be lucky if the odd thermal would break through above 3,500 ft. However, all but 2 pilots finished the race, which, by the way, had 2 Purple Airways lying across its route. The differences in speeds were mainly due to a number of pilots leaving early and consequently being rather slow. Those who left after 2 o'clock were flying in a rapidly improving sky, and John Firth did not even bother to circle in less than 5-knot thermals and used cloud streets part of the way.

Fastest Speeds

Pilot	*Sailplane*	*mph*	*Pts.*
Firth	Skl. 3F	52.9	1,000
Cardiff	Austria	50.1	928
Richardson	Skl. 3F	49.7	918
Philpot	Skl. 3F	44.6	797
Hull	Skl. 3	44.4	793

Sunday, 26th July

The cold front slowed up over the south Midlands and East Anglia, south-east England being affected by a slack pressure field.

At the first briefing Mike Fairman announced that we had to observe two Purple Airways again. However, as timing the conditions in our area was rather uncertain, briefing was delayed till noon, with the hope that by then brighter weather would be over us. At the midday briefing there was still a certain amount of medium and upper cloud, and a further and final briefing was called for at 13.30 hours.

A cloudbase of 2,300 tops 4,000 ft. was now being forecast; thermal strength was expected to be moderate with narrow cores, visibility 3-6 miles.

Task: Out and Return to Duxford, 65.8 miles. $X=15$.

Soon pilots were awaiting their turn for take-off, looking rather depressed by what they saw (or did not see) in the sky. Firth, Wilkinson and Donald delayed their take-off, but all to no avail; nobody, except Firth, went past $2X$ and the day was declared No Contest.

Monday, 27th July

Again briefing was delayed to mid-day, Mike Garrod holding out good prospects for the afternoon.

A wave developed along the cold front overnight, further delaying its progress south; but after it passed, the front accelerated and cleared the area by mid-morning. The airstream behind was unstable up to 3,500 ft. with a sharp inversion above.

At 12 o'clock an Out-and-Return to



Experienced riggers try their hand on the Briefing Tent.

Edgehill was set, 42 miles each way. $X=15$.

Thermals were expected to be locally strong, and weaker under the cirrus which could be seen in the distance. The wind turned out to be a lot stronger than forecast and pilots found it difficult to make headway; also lots of re-lights were needed and a typical gaggle mentality was soon observed as pilots hung on to their hard-to-come-by thermals. Only Firth was seen to depart in a very determined way, and in the end was the only one to reach Edgehill. Alas, another No Contest day.

Tuesday, 28th July

A deepening depression brought stronger westerly winds, a cold front moving quickly into north-western districts. Ahead of the front the air was still fairly dry with little high cloud, and with prolonged heating there was good convection to 4,000 ft.

Again it took two briefings to arrive at a task, but it was obvious from the start that this time it would be a better soaring day than we had had and pilots were very keen to get going.

Task: Race to Great Yarmouth, 110 miles. $X=20$.

As the wind was fairly strong, launching was done by winch, and within an hour everybody was airborne. Not much time was being wasted hanging around locally and most pilots were across the line before 2 o'clock. As far as radio reports could be picked up from base, flying seemed to be straightforward as far as Newmarket; then, suddenly, pilots were running into difficulty and, soon after, landing reports started to come in, most of them having landed well south of track, the crosswind obviously being more difficult to cope with. Only 4 pilots reached Yarmouth, with John Cardiff easily being the fastest, followed by Humphry Dimock, who had run into trouble near Eye and flew for over an hour at 700 feet to cover 12 miles. John Firth, Gordon Camp and Hugh Mettam all landed in holiday camps in the Lowestoft area, and Simon Redman had some trouble with a ploughed field which put his glider out of action for a few days.

Leading Scores

Pilot	*Sailplane*	*mph*	*Pts.*
Cardiff	Austria	38.8	1,000
Dimock	Skl. 4	34.15	955
Barnett	Skl. 4	33.3	947
Donald	Skl. 3B	26.1	891
Mettam	Skl. 3B		735
Firth	Skl. 3F		685

Wednesday, 29th July

The cold front cleared southern England overnight, but was linked to a warm front associated with a wave over the Irish Sea. An area of broken upper cloud existed near the front to the north and south of Dunstable, and good convection occurred in this narrow belt during the morning. Later, convection weakened as a sheet of stratocumulus became established.

It was almost standard practice by now to have a second briefing, and this time it was at 11 o'clock. As the wind was still from a W.N.W. direction, we were once more sent to Ipswich, this time via Duxford to keep us well away from Stanstead. 78.7 miles. $X=15$.

Most pilots tried to pick a reasonably early start time, and were soon on their way. Again, like the first day, all but one pilot arrived at Ipswich with speeds varying from 50 to 21 miles per hour. A good sea-breeze front helped the later arrivals.

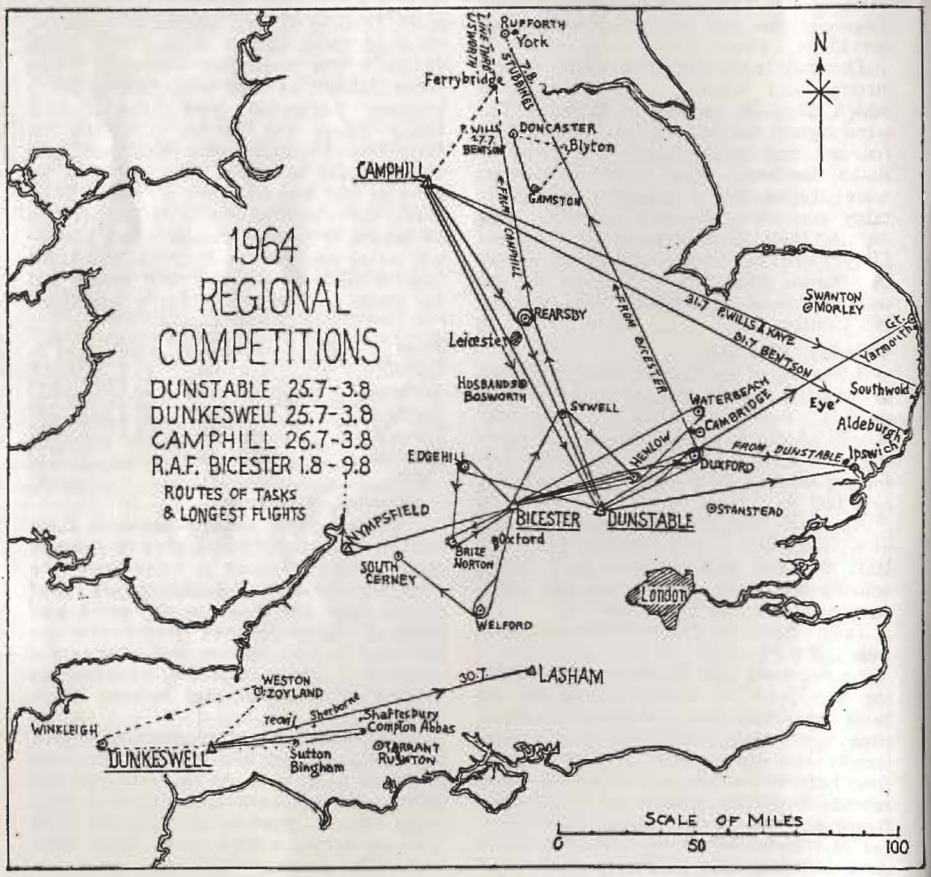
Leading Scores

Pilot	*Sailplane*	*mph*	*Pts.*
Firth	Skl. 3F	50	1,000
Cardiff	Austria	48.05	947
Warminger	Olv. 419	45	867
Rika Harwood	Skl. 3B	43.7	835
Camp	Skl. 3	41.85	790
Philpot	Skl. 3F	41.85	790

Thursday, 30th July

Most of the British Isles lay between two warm fronts. A light westerly airstream with fairly unstable air below 4,500 ft. combined to give good soaring conditions from late morning to early evening. Cloud was less than half cover, and in places thermals were dry.

Yes, only one briefing this morning with lots of exciting titbits. The Northern Regionals to share our finishing line, and the Western Regionals to use us as a turning-point. However, the latter was later changed to a goal race to Lasham. As for our task, it was Out-and-Return to Rearsby (Leicester), 124 miles. $X=15$.





Mick Kaye leads in his Dart after winning the race from Camphill.

No time wasted today. Everybody, including trailers, had left the site well before 1 o'clock, leaving an unusual peace and quiet behind.

Soon after 2 o'clock Humphry Dimock was the first of 20 pilots to round the turning-point, but already we had received various radio messages that things were not as easy as was anticipated. Although most pilots did not find it too difficult to stay airborne, they were spending a lot of time making any headway, and on the whole those pilots who kept high and kept going had a fairly easy time, while for the rest it was hard work.

Just after 4 o'clock we heard John Firth over the radio on his final glide, well ahead again of everybody else, and soon he was sitting with the official observers at the finishing line to watch the next lot of arrivals. Also Philip Wills was heard over the radio on his way to us from Camphill. It was getting quite exciting as more and more pilots were heard in the vicinity, most of them in some sort of trouble.

The most spectacular arrival was Gordon Camp, who really crept in from about 2-3 miles out at a ridiculously low height, and in between shouts from everybody — "Yes, he will" and "No, he won't" — he just managed to get over the finishing line still airborne, height 2 inches. Only 8 pilots plus another 5 from the Northerns made it back to Dunstable. Alf Warminger, who had been in trouble, according to his frequent radio messages, nearly the whole way, did get back, to his great relief, in the end.

Roughly 115 hours were flown from Dunstable alone on this day.

Leading Scores

Pilot	*Sailplane*	*mph*	*Pts.*
Firth	Skl. 3F	33.63	1,000
Cardiff	Austria	27.92	887
Dimock	Skl. 4	25.95	853
Warminger	Oly. 419	22.56	800
Barnett	Skl. 4	22.17	794
Camp	Skl. 3	22.12	793
McMullin	Skl. 3B	21.19	782
Daniels	Skl. 3F	20.35	769

Friday, 31st July

A cold front moved south during the day, accompanied by freshening winds. This cleared Dunstable by mid-afternoon to give good soaring conditions for the rest of the day, even though the winds were 25 knots below 3,000 ft.

This was the only day the organisers probably got cold feet and cancelled the day after three briefings, the last one being at 1 o'clock. The weather improved rapidly soon after, and most pilots rigged quickly so that they could let their crews fly, and Humphry's crew chief got his 5 hours in comfortably. Unfortunately the crew member who was flying the Fauvette damaged it rather badly on landing, and the glider had to be withdrawn from the contest.

Saturday, 1st August

A strong north-westerly airstream covered the British Isles, being unstable to 4,500 ft. and markedly stable above. Rough thermals, mixed with some weak wave activity, occurred in the afternoon, but cloud cover gradually increased to make soaring very difficult by early evening.

There would be another Purple Airway lying across our route, which route we did not know until the second briefing at 12 o'clock. A reasonable forecast was given with rather strong winds above 3,000 ft. Thermals to be moderate, cloud cover 5/8, later 7/8.

Task: Crosswind race to Swanton Morley, 87 miles. $X=20$.

Because of the strong wind, 20-25 knots, it was decided to winch-launch again, but it was soon apparent that something had gone wrong with the forecast. Winds were a lot stronger and also

more across than expected. Thermals were difficult to use and far apart. However, most of the pilots managed to get on their way, but progress was very slow. Unfortunately for those who made good flights in the circumstances, not sufficient people passed 2*X*, and another No Contest day was declared.

Sunday, 2nd August

The winds decreased overnight, and by morning were down to 15 knots at 2,000 ft. A cold front then lay northwest-south-east through the South Midlands, and very slowly edged away south during the day. Dull drizzly conditions gave way to dry but cloudy weather, and the upper cloud never broke sufficiently to give anything more than weak thermals.

After two briefings a task was set to Ipswich via Duxford. Except for one or two bright intervals, the weather never got going, and the task was cancelled later during the day.

Monday, 3rd August

This being the last day, and having had two No Contests in succession, the organisers and pilots were all very keen to finish the competition with a reasonable task if possble, even if it meant that prizegiving would be held at a later date. Pilots were told to come back at 11 o'clock as there was good hope of the weather improving.

The cold front had returned as a warm front overnight, and had moved east of Dunstable by the morning. There was a marked inversion at 3,500 ft. a.s.l., but beneath this it was sufficiently unstable to give moderate thermals during the afternoon. Wind 15-20 knots from the north-west.

Task: Out-and-Return to Duxford, 65.8 miles. $X=15$.

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Pilots who were launched early were soon soaring between 1,200 and 1,800 ft. Slowly conditions improved sufficiently to make everybody dash for the starting line, soon to be back, however, for another go.

Cardiff and Firth were still neck and neck with 77 points between them; both flying extremely well, and everybody was watching them keenly to see what tactics they would use today. After several attempts John Firth was first over the start line at 2.28, followed by John Cardiff 17 minutes later. It was just on 3 o'clock when the first batch of pilots rounded Duxford, and according to radio messages it was rather claggy this side of the turning-point with very little sun coming through, and also there was more of a headwind component to cope with.

The organisers were no doubt biting their fingernails wondering whether they had set the right task and whether anybody would make it back to base. They needed at least 8 pilots to finish, they felt, to justify a really good task. Well, they could not have done better, as 8 pilots swept over the finishing line with George Scarborough, who had flown the task *hors concours*, thrown in for good measure. Unfortunately for John Cardiff he had to land out, making John Firth the overall winner with a good lead.

Leading Scores

Pilot	*Sailplane*	*mph*	*Pts.*
Firth	Skl. 3F	32.80	1,000
Dimock	Skl. 4	26.13	861
Donald	Skl. 3B	26.04	859
Rika Harwood	Skl. 3B	25.91	857
Neilson	Skl. 3B	25.58	851
Barnett	Skl. 4	23.28	811
McMullin	Skl. 3F	22.78	803
Redman	Skl. 4	17.90	745

John Furlong, as President of the London Gliding Club, presented the prizes at 7.30 the same evening, and everybody endorsed heartily his remarks as to what fun it had all been.

Prizes were generously donated by leading members of the Club and by: Gilbey Twiss Ltd., Ronson Products Ltd., Arthur Guinness Son and Co. Ltd., John Murray Publishers Ltd., National Benzole Co. Ltd., W. D. & H. O. Wills Ltd. Subscriptions to *Flight* and *The Aeroplane and Commercial Aviation News* were also popular prizes.

RIKA HARWOOD

FINAL RESULTS: LONDON REGIONALS

Final Place	Pilot(s)	No. of Contest Day and Date 1 25th	2 28th	3 29th	4 30th	5 3rd	Final Points	Comp. No.	Sailplane
1	J. M. Firth	1000	685	1000	1000	1000	4685	317	Skylark 3F
2	J. D. Cardiff	923	1000	947	887	266	4028	272	Std. Austria
3	H. R. Dimock	674	955	683	853	861	4026	228	Skylark 4
4	R. C. Barnett	672	947	693	794	811	3917	81	Skylark 4
5	G. Cornell & C. Donald	640	891	718	540	859	3648	268	Skylark 3B
6	Rika Harwood & H. S. Mettam	610	735	834	558	857	3604	65	Skylark 3B
7	T. A. McMullin	582	661	629	782	803	3457	177	Skylark 3B
8	A. H. Warminger	791	489	867	800	497	3444	44	Olympia 419
9	J. G. B. Daniell & P. R. Philpot	797	646	790	769	329	3331	173	Skylark 3F
10	G. Camp	692	657	790	793	318	3250	9	Skylark 3
11	P. J. Neilson	630	471	669	625	851	3245	101	Skylark 3B
12	M. Denham-Till & C. G. Richardson	918	560	770	558	302	3108	161	Skylark 3F
13	K. G. Wilkinson, R. A. Neaves & J. Ellis	698	540	745	509	— — —	2492	197	Fauvette
14	G. R. Paddick & R. A. Walker	663	492	745	301	240	2441	21	Weihe
15	S. R. Tomlin & A. T. Wilson	560	555	609	403	240	2367	62	Skylark 2
16	P. A. Hearne	560	440	514	274	543	2331	47	Ka-6CR
17	R. Q. Barrett & E. Hull	793	209	763	478	0	2243	214	Skylark 3
18	S. J. Redman	739	551	—	—	745	2035	267	Skylark 4
19	D. W. H. Roberts & D. Lowe	612	0	544	214	420	1790	170	Olympia 2B
20	A. MacDonald & S. Soames	598	0	476	382	114	1561	193	M-100s
21	R. Chesters & C. L. Ryan	149	384	493	76	332	1434	400	Jaskolka
22	Patricia Holmes & R. T. Pollard	0	246	0	255	0	501	219	Ka-7

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

HUIT JOURS D'ANGERS

THIS annual event in France had the usual quota of foreign visitors: from Great Britain, George Burton with a Dart; Germany, Gross, Bucher and Waldenberger, each with a Ka-6, and Loh with a Zugvogel 3; Switzerland, Hachler with an Elfe and Rigazio with a Foka; Belgium, Stouffs with a Ka-6.

The contest was won by Henry, of France, in an Edelweiss with 4,630 pts.; Gross finished second with 4,583 pts. Among 47 competitors, the other visitors had the following final positions: Bucher 7th, Hachler 12th, Waldenberger 13th, Burton 19th (3,343 points), Stouffs 21st, Rigazio 28th, Loh 40th.

Winners of Contest Days:—

1.—156-km. Out-and-Return: Jean-Paul Weiss (France) in Standard Austria, 3 hr. 10 min.; Henry 15th, Burton 18th; 30 completed it.

2.—207-km. Triangle: Henry at 76.7 km/h.; Burton 8th; 43 completed it.

3.—313-km. Triangle: Lacheny (French) in Foka, 4 hr. 24 min.; Henry 2nd, Burton 8th; 28 completed it.

4.—156-km. Triangle: Hachler (Switz.) 63.7 km/h.; Henry 4th, Burton 7th; 32 completed it.

5.—Double Out-and-Return, 190 km.: Gross (Germany) 3 hr. 12 min.; 34 completed it, excluding Burton; Henry 2nd.

The most popular types with the French competitors were: Breguet 901 (11); Breguet 905 (7); M-100 (5); Wassmer 22, Foka and Standard Austria (3 of each).

World Goal Record

by WALLACE A. SCOTT

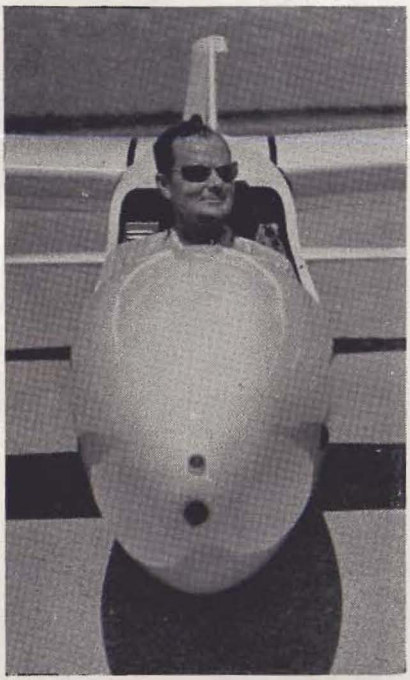


Photo by Alex Aldott

UPON completion of the Nationals at McCook, a lot of pilots were looking forward to the Marfa Records camp, to be held at the Marfa-Alpine airport. This encampment is still in progress at the time of this writing, but some of our pilots are now flying out of Odessa, due to the poorer than usual weather being experienced at Marfa. Some really fine flights are being made from there nevertheless, some reaching near the 500-mile mark, and the shooting isn't over yet.

My family "crew" and I and the Ka-6 went down to Marfa on 17th July to enjoy the mountain flying and good companionship. The pilots were becoming rather restless — those seeking records, as the weather was not co-operating. Many were trying, anyway, and having fun doing it. After flying locally for a few days, and climbing Mount Livermore and old Sawtooth a few times, I too became restless, and early Tuesday morning on 21st July declared a goal to Springfield, Colo. If the weather didn't work out, my plans were to land at Odessa and wait for developments. This I did.

Wednesday, 22nd July gave a promise of perhaps a good flight in the near future. Our favourite weather man, Dave Owens, at the Weather Bureau, thought the next day would hold promise also.

The family and I overslept and did not start moving until after eight the next morning. The skies had a few patches of high residue of some overdevelopment from the preceding night, and scattered patches of cumulus castellatus. This could be good. All of the weather data could not be gathered before about 9 a.m., but I called my friend "Buzz" Hurt to please be on standby for an air-tow about 10, and to be my observer. The wheels got in motion after completing the weather check. Odessa, minus 4 stability. Amarilla a plus one. Zero stability further up the line. The winds were not too promising, but acceptable.

Arriving at the airport at 09.30, my son and I tried to plot a course utilizing the winds. The winds were to be slightly south-east to start with, then further up the line they were predicted to be southerly, and finally to be south-westerly further on. I plotted a curve on the wall map with these winds in mind, picked a general area for my goal, put the string on Al Parker's world goal destination of Great Bend, added about 25 miles to this, then put the string at the general area in mind and it hit Goodland, Kansas, airport on the nose. I planned to fly straight away, forgetting the slight cross-winds as they should average out. As I was making the goal declaration, "Buzz" drove up and signed same. Things were hectic, I had so much to do. Replace radio batteries, and other chores. Buzz helped all he could.

We got to the take-off line, buttoned up and the take-off roll started at 10.02. Buzz headed south to a developing Cu over downtown Odessa, and there was good lift under it. Still below release

altitude, he kept going straight to another Cu, and I released under it at 5,100 a.s.l., about 4½ miles south of the airport. Notching the barograph to 4,900, I went back to the Cu and found about 300 f.p.m. lift. Another Cu was starting over the airport, so after a couple of turns I headed for it. Working this one for a couple of turns, I noticed the Cu further out on course were becoming real nice, and headed for them. Under these I found about 500 f.p.m. and the cloud base to be about 3,000 above ground, or 6,000 a.s.l.

Varying my course from north to 30 degrees and 330 degrees, short climbs were possible to cloud base under now towering Cu's that provided from 400 to 600 f.p.m. lift as I passed 5 miles east of Andrews at 10.45, about 35 miles out. The following winds were helping with the speed, and I guessed them to be about 20 m.p.h. 16 miles due east of Seminole at 11.09, and altitude stayed from 1,800 above ground to 3,500. The ground was never a thought, as the lift was everywhere. Bases began raising slightly. 6 miles due east of Seagraves at 11.20, and the Cu's were getting big. The overdevelopment was outrunning me a little. Over Wellman at 11.31, and the wife and kids were still in radio contact as I called out my positions and times. They left the airport confines about 15 miles behind me. West of Brownfield and at about 8,500 a.s.l. at 11.40.

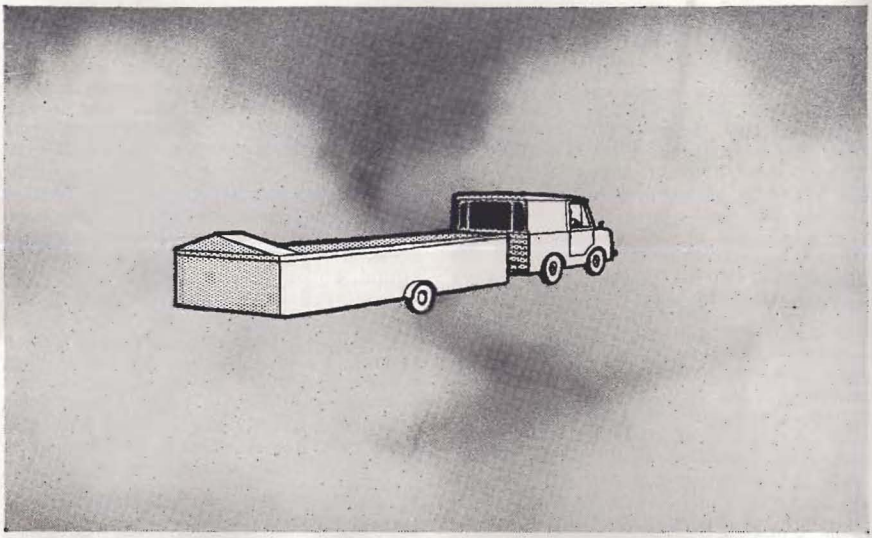
West of Lubbock I came to the last of the big Cu's, and there was a large hole in front of me that stretched for miles and miles. No way to go around to the east, and no way to go around to the west. A few isolated small Cu's were out there on course, so I radioed that I may have to land at Littlefield. I was able to stay respectably high, and was working small Cu's over Littlefield at 12.40. Out of radio contact now, but still reporting my positions. Just spotted and very sparse Cu's now, and still varying course from 330 to 30 to pick up the lift, which was about 300 f.p.m. East of Dimmitt at 13.25, and staying high. Last Cu's of any kind 15 miles east of Hereford, at 13.40. 200 miles away from Odessa, no Cu's ahead, and very little cloud drift in evidence on the ground. Still a big hole ahead, but I could see clouds in the distance, about 65 miles away.

Heading out straight on course, I was soon down to within 1,500 feet of the ground, and the wide and rough Canadian River badlands just ahead. I crossed into this rough country and then headed west, hoping to pick up some lift over the rough ground, but keeping within glide distance of the ploughed fields on the higher ground a couple of miles to the south. Several times I would encounter rough but weak lift, and worked it each time for only a few hundred feet. Finally was able to find 100 to 200 f.p.m. in a small and rough thermal, and worked up to about 8,500 a.s.l.

Heading on course again, things went fairly well until I encountered sink. Oh boy, here comes another thermal! The sink turned into worse sink, 500 f.p.m.,

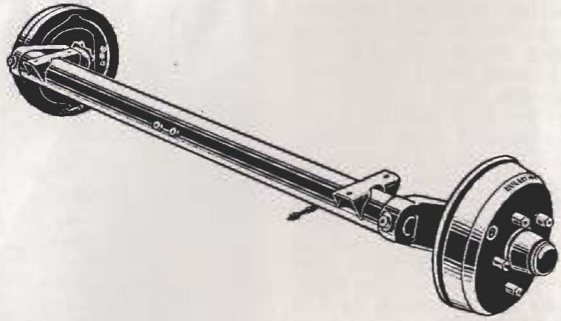


Wallace Scott in his Ka-6.
Photo by Alex Aldott



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then 600 and 800 and finally 1,000 f.p.m. down. Down rather low over the bottom lands, about over the Boys Ranch, I found a very rough one-wing thermal that I talked myself into staying with, and it finally put me high enough to reach a small Cu just to the north. This Cu furnished 300 to 400 f.p.m. and was worked until a larger cloud to the north could be reached. 600 f.p.m. lift to about cloud base. This belt of clouds stretched as far as I could see to the west and to the east, and was also deep in width to the north. Over Stratford at 15.30 and high. Cloud base about 13,500, but very little drift indicated by the shadows on the ground. About 5 to 10 miles per hour, I guessed.

Now I was 300 miles out, had 200 miles to go and could expect little help from the wind. Other conditions were now excellent. Figuring to have about 3 hours of flying time left, I wondered if it were possible to go another 200 miles. This would have to be done on pure speed, fast climbs and holding the airspeed on red line. I started flying straight through the 400 and 500 f.p.m. lift, and worked only the 600 to 800 f.p.m. lift. This lasted for about another hour, then I began leaving the cloud belt behind.

I would have to stay high now, and start working the weaker lift. We were still about 110 miles or so from the goal now, and I began to wonder if it were possible. Stay high, fellow, and start flying. Keep that string centred. Sloppy flying won't get us there.

Now there were only a few "spit curl" type Cu's to head for, and they produced only 200 and 300 f.p.m. lift. Finally, no more Cu's of any kind. A while back I had noticed that some dust devils on the ground gave evidence of stronger winds at the surface. Working the gradually weakening lift up high, I wondered about lowering my altitude to take advantage of the stronger winds down low. I knew I would be able to find 1 metre lift to drift on down there.

No, guess I will stay high, and see about the plans I had been formulating for the past few months. I would try to arrive at my goal with enough altitude to search the air near by, for one last thermal that would put me high enough to overfly the goal and get the big one. This we would do. At last I had the goal in hand, working slowly up to 9,500 a.s.l. on the altimeter, just north of Sharon Springs. Guess I had better go on in and land. Great feeling

Then my hand eases forward on the control stick and I head for the airport. "Hello Goodland radio. This is sailplane 04 Sugar. Come in." "Sailplane 04 Sugar, this is Goodland radio, over." "04 Sugar to Goodland, I am now approaching the south boundary of the Goodland airport. I think I may have set a new sailplane world record and will land at Goodland. Will you please call the airport management and notify them that I will need them to witness my landing." "Roger 04 Sugar, stand by." — "Goodland radio to sailplane 04 Sugar, the airport management has been notified. Are you a two-place sailplane or single-place?" "I am single-place, Goodland, and am now descending through 6,300 a.s.l., circling over the field." "Roger 04 Sugar, you may land on runway one six, etc., etc." "Please get a time hack on my landing, Goodland, and I will land on the southeast runway, in order to be closer to the taxi strip, if that is OK" . . . and down I go.

Accelerometer Readings

THE ordinary panel-mounted accelerometer with maximum and minimum pointers is intended to indicate loads occurring in fairly smoothly-executed manœuvres in flight. The pointers are operated by a mechanism involving weights and springs so that, as a consequence of the natural frequency of this system, it will not indicate accurately the effects of very sudden loads or rapidly repeated loads. For example, after quite a good landing on a reasonably smooth field, it may indicate as much as 6*g*, whilst landings on rough but still acceptable surfaces may give even higher readings. When subjected to other patterns of very rapidly-applied loads, it may either under- or over-read. However, in deliberate manœuvres such as loops, it *will* give accurate indications.

When considering maximum loads imposed by aerobatics, in the context of the recent B.G.A. circular requiring accelerometers to be fitted to two-seaters used for instruction in aerobatics, and single-seaters used for early solo aerobatics, these limitations should be borne in mind. The indication of the maximum pointer should be observed before landing, preferably immediately after performing the manœuvres.

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



THE ART OF COARSE GLIDING



by Mike Bird

THE best way to define Coarse Gliding is by stating what it is not.

It is not as described in *On Being a Bird* or in *The Soaring Pilot* or in films that start off with seagulls and the usual guff about Man's Age-long Dream of Flight.



From reading such books or seeing such films one realizes that there exists a super-race of real glider pilots, known in the trade as Pundits. They own airworthy gliders, launched by serviceable tugs, retrieved by roadworthy cars containing tireless, devoted crews They have infallible radio with a sixty-mile range which they use in brisk military style. They have new batteries; they describe thermals in knots. They really use the J*hn W*lly Calculator.

They understand the Rating System. They are allowed to fly foreign prototypes. Their crashes are forgiven, however serious. Their barograph traces look like shark's teeth. They have swung their compasses. They come out of clouds pointing the right way. They write brilliant accounts of their flights.

As I was saying, the Coarse Glider Pilot is not one of these. The best-sellers of aviation literature are written for, but not by or about, Coarse Pilots. They are the submerged 99% of whom no bard sings.

Coarse Pilots are easy to identify. They can be seen feverishly doing C's. of A. in July. They live always for "the great day" and are never ready when it comes. Their gliders, trailers and cars



. . . and are never ready

show the ravages of time, brutal handling and inspired improvisation. Coarse Pilots sneer at the pompous phrase "sound engineering practice". If the wing fittings begin to get sloppy, bending the pins slightly will restore the feeling of a good push fit. They build trailers in mid-air, so to speak, without plans or jigs. Gap-filling glue was invented for Coarse Pilots. Every coarse-built trailer is different and will sometimes not take a glider of identical make to the one around which it was built. Coarse trailers are often finished on the first day of a contest and may be coming apart on the last. One basically sound trailer for which I was 50% responsible had rather crude doors which, for lack of time to construct anything better, had to be nailed shut and opened with a claw hammer or jemmy. This door fell off repeatedly until one day it disappeared



altogether during a retrieve, which was a great relief. The trailer in question had one white-painted side, green mudguard and fourteen-inch wheel and one grey-painted side, black mudguard and thirteen-inch wheel (the spare from the A35 towcar). If there had been any accidents (which, incredible to relate, there were not), it would have been interesting to hear the witnesses contradicting each other.

National Championships bring out the worst in the Coarse Pilot. He has no hope of winning but is content to have a vicious feud with the pilot who is a few points in front. Simply to see this one rival flop to earth below is pure nectar — it is one of the few occasions on which the Coarse Pilot will break into song as if intoxicated. (The only other occasion is when he is intoxicated.) Asked what is the greatest pleasure in gliding, he says, "Grinding the other fella's face" with disarming honesty.

Pundits go to briefings and appear to understand the weather even when the forecasters don't. The Coarse Pilot stays in bed till eleven, preferring to keep his mind clear and his body rested. He usually remembers to enquire what the task is just as the canopy closes. He'll find out about the weather when he gets up there. As one of them says, "Give him an old Esso road map and a packet of fags and he's happy."

As a matter of fact, 1964 was a real Coarse Pilot's Nationals. Pundits prefer



not to mention 1964 at all, and I believe steps may be taken to expunge the whole ghastly episode from the records, like Russian history.

The really damning case against the Coarse Pilot is that he does not cultivate public opinion either in regard to himself or the gliding movement. A recurring bad dream of a Senior Pundit

must surely be this . . . in the lounge of a four-star hotel he is convincing a Cabinet Minister what a fine, clean-limbed body of men glider-pilots are, worthy of limitless subsidy, when in shambles a gang of scruffy, unshaven oicks, the sort of people who steal locking-wire and never return screwdrivers. Having no sense of occasion they hail our Pundit loudly and ask him what he was doing down in that silly little field. Making ribald references to his last crash, they produce a pack of beer-stained cards and insist that Pundit and Minister join them in a game of five-card stud poker, pot limit £15. Every big hand buys a round of hard liquor. At every opportunity there are allusions to what the Actress said to somebody, which evoke raucous guffaws without fail. An hour later the Minister is cleaned out, cuff-links and all. He declines a generous offer of a lift home in the trailer and departs, leaving our Pundit in tears. Collapse of grandiose million-pound Government plan for gliding, ruin of gliding's image, etc., etc. . .

Bad dream? Heavens, it really will happen one day, and the rotters won't even be sorry.



The Arm-Chair Pilot

by ANTHONY EDWARDS

He that observeth the wind shall not sow ;
And he that regardeth the clouds shall not reap.
ECCLESIASTES, xi, 4.

I HARDLY dare put pen to paper again after the embarrassing amount of space devoted to the title of my last effort (Feb. 1964). Surely not even World Champions find their names in such large type! But, encouraged by the subsequent absence of Inflammatory Correspondence, I thought the following contribution might be acceptable. It can be regarded as the second of a series with the above title, the first being "A Stochastic Cross-Country" (Feb. 1963), whose general aim is to inject some new ideas into cross-country theory without using much in the way of mathematics.

AS is well known, the standard best-speed-to-fly theory makes several simplifying assumptions which are explicitly stated. It is less well known that it makes one or two implicit assumptions, and one of these is that the rate of climb in a thermal is constant. "Nonsense!" you will say, "everybody realises that *average* rates of climb are being considered." But let's take a closer look. Suppose, for the sake of argument, that thermals all stop abruptly at the same height, and that we climb to the top of each. If we are at the top of a thermal (point A in Figure 1), then the general problem is to determine at what speed we should fly in order to arrive at the top of the next thermal, C, as quickly as possible. If we fly at the

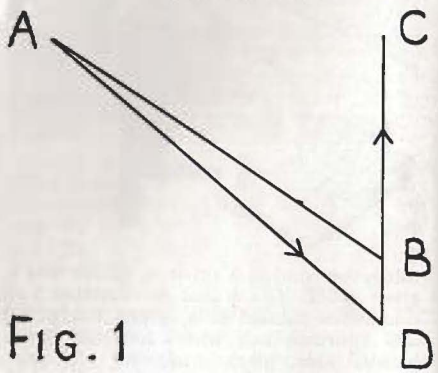


FIG. 1

best-gliding-angle (henceforth abbreviated to B.G.A.) speed, we will arrive at B in the next thermal, and then climb to C. If we fly at any other speed we will arrive lower down, say at D, and pass point B on the way up. Since there is nothing better than the B.G.A., the climb from B to C is mandatory, and our problem reduces to that of finding the speed which makes for the quickest passage from A to B, via some point such as D.

It immediately follows that *the rate of climb from B to C is totally irrelevant*, and bang goes the standard theory. But wait! If the rate of climb from B to C is irrelevant we may give it what value we like for the purpose of calculating the best speed to fly (henceforth B.S.F.). Let's put it equal to the average rate of climb from D to B, for then, DB being a relatively small bit, the "thermal" has practically the same strength all the way up, and we may apply the standard theory, and thus arrive at Rule One:

RULE ONE.—When each thermal is left at the same height, the best speed to fly between thermals is found from the standard theory, but the "average rate of climb" is to be replaced by the "anticipated rate of climb" at the *bottom* of the next thermal.

By "bottom of the next thermal" we mean the bit DB; but since the position of D depends on the speed at which we fly, there is some feed-back in our rule, though not enough to worry about. In our calculation we should not include the low initial rate of climb when centering in the thermal, because that is unfortunately obligatory too.

In practice, thermals fizzle our gradually, and we know that it is wasting time to squeeze the last drop of height from each. Let us therefore suppose that each thermal increases in strength up to a certain height, and then becomes weaker again, as in Figure 2, where the width of the thermal indicates its strength at the corresponding height. Only if conditions are very weak, and our main objective is to stay as high as possible, will we climb to the top of every thermal (Figure 2a). because it is obvious that the time to climb a given height interval is least when the interval is placed in the strongest part of the thermal — to be exact, when the rate of climb on entering the thermal is equal to the rate of climb on leaving (Figure 2b). We may call this the *critical* rate of climb, for we will neglect any lift which is below this strength. As is well known, the critical rate of climb chosen depends upon the excellence of the day. If it is duff, we choose the value zero, snatch at any bit of lift that's going, and fly between thermals at the B.G.A. speed; but if it is good, we choose as high a value as possible consistent with staying airborne (though other considerations will be advanced in a moment).

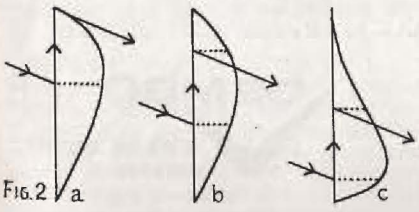


FIG.2

Rule Two is now in the bag: if we fly at the B.G.A. speed we will use the smallest possible height interval in each thermal, but it may pay to fly faster, in which case we will go a little higher and a little lower in each thermal, using bits of thermal of strength fractionally above the critical strength. By exactly the same arguments as before, we arrive at Rule Two:

RULE TWO.—The best speed to fly between thermals is found from the standard theory, but the "average rate of climb" is to be replaced by the chosen "critical rate of climb".

This clearly makes sense: when the critical rate of climb is zero, we fly at the B.G.A. speed, and as the critical rate increases, so the B.S.F. increases. All we need is a well-calibrated variometer (see "Calibrating Variometers" by Nicholas Goodhart, Oct. 1957), and we can throw the stopwatch, integrating variometer and sticky altimeter out of the clear-vision panel (all with the Minister's permission, of course). Apart from the usual assumptions, all we have stipulated is that the lift distribution with height must be unimodal (single-humped). The theory is generally applicable unless it invites us to join each thermal below a safe height, owing to the thermals being strong low down (Figure 2c).

Let us now set off on a cross-country,

armed with Rule Two. Unless we are very skilled at reading the conditions, or are in a desperate hurry, it will be prudent to choose zero as the initial critical rate of climb. After working a few thermals we observe that we are reaching each thermal at a safe height and immediately finding 10 up, so we put the critical rate up to 5 f.p.s., say, and fly at the appropriate B.S.F. If we are lucky we will then find that we are still hitting thermals at a safe height, encountering at least 5 up, but not much more, in which case our critical rate is well-chosen, and we can continue to use it until conditions change. But if we find that leaving each thermal at 5 up makes us arrive uncomfortably low at the next one, or that the initial thermal strength is less than 5 f.p.s., we have been too optimistic, and must reduce our critical rate of climb to 3, say. Flying between thermals, we will, of course, neglect anything weaker than the critical rate, unless the ground gets alarmingly near, in which case we will take the usual precautions.

Given our assumption of unimodality, it is clear that the critical rate of climb will be less than the average rate, so that the B.S.F. will be less than that predicted by the standard theory, although, of course, the average speed has gone up. There are several other good reasons for reducing the currently-accepted B.S.F.: the strongest is the stochastic one, for flying faster than the B.G.A. speed always increases the probability of landing, in addition (as Colin Pennycuick has pointed out to me) to reducing the probability of finding a strong thermal because the area of search is smaller. Also, if the thermals are cloud-marked the lower you arrive, the greater the difficulty in finding the thermal. Finally, we should note that flying faster than the B.G.A. speed means more time spent thermalling, even though it will put up the average speed, and the ensuing increase in fatigue may well decrease the average rate of climb enough to annul the advantage of the strategy.

So choose your critical rate of climb carefully, stick close to Rule Two, and, if in doubt, fly a little slower than the corresponding B.S.F. It need hardly be added that the down between thermals can be taken into account in the normal way.

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Northern Regionals

by BRIAN JEFFERSON

TWENTY-FIVE sailplanes were assembled at Camphill to take part in the contest, competitors coming from as far afield as Portsmouth and Arbroath. For the first time Philip Wills was in direct competition with two of his sons, Christopher and Stephen, all three flying Skylark 4's. Four Darts were entered, two from Coventry, one flown by Jack Tarr from Doncaster and the other by D. M. Kaye, the Chief Flying Instructor at Camphill.

Competitors arriving on Saturday, 25th July, were greeted by grey skies and a fine drizzle which afforded little opportunity or inclination for practice.

SUNDAY, 26TH JULY.—A slow-moving cold front gave prospect of convection later in the day and the task set was a race to Ferrybridge Power Station and return; 69 miles. Most competitors had launches but the lift remained scrappy and no one went away.

MONDAY, 27TH JULY.—A better forecast, with a prospect of convection in the afternoon and waves in the lee of the Pennines later in the day. The task set was distance along a line, Camphill-Rearsby-Usworth. With typical perversity the wave conditions arrived early and most competitors contacted from the hill and left the site at over 3,000 ft. For many pilots it was downhill all the way thereafter to a landing halfway along the first leg. Four machines rounded the turning-point, Philip Wills (106 miles), Chuck Bentson (101 miles), Mick Kaye (52 miles) and John Cochrane (59 miles). The latter part of Philip Wills' flight was carried out in characteristic manner with long periods at heights where most self-respecting pilots have the dive brakes open and the landing field directly ahead.

TUESDAY, 28TH JULY.—The day began unpleasantly with grey skies and a fierce westerly wind. Briefing was delayed and at lunch time the day was declared "No Contest". This did the trick. The skies cleared within an hour, the wind moderated and most competitors spent the afternoon soaring in wave conditions at heights up to 8,400 ft. The task-setters were not to be found.



Gaggle over Camphill.

WEDNESDAY, 29TH JULY.—A complex frontal system lying across the North Midlands produced poor conditions. The task for the day was free distance, but although several machines got away, an insufficient number scored to enable a contest to be declared.

THURSDAY, 30TH JULY.—The forecast gave cloudy conditions both to the west and the east with a prospect of good convection down the centre of the country, so in spite of a fresh westerly breeze, the task declared was a goal race to Dunstable, 111 miles. Once again many competitors found difficulty over the hills and there were a number of landings in the Matlock and Ilkestone areas. Beyond

Derby conditions improved, and five pilots reached the goal. The Dart flown by D. M. Kaye put in a particularly fast time. The speeds were as follows :

D. M. Kaye	28.1 m.p.h.
P. A. Wills	24.5 m.p.h.
C. W. Bentson ...	19.5 m.p.h.
C. Wills	19.4 m.p.h.
C. Green	19.3 m.p.h.

FRIDAY, 31ST JULY.—In spite of gloomy conditions early in the day, Peter Wickham confidently forecast a clearing by early afternoon with reasonable convection to the south-east and a possibility of waves further north. The task set was free distance. Most competitors were launched and left the site between 2 and 3 p.m., and everyone beat X by a handsome margin. Best flights, all finishing on the Suffolk coast, were :

C. W. Bentson, 162 miles.

P. A. Wills and D. M. Kaye (in the same field), 160 miles.

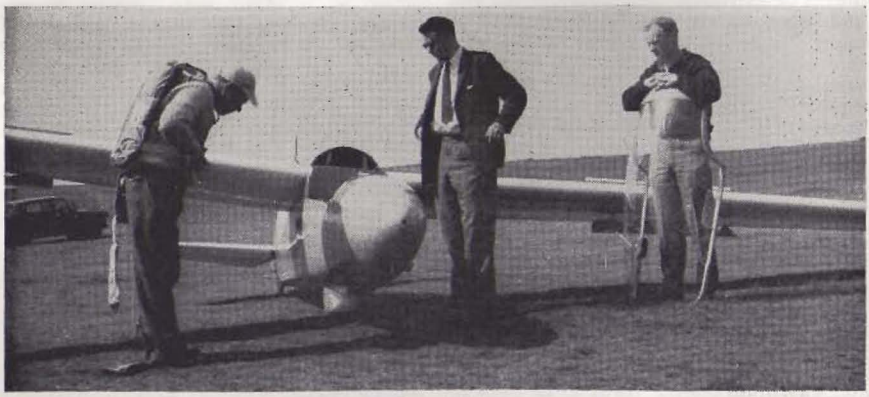
SATURDAY, 1ST AUGUST.—No contest.

SUNDAY, 2ND AUGUST.—Eight-eighths cloud for the second day in succession combined with a forecast of much better conditions to the east provoked a snap decision to move to Doncaster. Most competitors assembled for briefing at 1.30 p.m. although the day had previously been declared outside the competition proper. The task was a 56-mile triangle, Doncaster-Gamston-Blyton. Conditions remained poor, however, and only three or four pilots managed to reach the first turning point. The day's prize might well have been awarded to the winch crew, who did a magnificent job in getting the two mighty two-drum winches 35 miles over the hills in time for the first launch at Doncaster at 2 p.m.

MONDAY, 3RD AUGUST.—The task set was a race to Husbands Bosworth airfield, 67 miles. Wave conditions were apparent when the first competitor (Tom Smith) took off at 11 a.m. He promptly disappeared into cloud off the winch launch and was not seen again. After a further three competitors had vanished under similar conditions, launching was suspended and Philip Wills dispatched to report conditions over the radio. Those left sat huddled under low cloud listening to Philip's glowing description of the sunlit cloudscape at 8,000 ft. over Chatsworth.

The sky cleared by lunch time and there was enough wave remaining to see most competitors away at over 5,000 ft. Once again everyone scored, but the only arrivals at Husbands Bosworth were two of the Wills — Philip and Christopher. Mick Kaye and Ivor Tarver landed only two miles short.

So Philip Wills retains the Peak Trophy which he had also won at the Northerns at Sutton Bank during the previous year. Special mention must also be made of the excellent performances put up by D. M. Kaye and C. Bentson.



Not to worry about his canopy it's perfectly transparent and quite free from distortion.

FINAL RESULTS: NORTHERN REGIONALS

Final Place	Pilot(s)	Contest Day 1	2	3	4	Total Points	Sailplane
1	P. A. Wills	1000	865	909	1000	3774	Skylark 4
2	D. M. Kaye	454	1000	1000	846	3300	Dart
3	C. W. Bentson	959	815	925	180	2879	Skylark 4
4	C. Wills and J. N. Cochrane	498	814	393	907	2612	Skylark 3F
5	A. L. L. Alexander and G. R. Whitfield	137	428	515	743	1823	Olympia 460
6	J. Findon and R. Tarver	347	81	342	845	1616	Dart
7	K. Blake	143	412	372	642	1569	Olympia 460
8	D. Darbishire and S. B. Wills	209	457	471	327	1474	Olympia 460
9	C. Green	0	894	515	37	1446	Olympia 460
10	G. Glennie	286	429	396	—	1111	Skylark 2
11	S. F. E. Wills	147	110	41	711	1009	Skylark 4
12	A. Watson	0	385	40	574	999	Ka-6
13	J. Iceton and M. Wilson	107	540	126	204	977	Olympia 2
14	J. Blackmore	0	130	127	592	849	Olympia 2
15	D. Crabb and G. Crabb	0	125	199	493	817	Skylark 4
16	J. Riddall and V. Wright	68	0	475	261	804	Olympia 2
17	T Smith	62	254	110	351	787	Olympia 460
18	M. Seth-Smith	0	0	120	644	764	Olympia 460
19	A. H. Baynes	149	19	110	430	708	Skylark 3B
20	J. Everitt	0	0	167	458	625	Capstan
21	M. Bagnell and W. Fay	0	0	229	392	621	Dart
22	B. Fisher and F. Knipe	0	0	121	484	605	Skylark 2
23	D. Johnson and W. Malpas	0	0	359	—	359	Sky
24	J. Tarr and J. Bower	31	0	177	12	220	Dart
25	P. Grime	0	91	84	—	175	Skylark 1

SERVICE TROPHIES AT THE NATIONALS

SIMULTANEOUSLY with the National Championships, the usual Royal Air Force Championships and Inter-Service Championships, Individual and Team, were held. In the latter, only the R.A.F. and Army competed; the Royal Navy was not represented. At the prizegiving, the following Trophies were presented by Sir Roy Dobson:—

McEvoy Trophy.—Flight Lieut. R. A. E. Dunn, winner of R.A.F. Individual Championship.

Emmott Trophy.—Flight Lieut. R. A. E. Dunn, winner of Inter-Services Individual Championship.

Roderick Salmon Trophy.—Royal Air Force, winner of Inter-Services Team Championship. Team captain: Air Commodore N. W. Kearon; Pilots: Flt. Lt. R. A. E. Dunn, Sqn. Ldr. J. D. Spottiswood, Flt. Sgt. A. W. Gough.

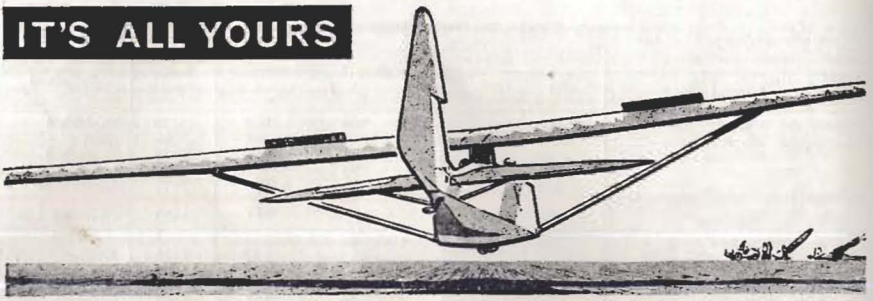
Tinsley Trophy.—Wing Cdr. J. G. Croshaw, best R.A.F. pilot in League 2.

PRACTICE WEEK FOR THE NATIONALS

THE table of results for the week's practice period before the National Championships, published in the August issue on page 251, with columns for "Final Position" and "Total Points", may have given the impression that this was an officially recognized competition.

It should be pointed out that many pilots, both R.A.F. and civilian, regarded it merely as an opportunity for practice and were not necessarily trying to win each task; in fact, some of the tasks were deliberately missed, the pilots preferring to make flights of other kinds than those set.

IT'S ALL YOURS



THERE is a tendency to instruct in a rigid manner, laying down rules and procedures without explaining the reason behind them. For example, pupils are made to do a cockpit check, and see that the controls work properly, as part of the ritual before take-off. It probably seems inconceivable to them that the controls could not work, and they do this part of the exercise in a reluctant or, at the best, routine frame of mind. It must seem peculiar to them; when they learnt to drive a car, no one made them pre-twiddle the steering wheel to see if it moved the front wheels the right way.

To those who have been involved in flying for some time, the outlook is quite different. One has read, or been told about, or seen, many incidents when the controls were wrongly connected — the Schneider Trophy racer, and the Tudor whose ailerons worked the wrong way, and the D.C.3. which, with a pilot of 28,000 hours' experience, took off with the elevator locked, and many other stories of light aircraft, wartime, or gliding incidents.

When we ourselves fail to do this check properly, conscience strikes, not because we have broken a rule, but because we have failed to take what we know to be a sensible precaution.

It is not suggested that part of a pilot's training should consist of listening to lurid descriptions of the accidents which have taken place, but I do feel that describing a few incidents in detail to show the reason behind some of the present practices is well worth while.

The instructor must remember that he is trying not only to teach the pupil to use his hands to manipulate a glider in a particular way, but also to distil into his brain the essence of sixty years of aeronautical experience. It is this experience which has, of course, led to our present rules and customs, many of which may seem meaningless if the reason for them is not understood.

Quite a large proportion of ordinary glider flying is procedural, in contrast to handling and the development of judgment. To the new pilot it is this handling, and the improvements in flying which come from practice, which give pleasure and satisfaction. It is the procedural aspects which are less interesting and which tend to be ignored, particularly by the young and impatient pilot. It is essential, therefore, that such things as cockpit check, and pre-flight preparation, keeping a good look-out and learning to *see* other aircraft, planning the circuit and approach, even learning the rules of the air, are made realistic, and effective and interesting reasons for learning them properly are given.

The procedural side of flying should never be allowed to degenerate into a series of rules which have to be obeyed without reason. The instructor should make it an integral part of training, in which as much intelligence and imagination is required as in piloting.

ANN WELCH

EXCERPT FROM SAFETY PANEL CIRCULAR

Collision

Two Skylarks thermalling in clear air have been involved in a collision although each was aware of the other's presence. In spite of substantial damage to both the aircraft the pilots survived.

Are all *your* pilots aware of this, the greatest danger in gliding?

Accidents at the Launch Point

Recently there have been two accidents involving gliders just at the start

of their launch. In one the glider swung and struck an object which was behind the tip with the glider pointing in its original direction, and in the second the signaller was struck by the glider although initially he was well clear of the tip.

Another incident which could have been serious occurred when the cable, fitted with a drogue with one panel damaged, became detached from the glider at the start of a launch. The winch did not stop immediately and the drogue dragged the cable across the landing area taking a path approximately at 45° to the line of launch. During this process the cable passed underneath a glider which had landed 100 yards to one side and 100 yards ahead of the launch point, luckily without catching.

It would appear that even more care must be exercised at launch points if repetition of these accidents is to be avoided. What may have appeared in the past to be a safe clearance may not necessarily be so.

PAUL MINTON,
Chairman, Safety Panel

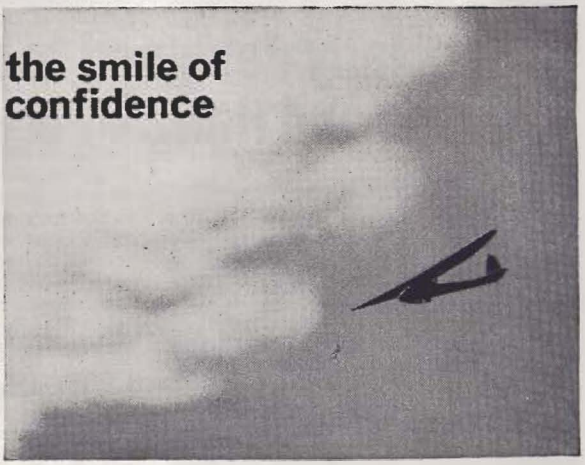
WILLS SCHOLARSHIPS

Wills Scholarships have been awarded so far this year to:

Pilot	*Club*
J. E. Baker	Northamptonshire
E. R. Boyle	Derby and Lancs.
B. G. Brown	Northamptonshire
J. W. Coulsey	Ouse
A. J. R. Deacon	B.E.A. Silver Wing
D. A. Gunn	Derby and Lancs.
B. Keogh	Swindon
A. Mells	Crown Agents
K. E. Panton	Norfolk
J. A. Sangster	B.E.A. Silver Wing
W. E. Sheppard	West Wales
T. Smallwood	Yorkshire
J. H. Turner	Southdown
Valerie Wyels	Scottish

W. D. & H. O. Wills have generously allowed the Instructors' Panel to use part of the Scholarship money to assist instructors of new or small clubs to help pay for qualifying courses. This is a very real contribution to overcoming the difficulty many new clubs have in obtaining an instructor.

ANN WELCH

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First Competition Experiences

by JOHN FIRTH

The author, winner of the Regional Contests at Dunstable, finished first in three out of the four races set. He has since broken the 200 k.m. triangle speed record at 44.33 m.p.h.

I HAVE always had a tendency, sometimes resulting in a dice, to prove that I can do as well as other people. For this they still remember me at Nympsfield. My early progress was not unduly retarded, thanks to a tolerant C.F.I., a good deal of luck, and, I suppose, some innate ability; a more conservative approach is to be recommended.

My enthusiasm for surveying new territory was fostered at Cambridge by the Club Ladder, with a pot at the end of the year for the most cross-country points.

This year, a week's holiday with four good soaring days, and the advantages of our Syndicate Skylark 3F, gave me 850 km. of cross-country flying, with a Gold C and Diamond to Moreton-in-the-Marsh (via Norwich). The airfield was covered with grass of a length and strength which would have put any cornfield to shame; luckily a bit had been cut. My nicely calculated final glide nearly failed: at 2,000 ft. I noticed that the "Marsh" is 450 ft. a.s.l.

With all this, and a few more closed circuits, I was at least in good practice.

At first briefing we were all pleased to have a task. Mike Garrod produced moderate thermals, and we all surged out to the starting board. "I'll see where the pundits put their tags and go a bit before," I thought. However, "317" came out first and, flustered, I selected an arbitrary time and went off to make chinagraph marks on my Fablon-covered map. I decided not to try to go too fast, and reckoned that nearly two hours would be needed for the task. One always gets a reasonable score if one arrives!

I set off soon after launch, hearing lots of people on their way already. The weather, contrary as ever, turned out to be really good; dutifully following the MacCready ring (set at four knots), I breezed along without getting into trouble, encouraged by passing one or two people on the way. Ipswich appeared in due course, and only four gliders were there; asked my time, I couldn't remember, but estimated 1 hr. 35 mins. or so, which seemed a good average so far. Gliders continued to arrive monotonously, followed by trailers; the evening wore on, the bar was still closed and everyone had left but me. Eventually my crew arrived, having taken, as directed, a middle route through Essex which was both tortuous and popular. After revealing some of the mysteries of gliding in the Ipswich Flying Club bar, we toiled home and, some time after midnight in the deserted briefing tent, inspected the score sheet. Incredible! I'd won.

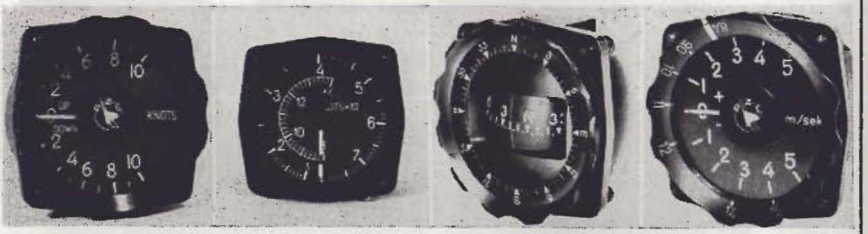
Next day, with cloud base low, it seemed wise to play safe and scrape along slowly in the patches of sun amid the clamp. At the turning-point no one was before me, so I continued equally slowly back till the day died, and glided it out into a ploughed field which revealed, from a few feet up, clay lumps of boulder proportions. The fuselage protested loudly, but only burst a bit of skin. The twenty assorted boys who arrived, we organised into a centipede act with the



John Firth in his Skylark 3.

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centre section. Home again, we found no one else had reached the turning-point, so this was a no-contest day.

Briton fought Briton at Edgehill; this day we fought just to get there. I forsook the circus over Leighton Buzzard, crept north to the sun, and gyrated endlessly in the blue, gazing with envy at the imperious wave clouds above. Brackley, wave and peace to 4,700 ft., when the wave clouds mysteriously melted away. My crew, mishearing a radio message, set off back to Dunstable.

Yarmouth has always had a hoodoo for me; I've tried to go there four times and still haven't been. I went off in great style in 6-kt. thermals, knowing John Cardiff in the Austria would move fast. Around Newmarket it suddenly got difficult; I was scraping like mad at 1,000 ft. and thence, for the rest of the afternoon, got lost on my home ground, thermalled out to sea, and crabbed north up the coast to Ponting's at Pakefield. The manager told Control the glider had just missed his canteen full of people, and a lot more besides. Avoid holiday camps.

We all groaned slightly at hearing Ipswich again, but it proved to be a good task, as it clamped at Dunstable in the early afternoon. The task turned out to be quite straightforward till the final glide, when I twice had to stop and take another 500 ft., and even then crept weak-kneed over the power station and the finish, turned round and landed — downwind. A simple failure to notice the sea breeze.

Mike Garrod said Thursday was going to be a real soaring day; there was much laughter (some nervous) when we were told the Camphills were coming, Dunkeswell were passing through, and we were to have an out-and-return to Rearsby. It wasn't quite Bank Holiday traffic, but there would be a lot of people around! Estimating four hours' flying, I tried to stay high and upwind of track. Clouds streeted across the track, and so did the thermals in the blue patch which gave most people a lot of trouble. The final glide with a generous safety margin was very satisfying; so was finding no one else back. I relaxed at the finish to watch the fun, hoping for them all to come back. Gordon Camp gave a masterly demonstration of local knowledge and low-speed contour-flying to creep over the line still airborne. John Daniels disappeared behind the hill circling, and then reappeared at a less alarming height. Several of the Top People arrived from Camphill. A remark of Chuck Bentson's was passed on to me; on being told that an unknown called Firth was winning nearly every day, he said: "Ah, I expect he is too inexperienced to know how difficult it is."

Still 80 points behind John Cardiff, I prayed for a marginal day to ditch that speedy Austria. We had three of them; all so marginal they ditched everyone.

Last day, 100 km. out-and-return, with low cloud base, and later, strong, tight, brief thermals. Everyone waited for cloud base to lift; I expected a small pack on my heels as soon as I left. It was. Rika flew very well and was right behind me in every thermal. A diversion to the north and no one followed. I dashed hastily round the turning point under clamp where a gaggle slowly climbed. There was an appearance of togetherness; "we'll all sink together if we sink," seemed to be the idea. A non-subscriber, I went back to the sun and steadily home, with a splendid cloud street to pep up the final glide to 80 kts. It was with mixed feelings that I heard the Austria was down; it would have been more satisfactory to have won on speed alone.

Overall, several things struck me: few people get the most out of the core of a thermal, and The Line has a hypnotic and restricting effect. John Cardiff obviously knows how to handle an Austria, and I still have a great deal to learn.

The whole organisation was excellent, and my crew made up in enthusiasm for what they lacked in experience!

One could hardly have a more satisfactory first competition.

Western Regionals

TWENTY-FOUR sailplanes with 42 pilots took part in the Devon and Somerset Club's Western Regional Competition. About a dozen clubs were represented, including the Dublin Club, from which Mike Slazenger brought an Olympia 419. The Army was represented by Ted Stark with a Dart. Two-seaters included a Bocian from Cranfield and an Eagle shared by the Creases, father and son (aged 19).

SATURDAY, 25TH JULY, proved a good contest day after the official opening by Marshal of the R.A.F. Sir John Slessor. The task was out-and-return to Sutton Bingham reservoir, near Yeovil, and back. It was not completed, but Peter Ibberson and Brennig James were joint winners with the longest distance, each in a Skylark 3. Ted Stark won 911 points with the Dart. James had reached Sherborne at 500 ft., got 6 knots up, but again sunk to 500 ft. and had to land.

Free distance was the task for SUNDAY, 26TH. D. J. Cunningham, of Coventry, went 83 miles in a Skylark 4, J. Heeson, of Lasham, 73 miles, Gardner, of the home club, 62 miles and Mike Hunt, of Coventry, 39; but as no one else scored it was not a contest day.

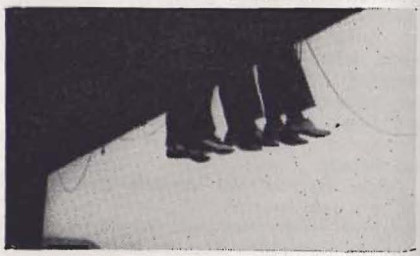
Another out-and-return was set for MONDAY, 27TH, with Compton Abbas as turning-point. It was reached by 19 competitors, but then all came down within 15 miles of it, due to weak thermals and contrary wind. Mike Hunt, of Coventry, did best and Brennig James was second with 945 points; at one period these two were hill-soaring together for more than an hour. John Brenner in the Cambridge Olympia 2 was third with 921 points.

After two days' bad weather, THURSDAY, 30TH brought the best day of all, with a strong west wind following a cold front. A race to Dunstable, 135 miles, was proposed, but on inquiry by 'phone it was found that the Camphill competitors were also racing to Dunstable, and on top of that the Dunstable competitors would be returning there after rounding a turning-point near Leicester. So at Dunkeswell it was decided to make Dunstable a turning-point instead of a goal, to avoid congestion, but later the task was changed to a race to Lasham, 100 miles. In the event there was no overcrowding at Dunstable, as only five pilots got there from Camphill and eight completed the out-and-return.

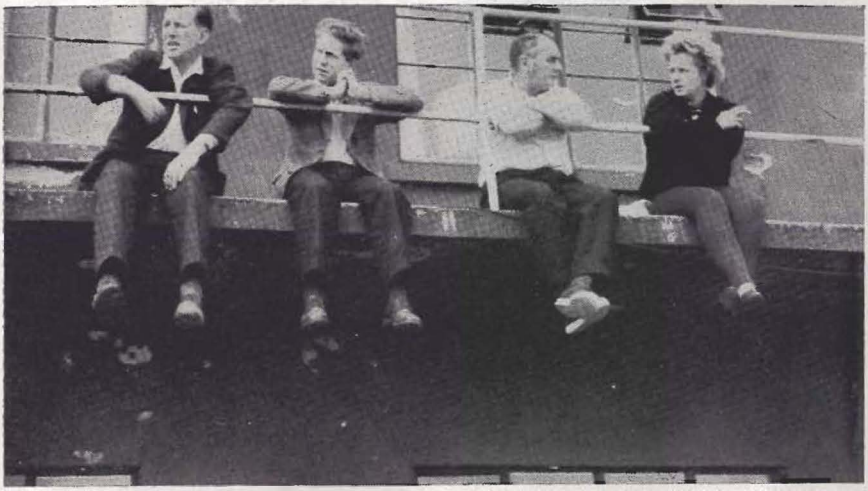
Briefing was at 9.15 a.m. and all 23 pilots competing had left the site by 10.45. Sixteen reached Lasham, arriving at various times between 1 and 4 p.m., though most were there by 2.30.

Mike Smith, of Coventry, in a Skylark 4, made the best speed, 36.1 m.p.h. He found the going straightforward except for one cloudless blue patch about 10 miles across which everyone met on the journey. John Ashford, of Imperial College, in a Skylark 4, averaged 33.6 m.p.h. and Ron Willbie, of Surrey Club, 30.6 in a Skylark 3B. Brennig James reported 4-knot thermals at 10.30 a.m., 6 knots at 11.30, and a ceiling at 2,000 ft. above take-off (820 ft.). He and Ted Stark had to come down at Shaftesbury. Three did not get away; high cloud had come over by the time one of them, Tony Crease, was launched.

I had intended to arrive at the Club this day, but there seemed no point in leaving Dunstable when competitors from all three Regionals were flying towards it. So I arrived instead on Friday evening, dodging various machines which were coming in low over



Competition legs. For owners see opposite page.



Sitting and thinking or just sitting? L. to r.: John Fielden, Nigel Stevenson, Ken O'Riley and Mary Brighton.

the perimeter track after a bout of slope-soaring. It had been a no contest day.

SATURDAY, 1ST AUGUST brought an opportunity to see John Fielden in action — taking the briefing, doing the met. briefing as well, setting a most ingenious task on a day which any other task-setter would regard as hopeless, and telling competitors just how it could be flown.

With a 15-knot wind from N.W. and an inversion at 2,000 ft., waves were to be expected, though at the moment cloud base was impossibly low. But he had taken off in his Tiger Moth under a strato-cumulus overcast and found a slit in the cloud layer to the lee of Exmoor, denoting a wave trough. If cloud base rose as expected during the morning, this slit should expand into a big gap into which all the competitors could be launched. They would then soar E.N.E. along this Exmoor lee wave to Weston Zoyland (22 miles N.E. of Dunkeswell); then back along the wave W.S.W., past the release point and on to Winkleigh, 49 miles for the whole "leg"; after which it should be possible from 4,000 ft. at Winkleigh to glide downwind back to Dunkeswell, 32 miles due E. The task was therefore a triangle via Weston Zoyland and Winkleigh, all in wave lift.

At a second briefing at 11.45 Fielden reported a further Tiger Moth tour; at the gap to the north, cloud base was 800 ft. above Dunkeswell, the top of the wave cloud was 2,500 ft., the Tiger could just hold height in this wave while ticking over, wave lift went up to 6,000 ft., there were more clear bands of sunshine (wave troughs) in the lee of Dartmoor by Torquay, and there were also lenticular clouds far overhead beyond Taunton. But the Exmoor gap obstinately refused to widen; at 2 p.m. it was still not big enough to launch



everyone through it, and on a final aerial tour at 3 p.m. Fielden found that cloudbase had descended to 600 ft. west of Cullompton, so the task was cancelled.

This must be the first time a task has been set and planned for the deliberate use of waves in the absence of other lift. One day, perhaps, John Fielden will set a task for Distance along a Sea Breeze Front.

On SUNDAY, 2ND AUGUST the cold front had returned as a warm one and cloudbase was 300 ft. above the airfield. Fielden's usual aerial reconnaisance showed solid overcast to the west, but the Exmoor gap was still there though wave-lengths were now 7 miles as against yesterday's 2 miles. However, the weather was clearer over the Somerset Plain, though clouds were sitting on the Mendips. Hope of setting yesterday's task again was eventually abandoned.

After hearing all this, I had to leave for home, so the story must stop here as a promised account of the whole meeting has not yet turned up, nor has the table of final results. There had been three contest days, and the leading totals were:—

1. S. Neumann & J. Brenner - 2,377
2. P. Ibberson - - - - - - 2,367
3. M. Smith & D. Cunningham - 2,343
4. R. Willbie & O'Riley - - - 2,158
5. C. Duthy-James & M. Hunt - 2,120
6. D. B. James - - - - - - 2,051
7. Martin & Simpson - - - - 1,957
8. Chubb & Breeze - - - - - 1,912

A 'phone call on MONDAY, 3RD AUGUST, the final day, brought the information that a Pilot-Selected Goal had been set. Most people had covered about 45 miles to the Tarrant Rushton region, and Brennig James had gone further on to a point south of Shaftesbury. John Brenner was still leading.

A. E. SLATER

Surrey Gliding Club

announces that its fleet now comprises

TWO SKYLARK 4's

TWO SKYLARK 3F's

FOUR SKYLARK 2's

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LASHAM GLIDING CENTRE

The German Nationals

A short summary of the final results of this year's National Championships in West Germany was given in the August issue (p. 338-9), where Heinz Huth was announced as winner for the 6th time in the Standard Class, among 51 entries, and the Open Class, with 12 entries, was unexpectedly won by a young student from Darmstadt, Gehrhard Waibel, who was not only flying in a competition for the first time but designed and built the machine he flew, in conjunction with a fellow-student, Wolf Lemke.

Sailplane types entered were:—

OPEN CLASS: five Zugvogel 3, two Phönix (plastic), one each of HKS-3 (variable camber), Geier 2, Waibel's D-36V1, and two Ka-6's to replace a Geier 2 and a D-36V2 which had been originally entered.

STANDARD CLASS: 42 Ka-6 (BR and CR), two Ka-10 (improved Ka-6), two Zugvogel 4, one each of Standard Austria, Phoebus (15-metre version of Phönix), Scheibe SF-27, Edelweiss (French visitor), Vasama, and an SF-26 which replaced a Ka-6 crashed during the meeting.

(It is noteworthy that on the third contest day, when two machines were badly damaged on landing, the pilot of one, Auer, could take no further part, but H. Römer was allowed to replace his Ka-6BR with an SF-26 lent him by W. Römer — presumably a relative.—Ed.)

There were 8 Contest Days.

MAY 17TH—337-km. Triangle. Blue thermals; inversion at 4,500 ft.; cirrus came over in the afternoon and covered 7/8 of the sky by 3 p.m., so none completed the course. Longest distances were the same in each class: 301.9 km. each by Huth in the Standard and Hezel in the Open; Waibel was not among the first three.

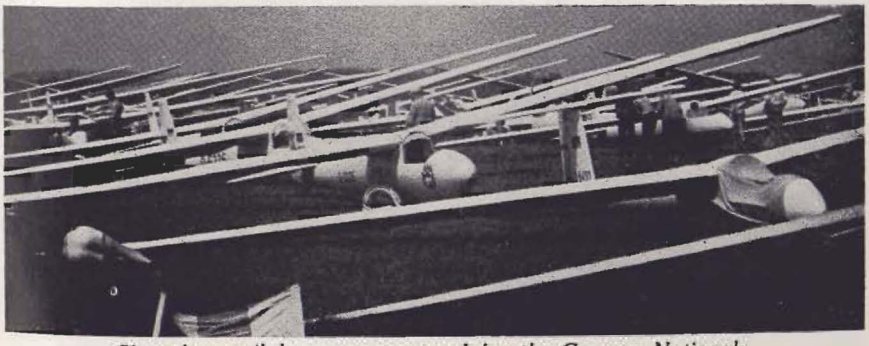
MAY 18TH—132-km. Triangle. A little cumulus, but 5-7/8 cirrus all day. All but three got round; fastest speeds: Linder (Phoebus) 73.8 km/h. in Standard; Spänig (Zugvogel 3) 72.3 km/h. in Open; Huth 4th in Standard, Waibel 2nd in Open.

Then two days of bad weather.

MAY 21ST—Goal-and-Return, 247 km. Much Cu and Strato-cu, spoiling the thermals; 16 got there, none got back. Best distances: Schäuble (Ka-6), 236 km. in Standard; Waibel 226 km. in Open.

MAY 22ND—304-km. Triangle. Cu up to 4/8; weak winds. All but five got round. Best speeds: Spänig 75.3 km/h. in Open (Waibel 3rd); Huth 74.5 km/h. in Standard.

MAY 23RD—105.5-km. Triangle. Almost cloudless; wind increasing to 20 kt. at 1,000-3,000 ft.; 42 out of 61 got round and 15 had a second try without success. Best Speeds: Waibel in Open, 55.1 km/h.; Huth in Standard, 53.3 km/h.



Sixty-three sailplanes were entered for the German Nationals.
Photo by Paul Krekel

MAY 24TH—Goal-and-Return, 156 km. Wind 20-30 kt. Of 61 competitors 58 got there and 49 got back. Best speeds: Kuntz (HKS-3) 57.4 km/h. in Open, Pietsch (Ka-6 CR) 56.2 km/h. in Standard. Waibel 3rd in Open, Huth 2nd in Standard.

MAY 25TH—Goal-and-Return, 166 km. Wind 25 kt. at first, decreasing. 60 got there, 58 got back. Best speeds: Waibel 88.4 km/h. in Open, Laur (Ka-6) 82.6 km/h. in Standard, with Huth 2nd at 82.4 km/h.

MAY 28TH—372-km. Triangle. Strato-cu on 1st leg, then showers producing low cloud base over the mountainous Alb region; showers became thundery in afternoon. Nobody completed the task; best distances: K. Fischer (Ka-6P) 320 km. in Standard; Schneider (Ka-6) 295 km. in Open.

Next day, the last: briefing postponed, then 266-km. task set, then task reduced, then cancelled.

Commenting on the instruments in the sailplanes, Paul Krekel writes that most of them had three variometers, and all at least two, mostly one with ±1 m/s. range and one with ±5 m/s.; 26 had a MacCready ring. About 25 had an electrical variometer, mostly the Crossfell and mostly with acoustic fitting.

The Standard Class were allowed radio, and those who turned up without it were lent sets by the Becker and Dittel firms.

Ten Do-27 tugs were lent by the armed forces (*Bundeswehr*), and each carried not only a pilot but also an "airspace observer".

The site was Roth military airfield near Nuremberg, and about 140 people were accommodated in tents.

Performance Polars

The following are the first Polar Curves checked by the Sub-Committee set up by the Magazine Committee for categorising Polar Curves in order of reliability.

The preliminary comments of this Sub-Committee were published on page 118, April issue, SAILPLANE AND GLIDING, *to which please refer for definitions of categories.*

FOUR polars are being published this month, namely those of the

Sky	Slingsby Sailplanes Ltd.
Skylark 2	Slingsby Sailplanes Ltd.
Skylark 3	Slingsby Sailplanes Ltd.
Ka-6CR	Schleicher Segelflugzeugbau

The Sky and Skylark 2 curves were both obtained from K. E. Machin, and include error bands. There is a 95% chance that the true values of sink lie within these bands. Both curves are reliable and are given "A" Categories.

The Skylark 3 and Ka-6CR curves are from a recent series of performance tests in Germany by H. J. Merklein and H. Zacher. These were amongst a number of Polar Curves published in a special supplement in the December 1963 and January 1964 issues of the DEUTSCHER AEROKURIER.

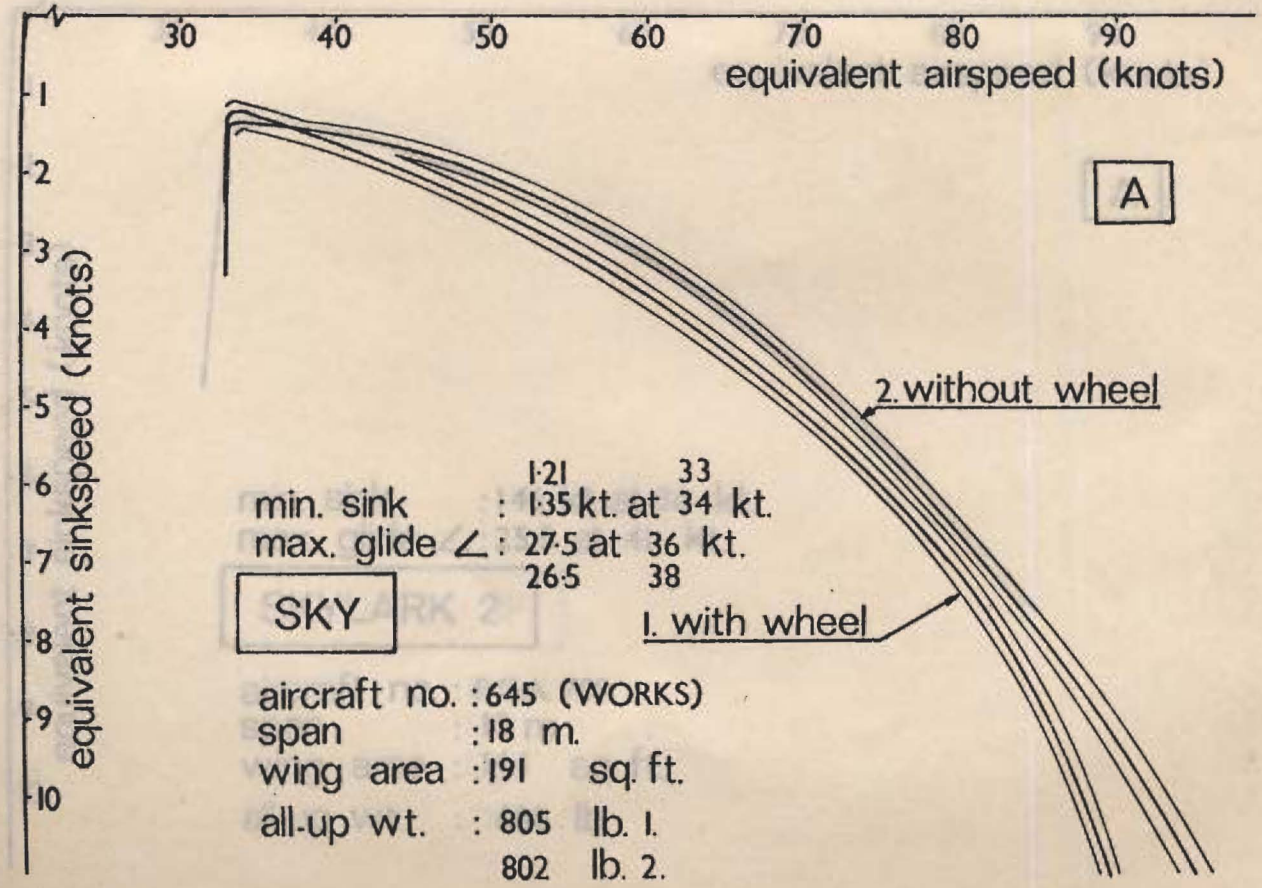
Although no error band is included with either of these polars, both are reliable and obtain "A" Categories. It is likely that the Ka-6CR polar is the more reliable of the two as considerably more flight test points were obtained for its evaluation.

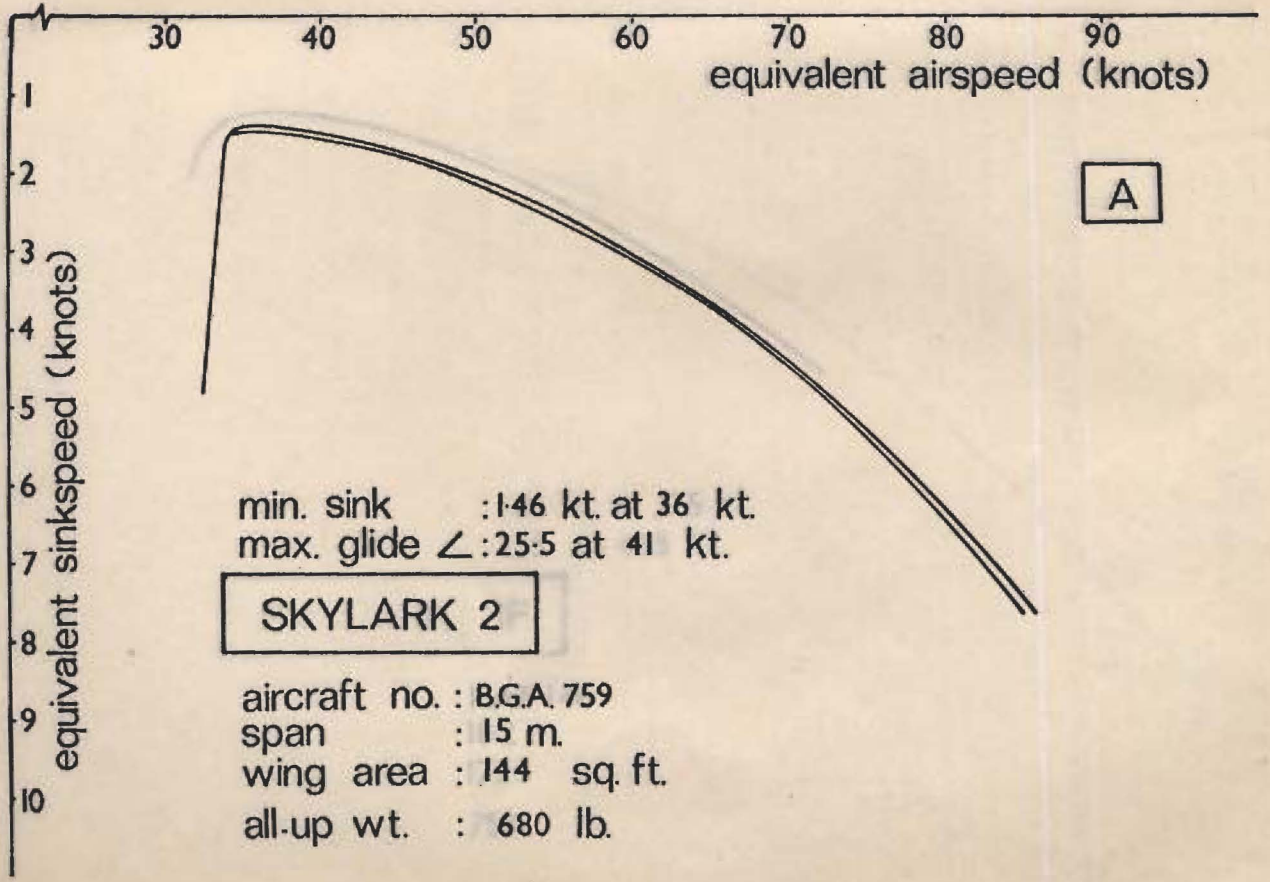
The scale of the polars is such that if a sheet of cm. graph paper is placed behind the polars, accurate, direct readings may be obtained for any equivalent air speed.

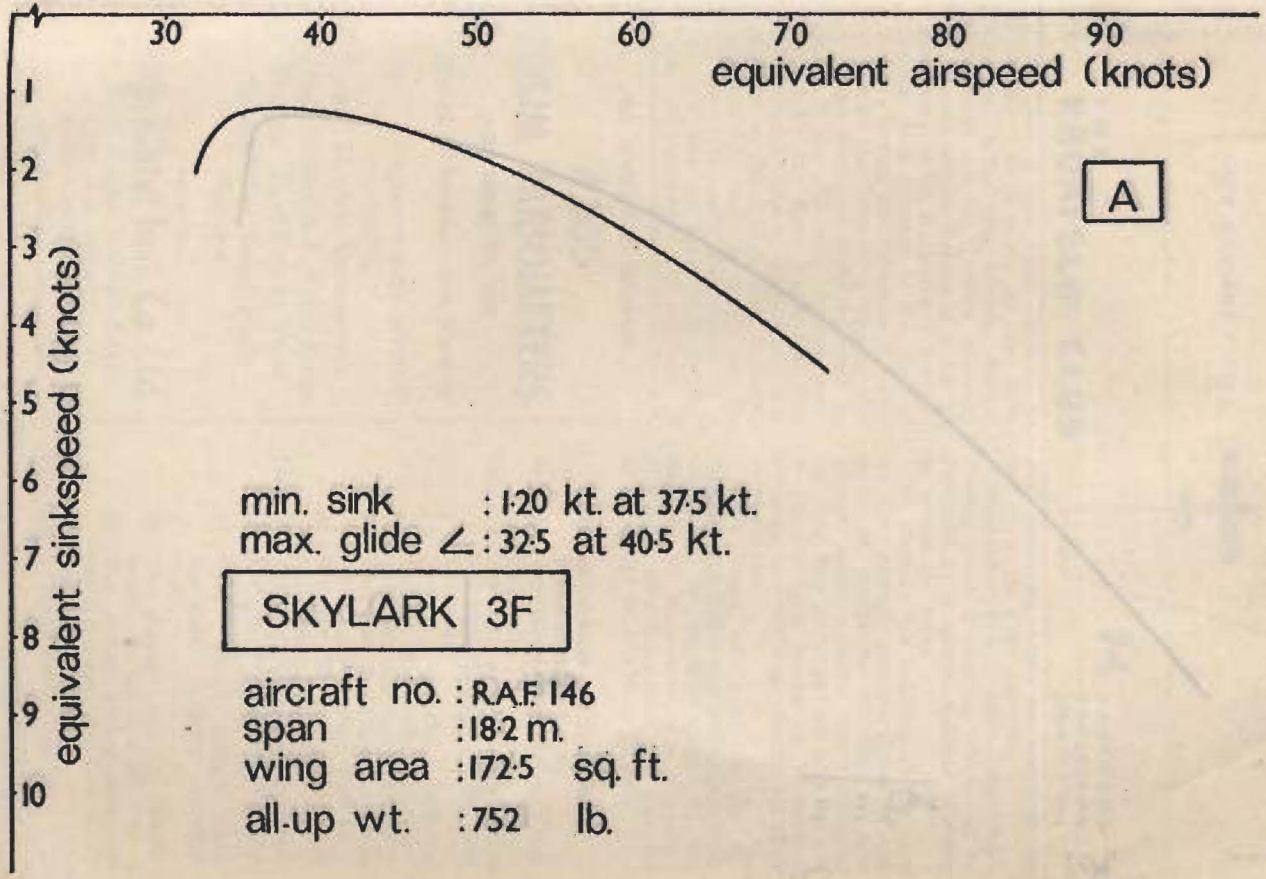
Emphasis must be placed on the fact that the performance curves are given for equivalent airspeeds and that these speeds are corrected for position error inherent in airspeed indicators. The curves are also dependent on the all-up-weight of the glider, and different curves will result for different glider weights. The effect of varying the all-up-weight on the performance of gliders will be shown in an article in the near future.

We would finally ask that any person with polars of other gliders should send them to us for review and subsequent publication. Of special interest are polars of Olympia 460's and 419's.

K. H. DOETSCH, D. LAMPARD.
Aeronautics Dept., Imperial College,
Prince Consort Rd., London, S.W.7.


30
40
50
60
70
80
90
equivalent airspeed (knots)
1
2
3
4
5
6
7
8
9
10
equivalent sinkspeed (knots)
A
2. without wheel
1·21 33
min. sink : 1·35 kt. at 34 kt.
max. glide ∠ : 27·5 at 36 kt.
26·5 38
SKY
1. with wheel
aircraft no. : 645 (WORKS)
span : 18 m.
wing area : 191 sq. ft.
all-up wt. : 805 lb. 1.
802 lb. 2.

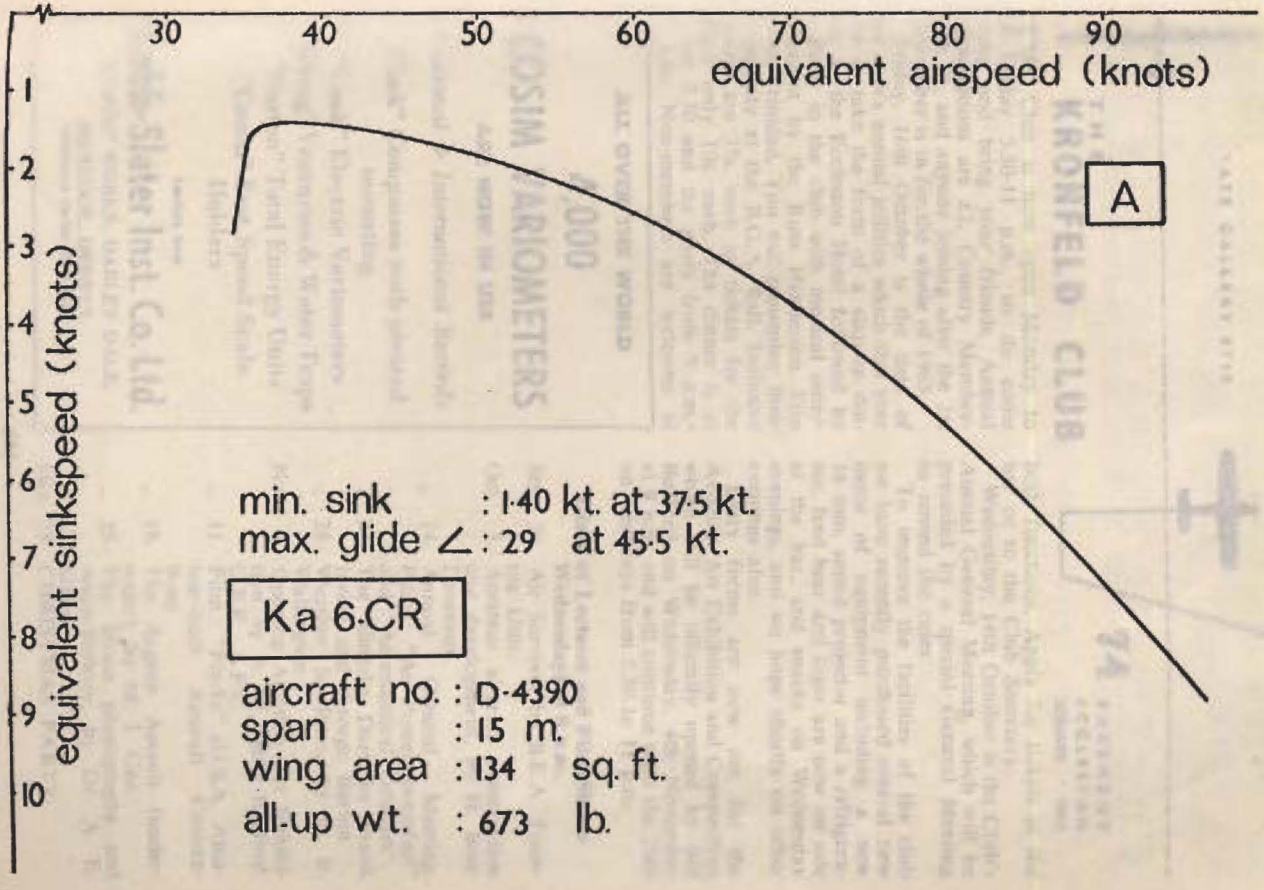

30
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90
equivalent airspeed (knots)
1
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3
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9
10
equivalent sinkspeed (knots)
A
min. sink : 1·46 kt. at 36 kt.
max. glide ∠ : 25·5 at 41 kt.
SKYLARK 2
aircraft no. : B.G.A. 759
span : 15 m.
wing area : 144 sq. ft.
all-up wt. : 680 lb.



min. sink : 1·20 kt. at 37·5 kt.
max. glide ∠ : 32·5 at 40·5 kt.

SKYLARK 3F

aircraft no. : R.A.F. 146
span : 18·2 m.
wing area : 172·5 sq. ft.
all-up wt. : 752 lb.


30
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80
90
equivalent airspeed (knots)
1
2
3
4
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6
7
8
9
10
equivalent sinkspeed (knots)
A
min. sink : 1·40 kt. at 37·5 kt.
max. glide ∠ : 29 at 45·5 kt.
Ka 6·CR
aircraft no. : D-4390
span : 15 m.
wing area : 134 sq. ft.
all-up wt. : 673 lb.

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THE KRONFELD CLUB

THE Club is now open Monday to Friday 5.30-11 p.m., so do come along and bring your friends. Annual subscriptions are £2, Country Membership £1, and anyone joining after the 1st November is in for the whole of 1965.

Friday, 16th October is the date of the club's annual jollities which this year are to take the form of a slap-up dinner at the Eccleston Hotel followed by a Party in the club with musical entertainment by the Russ Henderson Trio from Trinidad. You will remember their popularity at the B.G.A. Ball. Inclusive tickets are 35s. each or tickets for the Party only 10s. each. The dinner is at 7 for 7.30 and the party from 9 p.m.-1 a.m. Non-members are welcome at both functions. Apply for tickets at the bar or to the Club Secretary.

Wednesday, 14th October is the Club's Annual General Meeting, which will be preceded by a special General Meeting to amend the rules.

To improve the facilities of the club we have recently purchased several new items of equipment including a new 16 mm. sound projector and a refrigerator. Iced beer and lager are now on sale at the bar, and snacks on Wednesday evenings, and we hope shortly on other evenings also.

Entry forms are now out for the Aviation Art Exhibition and Competition which will be officially opened by Bill Bedford on Wednesday, 4th November at 8 p.m. and will continue until the 28th on weekdays from 5.30 to 11 p.m.

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

Sept. 30. Air Survival by B.E.A. Training Unit.
Oct. 7. Amateur aircraft construction and development, by H. Best-Dereveux.
„ 14. Annual General Meeting. Films: "Air Power Sweinfurt" and "Aeronautical Oddities".
„ 21. The Slingsby Dart, by Frank Irving and George Burton.
„ 28. Weather Satellites, by C. E. Wallington.
Nov. 4. Opening Aviation Art Exhibition by A. W. (Bill) Bedford, O.B.E., A.F.C.
„ 11. Film: "Fly-In" (U.S.A. Amateur-built Aircraft Convention).
„ 18. The Aegean Assault (underwater), by M. I. Gee.
„ 25. The Moon photographs and Astro-Biology, by Dr. A. E. Slater.
Dec. 23. CHRISTMAS PARTY.

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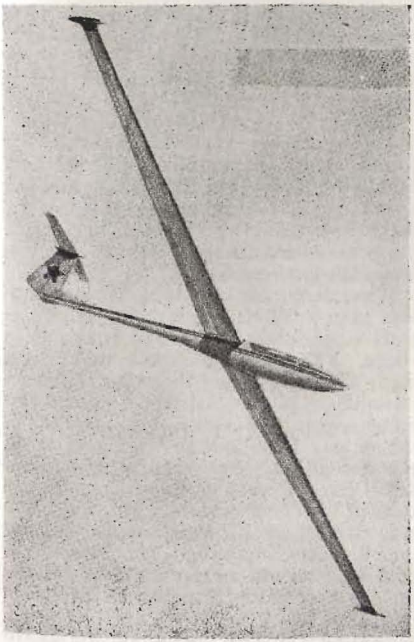
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The KAI-19

AT next year's World Championships in South Cerney the Soviet team expects to bring two new sailplane types designed by a team headed by P. Kamyshev, G. Vorobyov, M. Simonov and A. Sorokin. They are the KAI-19 in the Open Class and KAI-14 in the Standard Class. KAI stands for the Russian equivalent of Kazan Aviation Institute.

Some data on the KAI-19 were given in SAILPLANE AND GLIDING for June, p. 180, and some additional particulars, given below, are now published in the East German journal *Aerosport*, which also reproduces a photograph-like drawing of the machine and polar curves. From the phenomenal best-gliding-ratio and minimum sink, it may be assumed that these polars are estimated; *Aerosport* says the figures are *"nicht angeführt"* (no cheating).

The machine is of all-metal construction. The difference between its stated empty and all-up weight, 80 kg. (176 lb.), obviously applies to a single-seater, yet a new two-seater world's record for the 300-km. triangle has been set up with it. It is now stated to carry optional water ballast.



KAI-19 Data

Span: 20m. (65 ft. 7½ in.)

Aspect ratio: 28.56.

Empty weight: 334 kg. (736 lb.).

All-up weight without water ballast: 414 kg. (913 lb.).

Wing loading, without and with water ballast: 29.6 and 39.3 kg./sq. m. (6.06 and 8.05 lb./sq. ft.).

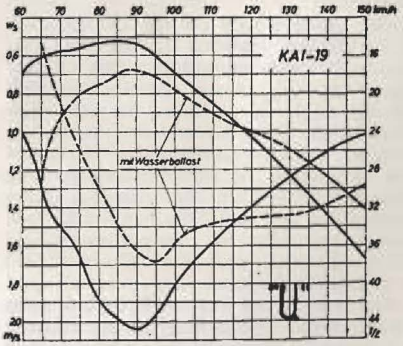
Best gliding ratio: 1:45 at 90 km/h. (48.6 kt.).

Minimum sink 0.52 m/sec. at 85 km/h. (1 ft. 8.5 in. per sec. at 46 kt.)

Minimum flying speed: 59 km/h. (31.8 kt.).

Maximum permitted speed: 250 km/h. (135 kt.).

Best circling speed at 45° bank: 78 km/h. with 1.0 m/s. sink in a circle of 50 m. radius (145 knots, 3.3 ft./sec. sink, 164 ft. radius).



POLAR DIAGRAM—Top: speed in km/h. On left: sinking rate in metres/sec. (upper curves). On right: gliding ratio (lower curves). Broken lines: performance with water ballast. "U" uncategorised.

Junior Inter-Services and R.A.F. Inter-Command Gliding Competition

by IAN STRACHAN

THIS highly successful competition was held at the R.A.F. Gliding and Soaring Association's Centre at Bicester from 1st to 9th August. It was the largest Regional Competition held in this country to date, with 38 gliders participating. It was also the first two-League Regional Competition, as the Olympias were put in a second League in the interests of fairness and ease of task-setting. Another "first" was the virtual elimination of the "take-off time board", as a system was used (with the prior permission of the B.G.A. Flying Committee) of stream-launching in a predetermined order at a time controlled by the organisers. Only relights used the time board system. The order of initial launch was decided by ballot on the first day and rotated by a certain number of places on each subsequent contest day. If a day turned out to be "no contest", then the same launch order was used on the following day. This launch system was most successful, and must surely sound the death knell of "boardsmanship".

The broad policy on the organization of the contest was that the R.A.F.G.S.A. Nationals pilots should run this competition for the benefit of the up-and-coming pilots of all three Services. The Clerk of the Course was Air Commodore Kearon, Wing Commander Croshaw was in charge of Administration, Tug Manager was Don Spottiswood, John Williamson and Ian Strachan were Task Setters and Scorers, Andy Gough was Chief Marshal, and Reg Curwen was in charge of Control. The latter devised a Kardex system (as used in accounts offices) which seems much more efficient and compact than all the multi-coloured sheets in use previously.

The Royal Naval G.S.A. put in two entries, and the Army Gliding Assn. put in five. The entire British team for next year's World Contest flew *hors concours* with League 1 of the main competition, as did a representative of the Irish team, Mike Slazenger. None of the *hors concours* pilots flew for the complete number of contest days, but on most days at least one of them scored over 1,000 points, as the datum for scoring purposes was, of course, the League 1 winner. The weather in general was good, with 6 contest days out of a possible 9, but on three days the convection was rather deep, which made conditions rather difficult at times.

Saturday, 1st August

Wind at operating altitudes N.W., 25 kt. Cloud 4-7/8 cumulus, base 3,000 ft., tops 5,000 ft. Thermal conditions variable due to clamps of nearly 8/8 cover, but occasional quite good patches.

LEAGUE 1.—Task: Dog-leg via Henlow to Waterbeach, 63 miles. Tony Deane-Drummond, George Burton and Mike Slazenger (all *hors concours*) landed near Cambridge. Only three others rounded the turning-point and it was a No Contest day.

LEAGUE 2.—Task: Race to Henlow, 36 miles. Two pilots completed the course, Norman Smith beating Johnny Morris for first place. The winner's speed of 40 m.p.h. handsomely beat those of the British team, who were using League 2's goal as a turning-point.

Monday, 3rd August

Wind N.W., 20 kt. Cloud 2-4/8 cumulus, base 2,000 ft., tops 2,500 ft. Thermals surprisingly rough and irregular in shape. The shallow convection layer made conditions very difficult. The tasks were set on a forecast which turned out to be highly optimistic.

LEAGUE 1.—Task: Triangle via Nympsfield and Wellesbourne, 124 miles. Jeff Chandler won by covering exactly half of the course. Doug Bridson, Ron Newall and Frank Burgess also cleared the first turning-point. The *hors concours* pilots did not reach Nympsfield, the farthest being Strachan at Minchinhampton.

LEAGUE 2.—Task: Out-and-Return to



Douglas Bridson, League 1 winner.
Photo by Frank Tinsley

Nympsfield, 102 miles. Only Smith turned at Nympsfield, landing 12 miles along the second leg and beating the British team for the second day! Not enough pilots scored to make it a contest day as the crosswind was just too much for Olympias.

Tuesday, 4th August

Wind N.W., 12 kt. Cloud, 6/8 Cu and Stratocu, base 3,500 ft., tops 5,000 ft., but 3-5/8 Cumulus to the south. Thermals weak or moderate north of Oxford, but strong to the south with some streeting on the second leg of the League 1 task.

LEAGUE 1.—Task: Triangle via Welford and South Cerney, 98 miles. Twelve competitors completed the task, which was won by Stew Mead at 30.6 m.p.h. with Lee Hood in the Army Skylark 2 a very good second at 28.1 m.p.h. The latter's 10% bonus was not quite enough to win the day. The overall lead was taken by Con Greaves, with Bridson second. Meanwhile, the *hors concours* pilots had done good times with Strachan in the Dart leading with 41.1 m.p.h. and Williamson in the 419 with 36.5 m.p.h.

LEAGUE 2.—Task: Out-and-Return to Welford, 66 miles. Six pilots completed the course, led by Caryl Taylor at 25.8 m.p.h. Smith, with 24.1, maintained his overall lead, with Morris second and Al Whiffen third.

Wednesday, 5th August

Wind W, 15 kt. Cloud, 4/8 cumulus, base 4,000 ft., tops 6,000 ft. spreading out in some places later to 7/8. Thermals strong below most clouds, but weak in areas of overdevelopment.

LEAGUE 1.—Task: Triangle via (near) Sywell and Henlow, 98 miles. Only three pilots got round, led by Bridson at 26.1 m.p.h. Greaves did 20.6 and Wheeler 15.6. The latter struggled for three hours to complete the last leg of 35 miles, having difficulty against an increased headwind which brought many others down. Bridson took the overall lead from Greaves, with the Army team of Goldney and Wheeler third. The *hors concours* pilots were headed by Williamson at 36.8 m.p.h.

LEAGUE 2.—Task: Out-and-Return to Henlow, 72 miles. The gaps between clouds were too large for the Olympias and nobody completed the course. Nine competitors rounded the turning-point. Jack Harrison got back to within nine miles of Bicester, won the day and took third place overall. The first two places remained as before.

Friday, 7th August

Wind W., 18 kt. Cloud 4-7/8 cumulus, base 3,500 ft., tops 10,000 ft. The rather deep convection made things tricky at times, but conditions to the north and east were generally good. To the west an unscheduled trough or clamp area restricted thermal activity and reached Bicester at 5 p.m.

LEAGUE 1.—Task: Dog-leg race via Duxford to Rufforth, 196 miles. Nobody completed the course, Dennis Stubbings being farthest up the route, only 5 miles short, and becoming fourth overall. Jack Ramsden and Bridson were next closest and the latter retained his lead. Second and third places remained as before. The *hors concours* pilots attempted a 200-km. triangle out to the west of Bicester but were all beaten by the clamp in this direction.

LEAGUE 2.—Task: Race to Duxford, 56 miles. Five pilots completed the task. Smith was first with 38.1 m.p.h. and

increased his overall lead. Harrison with 33.7 and Bon Lightfoot with 24.4 were second and third both for the day and also in overall placing.

Saturday, 8th August

Wind W., 20 kts. Cloud 4-7/8 cumulus, base 3,000 ft., tops 12,000 ft. The deep convection made things very tricky, as there were extensive patches with no thermals round the larger Cu. Some thunder was heard later in the afternoon, and conditions got worse unless one was lucky enough to be in the right place for big lift in a large cloud.

LEAGUE 1.—Task: Out-and-Return to Waterbeach, 123 miles. Due to the clamp areas, no one reached the turning-point. Bridson won the day, landing near Cambridge and increasing his overall lead to 1,000 points from Greaves. Stubbings came up into third place with Goldney and Wheeler fourth. Williamson was the only one of the *hors concours* pilots to reach the turning-point.

LEAGUE 2.—Task: Distance along a line Bicester-Waterbeach through Bicester. Smith was the only pilot to reach the turning-point, increasing his lead to 1,500 points from Harrison and Lightfoot. Once more he equalled the achievements of the British team — perhaps the Selection Committee should review the situation once more!

Sunday, 9th August

Wind W., 15 kt. Cloud 4-7/8 cumulus, base 3,500 ft., tops 11,000 ft.



Andy Gough talking to Stew Mead.

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Rather as the previous Friday's conditions. Good convection at times but awkward areas round the larger clouds.

LEAGUE 1.—Task: 100-km. Triangle via Edgehill and Brize Norton, 64 miles. Many pilots started too early and were caught out by a dead area near the first turning-point. Five managed to get round the route, and Stubbings won with 25.8 m.p.h., becoming second overall to Bridson, who came down at Edgehill. Goldney did 20.6 and moved up into third place, followed by the other Army team of Sheppard and Evans (the latter getting round at 18.4 m.p.h.). Ramsden completed at 21.7 and took fifth place, followed by Greaves, who had also had the misfortune to land near Edgehill.

LEAGUE 2.—Task: Out-and-Return to near Brize Norton, 64 miles. Only four got round, Harrison being the winner with 23.5 m.p.h., and being second overall. Smith, with 19.8, maintained a comfortable lead. Whiffen completed at 18.3 and moved into fourth place, with Morris in third place.

Junior Inter-Service Competition won by Royal Air Force, Army 2nd.

Junior Inter-Command Competition won by Transport Command. Winning team in both: D. Bridson and N. Smith.

LEAGUE 1

Entry Final Posn.	Name	Service or RAF Command	Sailplane	Contest Day and Date (Aug.) 1 3rd	2 4th	3 5th	4 7th	5 8th	6 9th	Total pts.	Av. per Day	Indiv. Final Posn.
1.	D. S. Bridson	Transport	Skl. 2	718	670	1000	960	1000	62	4410	735	3
2.	D. H. Stubbings	Signals	Skl. 4	0	791	522	1000	718	1000	4031	671	5
3.	P. Goldney and J. H. Wheeler	Army	Skl. 3	462	915	792	406	394	899	3868	740 550	2 8
4.	F. W. L. Shepard and J. A. Evans	Army	Oly. 419	0	628	709	720	655	865	3577	674 557	4 7
5.	J. B. Ramsden	Flg. Trng.	Skl. 4	0	710	590	953	394	868	3515	585	6
6.	C. M. Greaves	Bomber	Skl. 3	682	838	840	798	128	5	3291	548	9
7.	D. H. Scarfe and L. S. Hood	Army	Skl. 2	0	980	358	507	141	999	2995	169 830	19 1
8.	S. B. Mead	Bomber	Ka-6	64	1000	510	693	281	91	2639	438	10
9.	R. W. B. Newall	Maintce.	Oly. 419	571	736	224	453	394	203	2581	431	11
10.	I. Hamilton	Flg. Trng	SF-26	0	515	412	693	750	0	2370	396	12
11.	E. Burgess	Signals	Ka-6	559	286	327	748	128	219	2267	378	13
12.	N. A. Wilkinson	Flg. Trng.	Oly. 403	0	681	412	691	128	56	1968	328	14
13.	N. L. Bailey	Transport	SF-26	64	583	278	64	128	360	1477	246	17
14.	L. Kurilowicz	Maintce.	Skl. 4	0	254	628	307	168	0	1357	226	18
15.	S. Marriott and D. Du Boulay	Army	Oly. 460	0	0	413	332	502	0	1247	305 111	16 22
16.	J. R. Chandler	Bomber	Oly. 460	750	—	—	—	128	56	934	311	15
17.	J. Phillips and J. Schooling	Army	Skl. 3	71	106	303	—	128	96	704	156 117	20 21
18.	A. Eldridge	Transport	Oly. 460	0	255	344	22	0	21	642	107	23

LEAGUE 2

Posn.	Name	Service or Command	Contest Day and Date (Aug.) 1 1st	2 4th	3 5th	4 7th	5 8th	6 9th	Total points	Average per Day
1.	N. W. Smith	Transport	1000	941	615	1000	1000	909	5495	910
2.	K. A. Harrison	Transport	567	828	1000	917	638	1000	4950	826
3.	J. F. Morris	Technical Training	867	930	669	225	187	391	3269	546
4.	A. H. Whiffen	Fighter	648	945	443	11	187	874	3108	519
5.	R. D. Lightfoot	Flying Training	400	928	709	782	146	132	3097	517
6.	E. J. Robinson	Royal Navy	0	371	680	719	245	877	2892	483
7.	C. G. Taylor	Flying Training	0	1000	203	320	245	83	1851	308
8.	R. Brett-Knowles	Royal Navy	0	253	407	739	187	0	1586	265
9.	G. G. Jones	Bomber	400	25	168	470	151	63	1277	213
10.	B. Kay	Flying Training	0	20	0	556	388	0	964	161
11.	M. J. R.-Lanng	Transport	4	107	353	420	54	—	938	188
12.	A. J. Hogg	Bomber	38	0	146	75	187	134	580	97
13.	A. Chapman	Transport	114	0	443	0	0	0	557	93
14.	A. S. Morris	Flying Training	114	—	—	—	—	—	114	114

All the gliders in this League were Olympia 2's.

Hors Concours Pilots	Sailplane	Days Flown	Av. per Day	Name	Sailplane	Days Flown	Av. per Day
G. E. Burton	Dart	3	178	M. Slazenger	Oly 419	2	145
A. J. Deane-Drummond	Oly 460	5	658	I. W. Strachan	Dart	4	909
H. C. N. Goodhart	Dart	2	72	J. S. Williamson	Oly 419	4	901

CORRESPONDENCE

A GUIDE TO CLOUD FLYING

Sir,

I am moved to protest about the article on Cloud Flying published in the June 1964 issue of SAILPLANE & GLIDING.

I feel certain that the general tenor of this article conveys to the non-instrument pilot that cloud flying is a delightfully simple diversion, easily self-taught by trial-and-error progression through larger and larger clouds to the joys of the cumulo-nimbus with or without anvil top.

A few illustrative quotes, admittedly out of context, follow:

"Circling with an artificial horizon is easy."

"You must have a parachute."

"You will spin."

"The machine will naturally come up to a normal attitude."

"If the glider should break up," etc., etc.

Proficient V.F.R. Pilots have flown and will continue to fly into cloud and find that "instrument" flying is easy and simple with no tendency towards disorientation or vertigo and certainly without airsickness. The reason for this usually is that the "up" side of the cloud is somewhat lighter than the "down" side, due to the sun striking the upper surface of the cloud.

This provides vital and usually unconscious information about attitude and particularly attitude rates. Instrument pilots are familiar with this kind of welcome assistance in various forms such as a spot of sunlight leaking into an otherwise hooded cockpit.

The V.F.R. pilot who makes a later visit to a uniformly dark and turbulent cloud may find the experience to be shattering in more ways than one.

During severe turbulence, whether in or out of cloud, safety is dependent primarily upon controlling airspeed in the range between the minimum control speed and the manoeuvring speed — the manoeuvring speed being defined as the speed below which the aircraft is protected from destructive "*g*" loadings through stalling. In most gliders this range of speed is relatively large. The dive-brakes, if not iced up, can be very useful in controlling airspeed also.

Most gliders, although not possessing the attitude stability of a heavy transport aircraft, are responsive and easily controlled.

In my opinion demonstratable proficiency at detection and recovery from any and all unusual attitudes without excessive speed build-up is an essential prerequisite to any cloud flying. Furthermore, this must be done entirely through the use of the Turn and Slip indicator and the A.S.I. This is because most artificial horizon gyros will topple at about 80 degrees of bank and some lesser amount of pitch. During instrument flight this condition can only be detected and corrected by the Turn and Slip instrument which fortunately is rugged, reliable and entirely unaffected by aircraft attitude. Furthermore. its functioning can be quickly and easily checked at any time by sawing on the rudders a little.

Icing of the dive-brakes and particularly the pitot tube are much more serious matters than the loss of glide angle mentioned by Mr. James.

I wish also to be on record as doubting the feasibility of jumping through the canopy and the safety of spinning out of the bottom of a cloud.

It is time, I believe, for gliding associations to speak firmly against casual cloud flying, and to affirm the desirability of dual instrument instruction. Instruction in fundamental manoeuvres before solo practice is just as desirable before instrument flight as it is before the first take-off.

Probably the most famous self-taught glider pilots were the Wright Brothers. It should be noted that they were lifelong advocates of the dual instruction method.

West Beach, South Australia. RODERICK J. ROW.

DR. JAMES REPLIES

DR. BRENNIG JAMES *whose original article appeared in the June issue on p. 187, replies as follows to the above letter and to Flt.-Lieut. M. W. Johnson's article "A Guide to Cloud Flying — Amended", published in the August issue on page 268:*

To deal firstly with Flt. Lieut. Johnson's criticisms. Usually, in a spin, turn-and-slip needles do point in opposite directions, but this differs from machine to machine. I think it is reasonable to expect a pilot to have sorted out spin recovery procedure for the machine he is using before he enters cloud. Some gliders will readily spin in turns at normal soaring speeds — the Gull 1, for example. If you spin a Skylark 2 and recover, the indicated airspeed rises faster than can be accounted for by acceleration due to gravity, showing that the low reading previously is partly caused by position error due to yaw. In over 200 hours of cloud-flying in gliders I have spun only once, in 1953, so I don't consider it is much of a danger; most experienced cloud-flying pilots take the same view.

Do please not open your chute in cloud. In the German Nationals in 1938 two pilots died this way, probably from exposure, and a third, Scheidhauer, lost two fingers from frostbite.

As to the size of updraughts, in the American thunderstorm projects upcurrents up to one mile in diameter were encountered, so if you have to jump you are unlikely to fall to one side.

I have never seen lightning in cloud, even on one flight to 27,000 ft. in Italy where the rate of climb once reached 20 knots, so I don't feel that closing one eye is of much use.

Johnson's objections sound like those of a person with a lot of power-flying experience and a lot of theoretical knowledge, but practically no experience of cloud-flying in gliders.

Mr. Row's letter gives much the same impression. My first cloud flight was in 1949 when I climbed from 3,000 ft. to 12,800 ft. using an artificial horizon. I had about 60 hours' soaring and no power experience. I repeat, cloud flying with an artificial horizon is easy.

I agree with him when he says you must have a parachute, and also that recovery should be practised before cloud-flying is attempted (see above). I did not labour this point in my original article since the risk of spinning is slight. I wanted to be concise, and anyone who attempts cloud flying can reasonably be expected to have enough common sense to sort out the spin recovery problems in advance.

Pitot tubes are now obsolete in gliders; pot pitots rarely give trouble from icing.

I cannot quote chapter and verse, but people have had to go out through the canopy and they have safely spun out of cloud base. Before Mr. Row speaks out any more about the dangers, practical or theoretical, of cloud flying, I suggest he gets in some practical experience: I for one would have missed much of the fun and sense of adventure if I had to do it in a two-seater with a timorous instructor by my side.

D. BRENNIG JAMES.

19,000 FEET IN THE BLANIK

Dear Sir,

My attention was drawn to the article by Squadron Leader Saundby about his record-breaking flight of June 7th. Truly we must salute his achievement, though some of his conclusions seem less valid.

He shows a casual disregard for hypoxia which could well be dangerous to others more sensitive to it. I doubt whether his decompression chamber experience acclimatises him in the slightest degree to hypoxia. As to monitoring his performance, this becomes difficult when the critical faculties are the first to go. One must point out also that cold exaggerates the effects of oxygen lack.

I agree that, even at 19,000 feet, he probably had several minutes of useful consciousness left. However, was he wise to continue above 15,000 feet, when he states that he noticed his performance deteriorating?

It may be that under these special circumstances the risk to him and to his inexperienced passenger was justified. I hope, though, that he is not emulated too often.

R.A.F. Benson.

J. L. COWAN,
Wing-Commander.

SQUADRON LEADER R. P. SAUNDBY replies as follows :

Wing Commander Cowan is of course absolutely correct, the R.A.F. G.S.A. Handbook states that oxygen must be used above 12,000 feet, and I would entirely support this rule. If Wing Commander Cowan re-reads my article he will find I made no conclusions, valid or otherwise, and far from having a casual disregard for hypoxia I was acutely aware of the dangers. As is pointed out, one of the classical features of hypoxia is the lack of awareness of danger, a feature shared by alcoholic intoxication, but as with alcohol one can learn to monitor other symptoms.

Regulations have to be written to provide for the most susceptible of pilots; no pilot, without experimental evidence, is entitled to assume that his own tolerance to hypoxia is any better than the worst. I have personal knowledge of my own tolerance and have experienced symptoms of hypoxia on several occasions. I am by nature a cautious individual with a strong sense of self-preservation, and I abandoned a very rapid climb at what I considered to be a maximum safe altitude. Others in the past have flown considerably higher without oxygen. Bill Bedford went to 21,300 feet in 1950.

I would agree with Wing Commander Cowan that this should not be emulated too freely, especially by pilots without the advantage of specialist knowledge and experience.

Central Flying School,
R.A.F. Little Rissington.

R. P. SAUNDBY.

DON'T THROW AWAY THE WINCH

Dear Sir,

I read with interest Nicholas Goodhart's remarks in the August edition of SAILPLANE AND GLIDING (p. 301), when he asked us not to throw away the winch. The popularity of an air-towing aeroplane is due to four reasons.

1. It is more fun to fly the tug than to drive a winch.
2. The equipment is maintained in a much better mechanical condition.
3. More time in the air is achieved from a 2,000 ft. tow than one winch launch, and on a time-in-the-air basis the cost is roughly proportional.
4. A tug can be sold on the second-hand market.

We have been using air-towing in my own club for some three years now, and it is interesting to see how the presence of a tug aircraft has stimulated soaring from the site. Apart from making it possible to take advantage of standing-wave conditions, which were not accessible before,it has also given us a greater degree of reliability for soaring activities. This has had the interesting result that the soaring aircraft left the winch-run for training purposes so that circuiting and limited soaring tuition, which is carried out on the T-21, has the minimum delay for a re-launch with the next pupil.

I have felt that the biggest snag with winches in gliding is that they are almost entirely home-made, although some very excellent machines exist.

The current practice of building winches on bus chassis is a step in the right direction, but the real difficulty is not in getting the bus with a satisfactory diesel engine and fluid fly-wheel, but in finding adequate gearboxes to transfer the drive to the wire drums. In addition, a winch and mechanical equipment are a maintenance problem if the gliding club is more than ten miles from a largish town. As the air-towing aircraft is mobile, it has the advantage that it can be more easily maintained. At the same time, the degree of training for a P.P.L. licence is much greater than that required for a winch driver.

Finally, I do not think that we shall arrive at satisfactory winches in a gliding movement, unless commercially produced winch gears can be made available. Such equipment could be mounted on truck chassis to make them mobile, and be suitable to accept a range of commercial engines now available.

Yorkshire Gliding Club J. C. RIDDELL

Captain H. C. N. GOODHART replies:—

"I entirely agree with Chris Riddell's analysis of the present situation. Indeed, it was exactly this state of affairs which prompted me to suggest that winching could rival aero-towing at about one third the cost if the machinery was adequately designed and developed.

"Analysis shows that winch launches to 2,000 ft. can be made on a 1,500-yard cable in 10 knots wind using only the most conservative loadings on the glider. The winch to do it requires no more power than many current winches can give; the design must, however, be a little more sophisticated."

NICHOLAS GOODHART

SHOULD NATIONALS LAST A FORTNIGHT?

Sir,

Before we slide imperceptibly — *nemine contradicente* — into acceptance of the proposals made by Philip Wills and Ann Welch in the last issue of SAILPLANE AND GLIDING that future Nationals should last a fortnight, can a word of protest be raised on behalf of the Amateur and/or Impecunious and/or Busy and/or Family Enthusiast?

Arguments against such an extension can be summarised under three headings:— TIME, MONEY and MISCELLANEOUS. More specifically:—

A. TIME

1. Where does one get devoted Organisers and Helpers for a fortnight? A large contest like the Nationals requires a semi-professional standard of organization. This cannot be got by swapping places half-way through.
2. Where does one get devoted crews for a fortnight?
3. Will Lasham (or any other Championship site) be prepared to deprive its own Club Members of their own soaring and training for double the present period?
4. Will one's club, or one's Syndicate partners, be prepared to release the glider to a single pilot for a continuous fortnight of — we hope — the best soaring weather?
5. Will the owners of Tugs be prepared to release them to the contest for a fortnight; if so, at what cost?
6. How — with only three weeks' holiday, say — can that growing (and to be cherished perhaps) band, the family glider pilot, keep out of the Divorce Courts, if he has to use a fortnight up on gliding?
7. How can teachers and others who now scrounge a week off in term time manage double that period?

B. MONEY

1. A fortnight's Nationals must cost at least 40 guineas per entry.
2. Caravan hire or hotel accommodation, already expensive, will be doubled.
3. Cost of wining and dining the crew will be doubled.
4. If a Club entry, hire of glider will be doubled.

C. MISCELLANEOUS ARGUMENTS

1. Will longer Nationals not denigrate the Regionals into even lower grade meetings than they are now?
2. Why cannot aspirants for the British Team (the Top Ten, say) run additional flying to assist in their selection *outside* the Nationals?

Can we have other views on this please?

TONY BARKER FRANK IRVING
DAVID CARROW ALAISTAIR MACCONAILL

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GLIDING CERTIFICATES

HEIGHT DIAMOND

No.	Name	Club	1962	No.	Name	Club	1964
3/39	F. A. O. Gaze	New Zealand	20.3	3/40	J. J. Goddard	Army/Scottish	28.1

GOAL DIAMOND

No.	Name	Club	1964	No.	Name	Club	1964
2/160	T. A. M. Bradbury	Bristol	3.5	2/165	H. J. Shaw	Laarbruch	6.7
2/161	J. Tarr	Doncaster	14.4	2/166	T. A. McMullin	London	4.7
2/162	G. P. McBroom	Bristol	3.5	2/167	L. E. N. Tanner	Nimbus	24.6
2/163	K. F. S. Chard	Bristol	3.5	2/168	A. H. G. St. Pierre	Nimbus	23.6
2/164	J. M. Firth	Cambridge	26.6				

GOLD C COMPLETE

No.	Name	Club	1964	No.	Name	Club	1964
116	C. R. Simpson	E. Midlands	30.5	121	J. M. Firth	Cambridge	26.6
117	J. Tarr	Doncaster	14.4	122	L. E. N. Tanner	Nimbus	24.6
118	J. J. Goddard	Army	28.1	123	H. V. Howitt	Surrey	7.8
119	E. C. Rigg	Empire Test Pilots	4.7	124	A. H. G. St. Pierre	Nimbus	23.6
120	J. R. Chandler	Moonrakers	20.6				

GOLD C HEIGHT LEGS

Name	Club	1964	Name	Club	1964
G. W. Scarborough	London	9.8	J. C. Everitt	B.G.A.	30.6
H. Armstrong	Derby & Lancs	26.6	A. Chapman	Moonrakers	30.5
S. W. Milne	Scottish	30.6	B. W. Prtichard	Fulmar	24.12
W. Lawson	Scottish	30.6	E. C. Rigg	Empire Test Pilots	30.5

GOLD C DISTANCE LEGS

Name	Club	1964	Name	Club	1964
K. F. S. Chard	Bristol	3.5	D. W. H. Roberts	Oxford	3.5
H. J. Shaw	Laarbruch	6.7	G. P. McBroom	Bristol	3.5
T. A. McMullin	London	4.7			

SILVER C CERTIFICATES

No.	Name	Club	No.	Name	Club
1411	A. Waltham	Perkins	1434	Margaret Seabrook	London
1412	T. G. Creffield	Southdown	1435	J. H. Scrivener	London
1413	A. J. Dodds	Scottish	1435	J. D. Rich	Bristol
1414	R. G. Gardner	Coventry	1437	J. R. Miller	Bicester
1415	G. Appleyard	Clevelands	1438	P. V. Grime	Doncaster
1415	C. B. Golding	617 G.S.	1439	R. Hindle	Yorkshire
1417	B. Kay	Clevelands	1440	I. H. Payne	Bicester
1418	L. E. Rotter	Midland	1441	P. Shanahan	Bicester
1419	J. A. Stirk	Doncaster	1442	A. J. Hawkes	Empire Test Pilots
1420	G. I. Lewis	R.A.E.	1443	N. Revell	Newcastle
1421	W. A. Shanks	Scottish	1444	J. A. Hardie	Condor
1422	F. A. Plumb	Bicester	1445	A. G. Stevens	Laarbruch
1423	T. R. F. Gaunt	Bannerdown	1445	S. W. Milne	Scottish
1424	C. J. Sanderson	641 G.S.	1447	S. H. Beard	Surrey
1425	D. H. Keary	Army	1448	R. P. Rickwood	White Rose
1426	J. M. Hancock	Devon and Somerset	1449	G. O. Elliot	Scottish
1427	A. V. Clark-Lewis	Cornish	1450	C. E. Day	Derby and Lancs.
1428	J. A. S. Eccles	Surrey	1451	C. R. Elliott	Fenland
1429	J. W. Pye	Surrey	1452	G. N. Halliday	Four Counties
1430	J. G. Ferguson	Bristol	1453	K. F. S. Chard	Bristol
1431	W. G. Dyer	Newcastle	1454	J. Adams	Oxford
1432	A. S. Barmby	White Rose	1455	A. J. Glover	E. Midlands
1433	A. Billington	White Rose	1456	B. Keogh	Swindon

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KRANICH. 10 year tested. Reskinned fuselage, with wing glue checked and approved, £500 or near offer. Reply to: G. I. Lewis, Secretary, R.A.E. Gliding Club, 14 St. Michael's Road, Farnborough, Hants.

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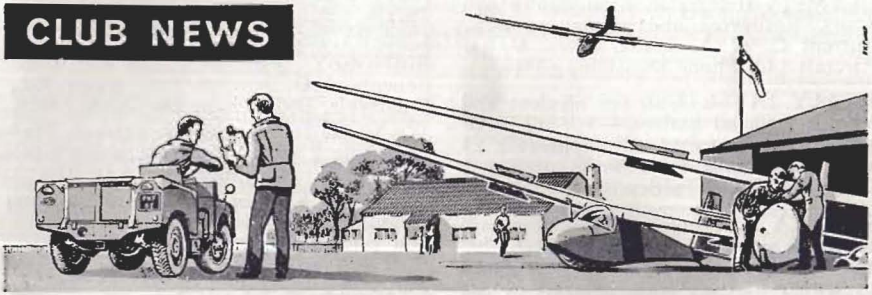
A Canadian pilot wrote on August 4, 1964

"The Canadian National Contest proved most interesting and I came third. My 'STANDARD AUSTRIA SH' performed extremely well and only errors in pilot judgement kept the machine out of first place. Direct comparison flights with earlier models STANDARD AUSTRIA S showed the machines have identical performance curves between 65 and 110 miles per hour, while the model SH climbs much better in a thermal. In fact, the SH climbs as well as Ka 6's have flown in this area. Of course this was a very pleasant surprise."

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CLUB NEWS



FOR inclusion in this issue we received the largest amount of copy for over a year — so apologies to some of you who have been drastically pruned to enable us to get you all in. I was also pleased to receive a record number of usable photos. If they are not in this time they will be published in the next issue.

On page 407 we are pleased to read that the Swansea Gliding Club have taken to the air again.

Copy for inclusion in the December issue, typed double spaced, should reach me at 14, Little Brownings, London, S.E.23, not later than Wednesday 14th October 1964.

YVONNE BONHAM,
Club News Editor.

ABERDEEN

THE unfortunate epidemic which struck our area earlier this year caused flying to be cancelled for a few week-ends, however, we are now working hard to make up for lost time. The courses and training programme are going well and we find our first T-21 which was purchased in January to be an excellent glider for our new site.

This is our second season at Litterty and site development continues. The entire airfield is now in grass thus making both launching and landing much easier. The local planning department have passed the plans for our clubhouse and the foundations are already down — our members are all working hard on a "Do-it-Yourself" basis with the usual motto, "We will do anything to get our feet off the ground".

We eagerly await the delivery of our new Terrier 1 tug which is promised before the end of August.

A. W. O. W.

AVRO

NOW we know why our T-21 has drain holes in the floor, it is to allow the flow of tears when we find ideal soaring conditions at Woodford and cannot allow the aircraft to climb, because of our 1,000 ft. height limit.

There have been several such days this year, with clouds streeting down the main runway, most launches were into lift; using full spoiler, and other fiendish methods did not prevent the aircraft from climbing, high-speed flying seemed the only sure and comfortable method of staying at a respectable height.

Several members have found new outlets for their energy, the idea being to try and push the Doncaster tug up to 2,000 ft. One member must be stronger because he insists on going to 3,000 ft., or maybe he has found the secret of putting starch in the rope. Keeping two skids crossed in the hangar paid off, Bill Scull was successful with his category test.

Our secretary, John Ekman, has left the company and gone to tread pastures new, we wish him luck.

J. A. K.

BATH (Keevil)

BEING a relatively new club we experience a sense of achievement from small incidents which clubs with a longer history take for granted.

The most recent "first time" was achieved by Joy Lynch when she became our first lady member to go solo. Firsts

are becoming quite a tradition in the Lynch family. Her husband, Ron, was the first person fully trained by our own instructors to get the A and B and to date he is the only member who has got his C on the Grunau.

We had one rather amusing (to some) incident when Len Denny took the Swallow cross-country on the bank holiday week-end. A phone message was passed on to us by a third party saying that he had landed at Winterborne Monkton. After looking up the place-name in the A.A. book and discovering that it was about sixty-five miles the retrieve crew set off, only to discover when there was no trace that there is another hamlet of precisely the same name only some twenty miles from the airfield. K. N. S.

BLACKPOOL & FYLDE

IT is not unusual for folk living in the north-west to continually bind about the lousy weather during July and August, but this year we have had splendid west winds and no shortage of thermal activity at our Samlesbury site.

The T-21B and Olympia 2B have spent many interesting hours above cloud base and have often been joined by the EoN Baby. Fortunately, the northern edge of the Manchester Control Zone has now been moved a few miles further south of our airfield, which makes it less likely to cramp Silver C height aspirants. The prevailing, westerly, wind and the large expanse of open country and suitable landing fields in the direction of Yorkshire's West Riding has decided us to commence simulated cross-country flying to previously examined fields whenever conditions are suitable.

Congratulations to Shirley Clapham and Terry Hogben on their C flights and also Len Clarkson and Ian Hamilton on their first solos.

The English Electric Flying Club members were our guests again on Saturday, 8th August and, the weather being excellent, some very pleasant soaring was enjoyed by all present.

The Club Olympia has just gone away again for another week. This time to the Long Mynd.

We shall be returning to our Winter Quarters at Blackpool towards the end of October. J. S. A.

BRISTOL

WITH conditions much improved the real business of the club has been in full swing again. Our resident C.F.I. Peter Etheridge, Peter Grieves winching and Jane Warter have been busy with the courses.

Solo congratulations to Messrs. Clarke, Opson, Kerr, Colvin, Ensell, Stansell, Parsons, Major and Conway. Three 5-hour legs go to Messrs. Griffiths, Grimes and Martin. Silver C completed include John Fergusson, the shock of which caused his wife to give birth shortly afterwards, double congratulations.

Many strange shapes have been circling the Nympsfield skies, the newest is the Olympia 460 of Messrs. Arden, Griffiths, Etheridge and Sandford. Geoff McBroom has achieved his P.P.L. and we look forward to another rollicking evening when Peter Collier has threatened to check him out on the Tiger. Collier, by the way, is now a pilot with Dan Air.

Visitors from many clubs have been welcomed. Of special note was the visit of Colin Pennycuick with his Ka-6 from Cambridge who at mid-day, under a very unpromising sky was winched and returned 8 hours later to announce it was soarable. Our best day to date was 1st August, when 61 hours were flown from 50 winch launches. The Nympsfield wave elevated a few to 8,000 ft. and Peter Etheridge tells a hair-raising story of a 5,000 ft. descent through cloud with much altimeter tapon the wrong side of the river.

R. G.

CORNISH

THE private and syndicate machines flying from Perranporth are in two groups, Ancients and Mods, comprising two Skylark 4's as Mods and Avia and Kite 1 as Ancients. So far as Silver legs flown during the last two months go, the honours have been about even.

20th June was a good cross-country day, but as the wind was fresh and nearly north, a longish tow to the Padstow area was needed to give 50 kms. of land nearly down-wind. George Collins launched Tony Clarke-Lewis in the Skylark 4 first. Tony climbed to 7,000



Vasama — the Standard Class winner of the OSTIV Prize in 1963 — is designed to meet the strictest contest flying performance requirements.

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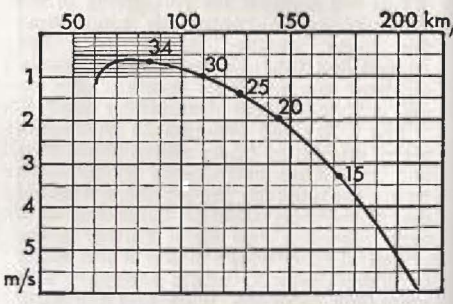
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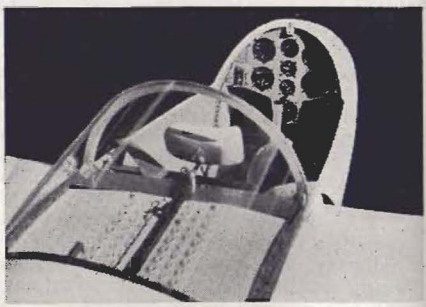
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ft., in cloud soon after release and wasted no time in flying to Culdrose to complete his Silver C convincingly. Ernie Hayman, in the club Olympia, had the next launch but was unable to reach his goal and was followed by Dave Pentecost in the Avia, on his first cross-country. The Avia, built in 1941, has no airbrakes and had to stay out of cloud and Dave had some hard work keeping on track with a bit of a cross-wind, but he too arrived at Culdrose with height to spare.

Meanwhile George retrieved the Skylark by air and had a launch himself, to fly a triangle and Tony launched Ted Mann, in the club Swallow, for a try for Culdrose too. Ted didn't make Culdrose but Tony went on to aero-tow the Avia back — quite a day's work.

Next day Dave Treadwell took the Kite 1 up for five hours of scraping, when the ridge lift gave out he found a little thermal and vice-versa.

J. E. K.

COVENTRY

AT last the club has operated from our site at Husbands Bosworth, although this was only on a temporary basis for the August bank holiday week-end whilst the Coventry Air Day was taking place at Baginton. The joy of using our very own site acted as a tonic and gave a great boost to morale.

Although we did not hold a camp as such this year, the weather during the local works' holiday fortnight encouraged a number of members to fly. During this time Bill May took his syndicate's Dart, one of the three now based with us, for its first cross-country, a distance of 25 miles.

A total of four teams went to the recent competitions. Findon and Tarver took their Dart north, as did another Dart team, Fay and Bagnal. Smith and Cunningham flew in the Dunkeswell competition with a private Skylark 4 in close rivalry with the club's 3B, flown by Hunt and Duthy-James. These machines were placed fourth and fifth respectively.

At the time of writing John Everitt is visiting us for a week with the Capstan to give some instructor training to a group from our own club and our nearest neighbours, the East Midlands Club.

Behind the scenes on the non-flying side work is proceeding towards our permanent shift to Husbands Bosworth, and this is regaining momentum after the holiday absences.

C. D. D.-J.

DERBYSHIRE & LANCASHIRE

THE "Northerns" are over . . . Congratulations to Philip Wills, who has again won the Peak Trophy. The large proportion of new 15 metre sailplanes competing made a pleasant change, compared with the near monopoly of 18 metre aircraft in the "Nationals".

The introduction of a second Thornycroft winch with 2 drums and fluid drive has proved a success, although some teething troubles are still receiving attention. We now have three T-31's in our fleet and intend to retain only one Tutor, one of the T-31's being used by solo pilots.

A recent crop of completed Silver C's includes Gerry Brook, Charles Day, Les Haynes, Don Hatch and Ted Neighbour. Mike Armstrong collected his Gold C height on 27th June, with a climb to nearly 12,000 ft. a.s.l. in a tall cumulus, and Mick Kaye performed a similar feat in his Dart on 9th August, reaching 13,000 ft. a.s.l.

October, the best wave month of the year, is not so far away now, and we look forward to its arrival, and to the arrival of any visitors who may be interested in trying the pleasures of wave soaring.

D. M. K.

DORSET

THINGS have been "humming" in Dorset.

Since last Easter we have been flying at every opportunity that the weather has given us and have had nearly a thousand aero-tow launches. The Swallow, which previously did not have much time in the air, is now hardly ever on the ground — Joe Linee, John Dalby, Bernhard Shackell, Robin Strange and Frank Turner being enthusiastic "solo" pilots.

Joe Linee, John Dalby and Frank Turner have obtained their C certificates; Ted Andrew Silver C height; Graeham Morris Silver C distance and height and Ron Tarling Silver C duration.

Alan Palmer has obtained his B.G.A. Inspector's Category and is now in charge of the aircraft and C's. of A., which will be of great help to us. We welcome Roger Woolway, who joins our small and noble band of tug pilots and who is keeping our Tiger Moth's engine in good order.

The A.G.M. was held on 25th June. A new committee was elected and we are very pleased that Lt.-Cdr. H. R. A. Kidston was elected and agreed to be our president. John Garrood is leaving us, relinquishing "the chair", which he has held since the beginning, taking with him a life membership, which seems a small and inadequate reward for all his enthusiasm and hard work starting the club and keeping it going. We are fortunate in having as our new chairman Lt.-Col. A. A. V. Cockle, who founded the Bovington Garrison Gliding Club, which shares our facilities and gives us invaluable help.

Margrit Schneider, Heinz Sulzer, Rudi Haeny and Niklaus Kunz, members of the Schaffhausen Gliding Club in Switzerland, are flying with us this summer and we look forward to meeting other visitors in the future should they visit Dorset. Pelle Madsen, from Denmark, has also been showing us how easy it is to find and stay with a "thermal".

P. J. H.

EAST MIDLANDS (Rearsby)

THIS will be the last time we appear under this name, as the club is changing its name to the Leicestershire Gliding Club.

Our aerotow only policy has really paid off this summer in increased utilisation of aircraft and members' time. We have sent our first pilot, entirely by this method, solo in the Olympia, and he was followed rapidly by many more. Congratulations to Messrs. Ashman, Allen, Hubbard, Moore, Swinfield, Shaw, Tilley and Walker on obtaining their A and B certificates and to Messrs. Ashman, Hallam, Hatton, Murray, Swinfield, Tomlinson, Walker, Whittle and Worley for their C certificates.

Tony Glover completed his Silver C with a five-hour leg in thermals, and Bernard and Fred Fitchett have obtained two legs of their Silver C.

Chris Simpson completed his Gold C by climbing to 12,000 ft. over the airfield in a cloud in the Skylark 4, and Peter Martin emulated him in the same aircraft to obtain his Gold C height. Congratulations to these two, who won the Joseph P. Kennedy trophy at Dunkeswell.



Keith Moseley instructs Derek Ashman, the club's first exclusively aerotow-trained pupil.

We would like to thank our gallant band of tug pilots, led by Doc Cameron, for making this such a successful season for the club, and hope we can keep them happy and *warm* during the winter months.

J. R. F.

GLASGOW & WEST OF SCOTLAND

SINCE our last report in Club Notes we are pleased to report that our instructor problem has to a certain extent been alleviated with the checking out of various people from a number of sources.

Flying continues apace although the weather has not been too kind to us so far this year. Nevertheless we have experienced our first wave flights at Balgair, when the T-21B was taken to over 3,000 ft. straight off the launch.

We have had a visit from the National Coach while he was instructing at the S.G.U. We are glad that he could find time between courses to visit us.

A number of our members have been

down South on courses this summer and Jim Montgomerie and Cameron Stevenson returned from The Mynd with their Silver C durations done in an Olympia and Swallow respectively, and John Goodwin, from Camphill, with a gain of height claim of 6,100 ft. done in an Olympia 460.

By the time this edition goes to print the Club will have had its first marriage. We wish every happiness to Russell Brown and Margaret Barclay.

T. J. G.

HANDLEY PAGE

THE summer has been a record one for us this year, with last year's total launches reached in mid-July and five pilots sent solo within a month. We are now in the position of having only two ab-initio pilots to be shared between five instructors!

Three of the eight members who spent a week at Sutton Bank in July obtained their C's there, the outstanding flight being that of John Read who flew solo in a T-21 for 1 hour 25 minutes.

Sandy Ing now has his Silver C height and he, together with Ian Hipkin, is urging along a number of projects ranging from a diesel tow-car to a home-built glider radio.

A. B.

LAKES

IT is good to report that a meeting of the Club Committee on Wednesday, 22nd July unanimously re-elected Ernie Dodd as Chairman for the ensuing year. Ron Reid continues as C.F.I., Rosalie Allen as Secretary and Elma Hoole Treasurer. The team that has done so much to pull us over the hump during the past two difficult years remains in office and we face the future with confidence. Appreciative thanks were recorded to Messrs. Vickers, and in particular to Mr. Len Redshaw, for the facilities placed at our disposal at Walney, and without which the present rate of progress would have been impossible.

Aero-tows to Ireleth have enabled several cross-country attempts to be made, and in contrast to last year, there will be keen competition for the coveted Lonsdale Trophy. Gerry Wilson's flight to Salmesbury has the edge so far, but David Millet, Gill Haslam and others are running him close and there is still plenty of time for re-arrangement of the league table.

The most noteworthy flight was undoubtedly Gill Haslam's on 12th July, if only for the sheer cheek of the thing. From a winch launch to 1,500 ft. at Walney he romped across the estuary like a donkey with a thistle under his tail. Arriving at Ireleth with a bare 700 ft. on the clock he wound it up to 1,700 ft. without much difficulty and set off south-east. Ridge lift at Ulverston and a thermal at Arnside helped him on his way and he finally reported down between Hornby and Lancaster. This effort, coming within a fortnight of completing his five hours is a matter for congratulation, and has put all the Silver C aspirants on their mettle.

Derek Sandford has been passed for cross-country flight. Ron Hawkes and Sid Wearing have graduated to the Olympia and the latter has obtained his C. The C.F.I. reports that he expects at least four more Tutor pilots to qualify for the Olympia very soon and the Tutor brigade has increased its numbers by four since our last notes were written.

The C.F.I. reminds us that to qualify, all attempts for Silver C legs must be completed with the aircraft in one piece, which prompts the thought:—

"Upity, upity, over the hill,
Leave at two thousand and off with a will.
Thermals a 'poppin', an' everything fine;
Coax it and hold it — then home for the wine.
Thermals a 'dyin', an' sure, it's no kid,
Bumpity, bumpity—off comes the skid!"

F. G. R.

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LASHAM

OUR better than average summer so far has meant many new Silver and Gold badges adorning the lapels of Lasham pilots. The famous Dunstable/Lasham Plate, which must be collected by air, has already qualified for its Gold C distance judging by the number of times it shuttles between our two sites.

A two-seater Blanik has been added to our fleet and is giving sterling service. Launches, hours and miles are up on last year and the training school is keen to have new pupils to keep our five two-seaters and five full-time instructors happily busy.

On the social side, the new clubhouse is a boon. The House Committee have arranged more dances and if they are as good as the first one held with topless *et al*, they should be a wow!

Recently we have entertained a number of overseas visitors, not least one pilot who claims to have hill soared a Boeing 707! We are always delighted to see gliding folk from any part of the world. If you wish to fly in or over, give us a call on 130.4 and someone will act as Observer. There are rumours of direction finding equipment being installed next year, so that we should be able to give quite a service. W. K.



Brian Masters, formerly Deputy C.F.I. at Lasham, likes to hear from his old friends. Address: 1837a, 9th Street, Santa Monica, California.

MIDLAND

JOHN BRENNER, sharing a Cambridge Olympia, achieved second place in the Dunkeswell Regional. Well done John.

During August the Derby and Lancashire Club sent down a strong team to compete for our inter-club trophy, the Beer Tray. The Tray has not moved for several years but it is intended to contest it more frequently in the future.

The Cambridge University Gliding Club paid us their usual late season visit in September.

By now the installation of mains electricity should be well under way. The digging of the trench as far down the hill as the water pump has been completed thanks to some slave-driving by our Secretary. Mains electricity should increase the amenities at the club and at last rid us of the noise of the generator going on into the middle of the night.

The delivery of our second T-49 is expected shortly. The two-seater fleet will then consist of two T-49's and a T-21.

We expect to hold our annual Trogs' Party in November, when there will be a few outstanding candidates for the position of King Trog. K. R. M.

NEWCASTLE

WHILST the Summer has by no means been perfect from a gliding point of view, we at Carlton are not complaining. The months of June and July produced some really good thermal days and there has been our usual quota of wave, together with the odd hill soaring day.

Our solo pilots have been making the most of all this good weather and there has been an outbreak of "Silver-itis". The current tally is: Duration — Tom Shepherd, Jum Mulloy and Marjory Paul; Distance — Bill Dyer, Norman Revell, Andy Hardie and Harry Hill; Height — Barrie Brighton, Ron Donaldson, Dave Lilburn, Bob Martindale and Norman Revell. Seven of the above Silver C legs were gained in one week and this brings our total so far this year to fifteen.

In the course of all this activity

another new wave has been discovered and soared on a number of occasions. It forms with surprising regularity about a mile downwind of the site on hill soaring days and can be reached quite easily on one good thermal. Having got it tamed we expect to reap a good harvest of height gains in the future.

The training programme continues in full swing and the latest Tutor victim is Jim Pigg, who lost little time in getting his C as well. John Pearson is also now sporting a badge with three gulls.

Naturally with all this flying site development has had to take a back seat so far this year, but it has not been completely neglected. Experiments are taking place with different types of grass seed and slow but steady progress is being made with new buildings.

B. W. B.

NORFOLK

WE have been rather quiet in East Anglia for the past few issues due to some re-organization which is nearing completion. Now we are ready to burst forth again and our most important piece of news is the affiliation of the Norfolk Gliding Club at Tibenham and the Norfolk and Norwich Aero Club at Swanton Morley. Full flying membership at one club now gives full facilities at the other club.

We are training by auto-launch at Tibenham in the T-21B with a Swallow for the more advanced members, whilst at Swanton Morley the 419, Skylarks and Olympia 2B are being launched as usual by Tiger Moths.

So now with a full amalgamation of all the civilian gliding interests in Norfolk and a good training organization we're hoping for big things. At the present time (August) we have two continuous summer courses at Tibenham. We are also looking forward to the visit of coach and Capstan in a few weeks' time.

And now for a bit of Swanton gliding news. George (Perranporth) Collins flew into Swanton last week. Alf Warminger's heart missed a couple of beats expecting that George was returning the compliment and had covered the mystical 500 from Perranporth. George was, however, on a round-Britain safari and had launched from Sutton Bank.

On the following day George's crew chief, George Tuson, was aerotowed from Swanton to R.A.F. Feltwell, where he released. By radio he was asked to return, overfly Swanton and land at Oulton, the disused airfield north of Swanton. George duly obliged and called us on the radio whilst on finals and we swiftly sent the Tiger to pull him home to Swanton. The time from take-off at Swanton to landing back after the retrieve was 2 hrs. 35 mins., including the 58 km. dash. Surely this is a record for the fastest *completed* Silver distances.

P. J. S.

NORTHAMPTONSHIRE

THE club has now established itself at Cranfield and members are finding the site provides some good soaring conditions amidst pleasant surroundings.

C certificates have been obtained by D. Robinson and J. Palmer; R. Koegler and H. Purser have gone solo; and I. Jones, J. France and N. Kay have transferred to the Swallow.

Two flying weeks are being held by the club this year and the first one under the direction of Brian Brown had a week of excellent weather. The second, however, running at the time of going to press, under the direction of C.F.I. P. Bisgood, has so far not been quite so lucky.

Saturday, 8th August must have been a very good soaring day for some clubs because 12 gliders from R.A.F. Bicester landed at Cranfield that day. At one time club members had their hands full dealing with the influx. However, we were very pleased to see them.

The possibility of obtaining a clubroom at Cranfield now looks more hopeful.

R. N. W. K.

NORTHUMBRIA

WITH the arrival, last June, from Camphill, of the Eagle, we now have three syndicate-owned gliders and a healthy competitive spirit has developed between the Ka-7 syndicate and the owners of the Eagle. The Eagle syndicate, which includes both our instructors, have kindly helped by making their aircraft available for club training following the tragic loss of the club's



Northumbria's Ka-7 coming in to land at Hedley Fell.

T-31. We fervently hope that our search for a suitable replacement two-seater will soon prove fruitful and that our friends can soon have their glider to themselves.

Ian Taylor, in the Swallow, achieved his Silver C distance from Sutton Bank, landing at a Filey holiday camp. Meantime, Norman Richardson went solo during one of his visits from the south.

Soaring conditions have been excellent for some weeks. On 4th July Alan Brown and Danny Borrits were up at 5,000 ft. over Hexham in the Ka-7 and either could have managed their Silver C distance and height; presumably each was wishing hard that he had left the other behind. The reputation of our Ka-7 is now such that a visitor flew over in an Auster from Usworth to have a flight in it.

To help spread the demand for launch cables, the club have introduced reduced launch fees to syndicates in the early part of the day before club machines are flying.

The A.G.M. was held on 7th August at the Bay Horse Hotel, Whickham, when Roy Bousfield was re-elected Chairman, while Rob Gains was confirmed from "acting" to "substantive" Secretary. In the process he passed on his Treasurership to Donald Barr-Wells; while our new Press Secretary, Philip Lever, will no doubt add a professional touch to these notes in future.

D. R. B. W.

OXFORD

AGAINST the background of the poorest season which has produced only half the flying from the usual effort, our achievements, if few, have an enhanced value.

At the Bristol Spring Regional, John Smoker and Nick Morland won our first trophy, "The Cadbury Cup" with their Skylark 4 No. 169 and on the final day of the same competition Dave Roberts over-flew the task in his Olympia No. 170 to reach Yarmouth for his Gold C distance, missing a diamond by a small navigational error. Adams-Pratelli, of the Skylark 3F No. 168 syndicate journeyed westwards for the August Regional at Dunkeswell, whilst Donald Lowe and Dave flew No. 170 at Dunstable.

The only cross-country flight so far from Weston-on-the-Green has been made by John Adams in No. 168 when he struggled 78 miles at low altitude to complete his Silver tasks by a flight to Mildenhall. He has since gained Gold C height with 11,000 ft.

In a less spectacular manner John Ellis continues to use the Gull 3 like the Squire's mare, disappearing into remote corners of Oxfordshire for hours at a time and returning only when all hope of further soaring has been abandoned.

G. Dion, G. Smith and C. Chave have all made satisfactory A and B flights. Chris Tompkins, newly converted

to the Olympia, gained his C with 29 minutes on his first solo and G. Tomlin has made a comfortable Silver height with 4,100 ft.

The most noteworthy achievement, however, has been made on the ground. Whilst help from a number of sources must be acknowledged, the development of the new winch as a compact and efficient looking piece of machinery continues as the result of a sustained solo effort by Keith Plummer. A. S.

OUSE (Rufforth)

THE end of June heralded a new record for the club when Instructor Les Bellamy took the Swallow on its maiden cross-country to gain his, and the club's, first Silver C legs. Declaring Ingoldmells, Les covered 77 miles with height gain on the way, to land at Mumby, four miles short and just being able to discern his goal through the murk. Three weeks later, fellow Instructor Bob Plane also claimed distance and height legs with a flight to Skipsea, using cloud most of the way before landing next to the caravan site on the cliff top.



After his cross-country flight Les Bellamy, of the Ouse Club, shares a joke with (l. to r.) Norman Worthy, Dick Boddy, Mrs. S. Gilbert and visitors.

From among the propshafts and cogs, etc., emerge those stalwarts Jim and Stan Park, usually covered in thick black oil, who, with David Park, are converting a diesel bus into another two-drum winch. Jim and David sacrifice their flying to this end and we could use more members of their calibre — well done lads.

First solos have been credited to Peter Rennison, Mike Maxwell, Colin Stanford and Cliff Houseman. Peter had only been with the club five weeks before solo and was last seen heading to Fayence (by car). The only C's up to the time of writing are by Mike Maxwell (T-21 at Sutton Bank) and Tim Wray in his first ever Swallow flight at Dunkeswell.

Several members spent a few days at Doncaster and Camphill, the T-31B and Swallow being aero-towed across. We were not blessed with a workable ridge at Camphill but experience was gained and we are grateful to Mick Kaye for placing the facilities of Camphill at our disposal. An ensuing clubhouse story by Dick Boddy begins, "Did I ever tell you about the day . . .", after he had out-scared a Dart with the Swallow at Doncaster.

I stand to be grounded for the next few words, but nevertheless, many congratulations to Yvonne Thistle and our "good old" C.F.I. Wilf Coulsey, who announced their engagement unbeknown to us.

PERKINS

OUR launch rate is still very low compared to operations at Westwood last year. However, we have acquired another winch from Rearsby for which many thanks, and hope to use

this very soon.

Peter Gray got his Silver distance with a goal flight to Downham Market, and Reg Bradshaw has converted to the Olympia. Sir Roger Conant has soloed again after some time away from gliding. Gordon Cornell and Colin Donald won the team prize at the Dunstable Regional Competitions. C. C. D.

SCOTTISH

THIS report covers the most active flying period of this year, and it has been particularly pleasing that some of our visitors have shared the highlights.

Strong winds in late June caused difficult conditions, but the frequent appearance of wave conditions tempted many pilots. The most successful of these were — Stan Milne who gained Gold C height and Silver C distance, thus completing his Silver C; W. Lawson (Olympia 460) gained a Gold C height, as did John Everitt in Bill Lawson's Olympia, thus completing his Gold C. Unfortunately the pilots did not have oxygen equipment and were unable to exploit the full potential of the wave, which according to the Tephigram, extended to 22,000 ft.

In early July several Silver C contenders continued their efforts and a visitor — Elizabeth Douglas (Swallow) logged the first 5 hour duration of the month, following this George Elliot (Weihe) completed his Silver C with a thermal flight to Peebles. Wave conditions reappeared in mid-July and Tom Webb (Swallow) explored the north-east gaining Silver C height and distance. The month ended with 5 hours duration by Doug Mackay (Swallow).

In the latter part of the month the summer courses investigated many wave systems and altitudes of 6,000-13,000 ft. were frequent. Visitors during this period included George Collins and George Tuson (Skylark 4) from Cornwall and both found considerable interest in the varied conditions. W. A. S.

SOUTHDOWN

SINCE our last report Jim Tucker has taken the Olympia along the Downs in a north-easter 49 miles to Butser Hill, near Petersfield.

Our first non-members course this year was held at Shoreham Airport and proved to be a great success, with a total of 148 launches between 5 course members. We would like to thank everyone who contributed to the running of this course, including Harry Howitt, who took on the instructing for the whole week.

20th June was an exceptionally good day, with the T-21 out-and-returning to the coast and good soaring flights by Stuart Brooker, Geoff King and Alan Boyle. The latter two soaring the Tutor with Geoff doing 40 minutes for his C flight. The 463 landed at Firle the same afternoon after being flown back from Lasham by Chris Hughes.

Bob Lowther has gone solo on the Tutor, and Jenny Goldstein and John Lovell have converted to the Swallow.

Highlight for the summer for a number of members was a week's course at the Mynd, where the weather was co-operative giving hill lift, thermals and wave. All the Tutor pilots enjoyed soaring the Prefect and Dave Bryant and John Lovell had their first taste of wave flying; Dave getting his C and John reaching 4,400 ft. in the Swallow — but, alas, without a barograph. Ron Walker and Peter Wildbur had interesting wave flights, Ron reaching 9,600 ft. in the syndicate 463. I should mention that Geoff Creffield did 90 miles on his first cross-country from the Mynd in 463 on an earlier expedition, reaching Abingdon airfield.

Our congratulations, even if a little late, to Christine and John Everitt on their recent marriage. We look forward to seeing them down at the club very soon, either on or off "duty". P. W.

STAFFORDSHIRE

WE are having something like a soaring season this year and six more members have flown their C's since the middle of June. Barry Ward, Neil McKay and Alistair Wright collected theirs on 20th June. Bill Jeffs managed it on 4th July, when Bertie Aranyos also qualified. All these flights with one exception were made in the Tutor. On 9th August Barry Gilman took the Olympia up for 35 minutes to claim his C. Several pilots have converted to the Olympia and this aircraft is now flying more regularly than the Tutor.

Ian Robinson has flown his Silver distance in the syndicate Olympia flying from Kirton-in-Lindsay to Scunthorpe while on a course at Kirton.

Meanwhile, back to the T-31 the circuit bashing fraternity have yielded up another four soloists — Ron Cook, Roman Derc, Roy Ibbs and Derek Longland. The club has now trained 25 ab-initio's to solo standard and the bottom of the barrel is in sight, though a recruiting drive is expected to bring in some more members shortly.

A clubhouse will soon be erected at Meir due to the fortunate purchase of two large wooden huts which had become available due to reorganization at the works where many of our members spend their non-gliding moments. Boris Clare was largely responsible for stepping in smartly here and we will all be grateful when the chill winds of winter blow again.

A. W. H. L. W.



Re-opening of the Swansea Gliding Club.

SWANSEA

WE are airborne again!

Since we've had a new lease of life, we feel worthy of this, our first contribution to club news.

Last season brought things to a disastrous head and crisis followed financial crisis, culminating in the sale of our only aircraft.

Now under new management, with life blood pouring into and through our bank heart account a new spirit pervades the club and — by cable and winch — we are airborne again!

The club was officially re-opened by the Mayor and Mayoress of Swansea, tape-cutting in the picture, accompanied by other civic dignitaries and local council officials on 11th July. Doncaster Club having made an epic dash to get the T-31 to us in time for the ceremony.

B.B.C. T.V. featured us and we were well publicised in the press. Fame at last!

Membership is increasing, the T-31 is hardly ever earth-bound and a number of earthlings are flying solo regularly in the short time since ops. resumed.

A. G. F.

WORCESTERSHIRE

OUR Summer Camp proved most successful six members going solo and three, Ray Ayres, Keith Tillesley and Bernard Kelly made their C flights in the Tutor.

We have had, over the past weeks, the pleasant experience of seeing either our two T-31's or T-21 and Tutor both in the air together, soaring flights of up to half an hour and 2,800 ft. having been made.

We have decided that our number one priority is to obtain a larger hangar, to save rigging and de-rigging.

We have had visits from two or three power aircraft, including a Tiger Moth with towing attachment, and this enabled a few trial aero-tows to be undertaken.

T. M.

YORKSHIRE

RECENT months have been eventful as we have been pleased to welcome several illustrious visitors and club members have ventured far afield over North Yorkshire to make this season the best for week-end cross-countries for many years.

The Archbishop of York, Dr. Donald Coggan, paid an unofficial visit to the site on the 12th July and flew for some fifteen minutes with the C.F.I., Chris Riddell. Dr. Coggan expressed his pleasure at his flight, and took tea with John Reussner, Peter Lockwood, Harold Salisbury and others in the clubhouse, while Henry Doktor took the Rev. John Douglas, the Vicar of Kilburn, who had introduced the Archbishop, up to cloudbase.

We were pleased to see George Collins of the Cornish Club on the 5th August. George and his wife stayed with us for the night on their way from Port Moak to Swanton Morley. George Collins continued his journey in his Skylark 4. He took a winch launch and climbed to over 9,000 ft. over the site and then flew on to land at Swanton.

Since the last notes were written extensive wave flying has taken place. Most notable were Barry Goldsborough's climb to 12,500 ft. on 27th June, Chris Riddell's climb through cloud to 9,700 ft. on the 26th, Joe Provins went up to 8,800 ft. in that evening. Many other pilots also enjoyed wave climbs in the vicinity of the site, assisted by a tow from the Tiger. Tim Birch went up to 8,000 ft. in the Swallow one night when nobody noticed a wave was blowing.

Cross-country flying has been very popular and on the 28th June over 500 miles cross-country were flown to give only two away landings. Barry Goldsborough in his Sky went to Doncaster and back, while Brian Fisher went to Selby and back in the club Skylark 2c. 8th August gave us a pool of cold air over the site and Cu. Nb. to great heights, one of which took Barry Goldsborough to 13,000 ft. for his Gold C height gain. He hadn't a barograph on his wave climb. Tony Smallwood went up to 9,000 ft. for exercise on the same day.

We were the guests of the Cleveland R.A.F.G.S.A. Club at Leeming on the 18th and 19th July, the weather gave some splendid hail and thunder but finally cleared to give a short sharp wave to 12,000 ft. and Joe Provins got up to 8,000 ft. before it died. Although this was a disappointment as a competition the hospitality of the R.A.F. was first-class.

The domestic side of the club thrives under the guidance of Jack Dent and a very successful cheese and wine party was held recently.

The marriage of club members Chas Boyer and Elizabeth Taylor took place in Leeds recently. We wish them every happiness together. J. C. R.

SERVICE NEWS

ALDERSHOT (Odiham)

WE are a service club belonging to the Army Gliding Association and operate at week-ends from R.A.F. Odiham, which is about five miles from Lasham. We started flying with one winch at the end of February and now operate a towcar as well. Any member of the Armed Forces of the Crown is welcome to join but please note that the welcome soon fades if every time the sun goes in the member goes home. Members of the Army, Navy and Air Force serve as instructors, so whichever service you belong to your language will be spoken.

Although we are still young the service plague has already hit us. John Thomson — a stalwart founder-member — has been posted to Laarbruch. John Rothwell, our hard-working secretary and treasurer, is also posted.

On the success side three C's have been flown (although passing that Aviation Law paper is holding the paperwork up). Alan Brew flew his three Silver C legs from Odiham within three weekends. Our Grunau has been seen at the top of the stack at Lasham wondering what all those Skylark pilots were doing down below him. R. A. E. D.

BANNERDOWN (Colerne)

THE following have achieved their A and B certificates: Bob Gordon, Chris Read, Derek Aldous, Keith John-

son, Ray Ingram, Rod Tew, Grahame Yates and Peter Bucke. Secretary Padre Mackenzie, Martin Yates, Keith Vater and John Whittaker flew their C's. Mike Channon flew his Silver distance and Mac Macintyre his height, but somehow a smudged barograph trace proved an obstacle to ratification.

Roy Gaunt completed his Silver C with a 73 km. flight to Lasham. Later Roy investigated a cu-nim and emerged at something over 10,000 ft. At the time of writing it is uncertain whether Gold C height is in his bag.

Eric Hales, Roy Gaunt and Mac Macintyre have been to Bicester and returned as Assistant Instructors. Camps have been attended and expeditions organized. P. H.

CHILTERNS (Benson)

ALTHOUGH the last couple of months have not seen many certificates on the operational side our programme of aircraft recovering and respraying is now complete and the M.T. is all running smoothly.

Gerry Harling is congratulated on gaining his A, B and C certificates in rapid succession.

There are changes about to take place in the club due to postings. We will be saying goodbye to Wilf Pickles, our C.F.I. who is off to Germany, Jim Martin and Terry Perry who is now somewhere in Yorkshire. We welcome Jim Blundell who has been posted in from Cyprus. A. T. B. W.

EAST MIDLANDS (Swinderby)

POOR weekend weather has restricted and frustrated our cross-country pilots, especially as there have been some excellent conditions on weekdays. With the closure of Swinderby as a flying station, however, we are now able to use the airfield during the week and flying has taken place for twenty days during the last month. Our main winch run has been extended and now gives us 1,500 ft. launches, which are a great help.

Bill Marshall visited Sutton Bank on his holidays and helped himself to five hours to complete his Silver C. Ted Barker gained his Silver height and distance, Clarry Parker, Chuck French, Brian Fogg, Alan Ball and Tom Lawson their C certificates. Nine A and B certificates have been obtained and these nine pilots are now busily engaged in thermal-searching.

At the Aspirants' Competition at Bicester, the club was represented by Con Greaves who did very well in League One and Paddy Hogg, who was in League Two. J. G. W.

FOUR COUNTIES (Spitalgate)

WE seem to have been absent from these pages for quite a long time now and some of our friends in the R.A.F.G.S.A. must have thought the club was extinct.

On the aircraft side, the Grunau and the T-31 are again flying after refurbishing and very shortly the Tutor will also be airborne once again. The T-21B is still flying and this winter will be fitted with a canopy. The Olympia is now fitted with an artificial horizon as well as a turn and slip also oxygen equipment has been installed. Our thanks to Fred Slater who is again doing sterling work as our aircraft Member.

Now that the Humber Super Snipe retrieve car (fitted with a Perkins P6 diesel engine) is serviceable we are reasonably happy with our ground equipment.

Silver legs gained this year so far are, distances from Dick Barrett, Simon Morrison and George Halliday. Durations from Simon and George (Silver completed) and height legs from Ian Smith and Chris Lister. On the 3rd August Maurice Pearce managed his C flight in the Grunau and on the same day "Dinger" Bell collected his A and B in the T-31.

Our thanks to David Brook and the members of the Clevelands club who made Fred Slater and his retrieve crew very welcome during the weekend competition at Leeming. We are pleased to welcome Geoff Barrell and Mike Baker to the club but are sorry to lose Simon Morrison and Chris Lester due to postings.

Finally, we extend a warm welcome to any gliding types arriving at Spitalgate whether they arrive on wheels or wings.

On 9th August Chris Lister gained his

Silver distance with a flight of 37 miles. He also climbed, on turn and slip only, to 11,200 ft., gaining his Gold C height leg. Well done, Chris ! I. G. A.

MOONRAKERS (Upavon)

EARLIER this year we introduced a package deal for new members: for 50s. (paid in advance) we provide 25 instructional flights, two text-books and a log book. This system is now proving most successful.

This month we had our first female solo for some time — Gillian Bridson follows her husband Derek who has gained his C Certificate after soloing earlier in the year.

In the August Club news we said we were not doing so well on the flying side but this has changed and we have many successes to report. John Williamson, who has been running a summer camp at Keevil during August, hurried round a 100 Km. triangle at 49 m.p.h. which could have been a U.K. record had there been an Official Observer at the turning points.

(On 30th August John Williamson broke the U.K. Goal-and-Return record by flying to Swinderby and back, 274 miles.—ED.)

We had mixed fortune at the August Aspirants' Contest at Bicester. Eric Reeves had the misfortune to injure his back landing in a rough field on the second day and could take no further part in the competition. Doug Bridson flew consistently well to win the League 1 competition, hotly pursued by ex-Moonraker Dennis Stubbings. John Martin has completed his Silver C — he did his duration in May, distance in July and height in August. Geoff Chandler completed his Gold C by getting his height in July.

Our winter programme will include the annual dinner which is to take place on 21st November. Any ex-Moonraker who wishes to attend should contact Flt. Lt. D. Bridson, Station Adjutant at Upavon. E. J. M.

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

JUNE and July have been two very successful months with over 500 hours flown in each month. This represents an average of forty hours per aircraft per month, better than many powered aircraft in the R.A.F. During this time Fred Plumb, Taff Shannahan, "Dusty" Miller and Chief Tech. Payne have all completed their Silver C's. Taff Shannahan succeeded in completing his inside a single week.

All the Gold C distance attempts have so far been defeated by sea air over Devon and Cornwall. Pamela Shipton has got her C and Silver C height, Midlands has his Silver height and distance, having overflown his briefed goal of Lasham and landed at Shoreham. Bob Patchett, one of the tug pilots, has gained his C in accordance with the general policy that all tug pilots should also fly gliders. Unfortunately, he has now left us to fly Gnats at Valley.

The SF-26 has now been reallocated and is going north to Acklington. We wish them well in their search for winter waves. In return we have gained an Olympia 463 which seems to be a very successful high performance club aircraft. R. P. S.

PORTSMOUTH NAVAL

AT the A.G.M., held earlier in the year, Lionel Bowles, Ian Hammond, Keith Morton, Alan Williams and Peter Wilson were elected to serve on the committee.

Peter Wilson was awarded the Goodhart Trophy for 1963 for consistently good flying and for his untiring efforts on the Club's behalf.

Ian Hammond, Keith Morton and Peter Wilson have been trained as Club Instructors, the first trained at Lee for some time.

Leslie Vine managed his C on Easter Monday. This was the first one of the year, at Lee, and was done on a day when other gliding sites, in the south, were having heavy rain.

Tony Redhouse went to Lasham to do his C and Alan Redbourne to do his Silver height.

We were pleased to see the arrival of the Tiger Moth recently, and have already had some aero-tows behind her, in spite of some early teething troubles.

We have to thank Ian Hammond and his P.F.A. group for this enterprising venture and look forward to more soaring from Lee in the future.

Mike Berridge, Jim Gill, Graham Rock and Leslie Vine have converted to

the Skylark and enjoyed the new experience.

We have been fortunate in obtaining a grant from the Nuffield Trust for the purchase of an auto-tow vehicle. When this arrives, he shall be able to overhaul our rather tired winches.

John Limb did his five hours at Dunstable in Humphy Dimock's Skylark 4 and our C.F.I., Peter Davies, just missed his at Lee in our Skylark with 4 hours 40 minutes—so one can soar at Lee sometimes.

L. D. V.

EAGLE (Detmold, Germany)

AS reported briefly in the last issue the club was allocated ten minutes of the first Army Air Corps flying display to be held in Germany. C.F.I. Ted Shephard gave a magnificent aerobatic display in the Swallow, terminating with a low level "beat up" at about five feet. Bryan Middleton gave a demonstration winch launch and then dropped a large teddy bear on a parachute, much to the amusement of the crowd.

We have had quite a reasonable amount of soaring in the last two months. Congratulations to Ken Ward, Harvey Barker and Lyn Yates on their Silver C heights. Bryan Middleton managed to get his whilst flying at Lasham.

John Welsh took our rather old and battered trailer away and has now brought it back completely rebuilt, really a case of "new trailers for old". Thank you, John, for a first-class job.

The club has just bought another Grunau Baby. This is in excellent condition and even sports a draught free canopy.

Recently we welcomed Brigadier Dobson, chairman of the R.A.F. Germany G.A., up here on a visit.

Finally, an invitation to all gliding types. If you are ever in this part of the world, please pay us a visit.

H. B. E. M.

LAARBRUCH (Goch, Germany)

LATE April a party went to Terlet and Harry Shaw and George Ross attempted Gold distances and Diamond goal flights. Harry went 28 km. and George 296 km. I don't know who was the most disappointed.

From the 15th-25th May the Club took part in the R.A.F.G. Competition and everyone had a wonderful time. Three aircraft were entered (Ka-6, Steve Warwick-Fleming; Ka-2, George Ross; and the B-Spatz, Harry Orme) and they flew a total of 1,260 km. taking 52 hours to do it.

On 30th May Tony Barber flew the B-Spatz 57 km. to qualify for Silver C distance. Al Stevens and Barry Nowells both attained Silver C height in the Grunau 2 and 3 respectively. George Ross had a near miss at Gold C distance with a 297 km. "towards" Hamburg, followed three weeks later by Harry Shaw with a 320 km. flight to Saarbrucken, gaining a Gold C distance and a Diamond for Goal. Well done, Harry, and thank you, Terlet.

The last week in July deserves mention as it gave us 46 hours soaring and every club member had at least one soaring trip, proving to one of our members that gliders can stay up longer than five minutes. During this weekend Noddy Brooke stepped on to the Silver C ladder with a climb of 3,700 ft.

The August Bank Holiday weather was very poor and very little flying was done, but whilst testing the Turn and Slip in our Ka-6 Sqd.-Ldr. Ramsey-Brown climbed from 1,800 ft. to 6,000 ft. in cloud, proving that it did work and gaining a Silver C height as well, at the same time Trevor Olner and Nowell Baker gained their A and B Certificates. Our new innovation, Friday evening flying, has proved a success and A and B Certificates for Mike Chapman.

A. G. S.

RED HAND (Ballykelly)

ON 29th February/1st March Mrs. Ann Welch honoured us with a visit and flew with our C.F.I., Flt./Lt. Tim Bradbury, and Cpl. Spider Webb. She also flew with four of our u/t instructors, Lt.-Col. N. Christie, Flt./Lt. Dick Snell, Gordon Mackie and Tom Heaslip. Ann gave us a very amusing, illustrated talk on the 1963 World Championships. Her visit was a great success and we now have authority to run our own instructors' courses. So far this has resulted in John Ellis coming up and awarding provisional categories to W/O Bernard Longstaff and Gordon Mackie.

Duration legs have been flown on Benevenagh by W/O Dave Laming, Tom Heaslip and Grenville Hill. Sgts. Dobson, Garlick and Lewis have completed *ab initio* courses at Ballykelly and have soloed in a Grunau, vicariously lent to us by the R.A.F.G.S.A. Centre at Bicester.

J/T Ken Edwards, Sgt. Alan Farmer, Tom and Grenville completed the major on the Oly, are working on the T-21 and will soon complete the Tutor. We say goodbye and thank you to Ken for all his work and wish him success on his Signallers' Course.

All pilots, please note: Our 3rd annual Wave Project will take place from 19th December to 3rd January, 1965. Aerotowing by DH 82a will be laid on, plus minimum of three sailplanes. All interested in soaring at the finest wave and ridge site in U.K. are asked to contact the C.F.I. before Advent Two.

G. M. H.

OVERSEAS NEWS

AUSTRALIA

ADELAIDE Soaring Club's annual Easter Regatta was the best yet with 14 machines entered.

Friday's task was Auburn out-and-return, total 80 miles, with an inversion at 5,000 ft. and thermals 1,000 ft./min. in patches though widely spread. Dick Deane won in a Ka-6, with Bob Rowe in a Briegleb BG-12 close behind with 951 points and Ross Isaacson in a Ka-6, 840 pts.

On Saturday a 100-km. triangle was won by Sue Suter in a Ka-6; she got improved conditions through making a later start than John Rowe in the BG-12, who rolled several hundred yards on landing and completed the course by inches.

Sunday was the best day with lift up to 1,500 ft./min. and an 8,000 ft. ceiling. The task was twice out-and-return to Roverton, 30 miles away, making 120 miles. Malcolm Jinks won in a Ka-6, Stewart Cox got 860 pts. in a Ka-6 and Rob Moore 820 in the BG-12. Charles Suter, in an Arrow, was chasing his wife Carmen and daughter Sue who were together in an ES-49.

Monday brought an overcast sky, little wind and very weak lift, and only Eric Sherwin in an Arrow completed the out-and-return task to Rosewarthy Silos, five miles away, and back, earning 1,000 pts. Reg Moore (Ka-6) and Tony Le Page (Arrow) each had 500 pts. for getting there.

The Ka-6 type is now being built under licence in Australia by Edmund Schneider Ltd. The new editor of *Australian Gliding*, Gary Sunderland, describes its introduction as a "breakthrough" which has "led to a completely new outlook in Australia". Club-owned Ka-6's have made four of the six Diamond Distance flights so far done in Australia, and the Victoria Motorless Flight Group at Berwick "have found that their Ka-6 will soar hours after the sea breeze has passed through".

Millicent Gliding Club has been allowed by D.C.A. to remain on the local aerodrome although an aero club also operates there.

—AUSTRALIAN GLIDING.

AUSTRIA

IN the National Championships (won by Wödl—see last issue), 12 of the 35 participants exceeded 4,000 points, with a spread of only 437 points between the 3rd and 12th place; 10 more exceeded 3,000 points. There were five contest days, not six. Oldest participant was 44, youngest 21.—AUSTROFLUG.

Siegfried Kier, who finished 3rd in the Nationals, has flown a 517-km. triangle from Leutasch, near Innsbruck, via Engstlenalp and Bernina.

At an advanced course in Austria, within one week 13,200 km. (8,202 miles) were flown and 21 Diamonds gained, three being for 500 km. distance.—SWISS AERO REVUE.

BELGIUM

THE National Championships, held from 4th to 14th June at Saint Hubert, were won by a Swiss visitor, Hans Nietlispach, flying a Skylark 4. Thirty entries, of whom 19 scored, included also a French visitor, Lefebvre, who finished 11th with a Javelot.

Highest placed Belgian pilot was M. Baeke, with a Ka-6, who had won the Victor Boin Trophy a month before.

The tasks were:

June 4th: 62-km. Race to Spa, won by Cartigny; Drory got 943 points, Nietlispach 935. Dorlodot landed his Ka-6 in trees at Spa.

June 5th: Free Distance; forecast wind 25 knots at 4,000 ft. Nietlispach made 330 km. to near Cologne; van Treeck (Mucha) 180 km.; seven others between 82 and 30 km.

June 6th: 200-km. Triangle; four completed it—Stouffs (Ka-6) at 46.2, Drory (Zugvogel) 39.6, Goethals (Austria) 39.0, and Nietlispach (Skylark 4) 36.6 km/h. Nietlispach now led overall with 2,727 points to Drory's 1,945.

June 8th: Only Nietlispach, Baeke and Sander (Mucha) scored, in that order.

June 9th: Out-and-Return, Balan, 258 km. in all. Only Baeke and Smet (Super-Sagitta) completed it, taking over 6½ hr.; Legrand (Mucha) went 198 km., Nietlispach 188 km. Wind weak and variable.

June 10th: Race via Casteaux to Temploux, 157 km., completed only by Drory (54.7 km./h.) and Baeke. Nietlispach 5th with 141 km., but still leading overall with 4,474 pts. to Baeke's 3,723.

June 11th: 100-km. Triangle; wind 5-10 knots. Baeke averaged 40.2 km./h., Nietlispach 34.6, and three others completed it.

June 12th: Distance round and round a 100-km. triangle. Six went round at least once; Nietlispach won with 174 km., and led Baeke overall by 1,330 points.

June 13th: Free Distance; cold front expected in afternoon, preceded by stable lower air which would need 27°C (80°F) surface temp. to start thermals. Actually big cu-nims preceded the front by 50 km. Nietlispach made 310 km., against 234 by Legrand.—CONQUETE DE L'AIR.

Leading Final Results

1.	Nietlispach	Skylark 4	7385
2.	Baeke	Ka-6	5440
3.	Drory	Zugvogel	5043
4.	Cartigny	Foka	4456
5.	Smet	Super-Sagitta	4432
6.	Sander	Mucha	4345
7.	Van Treeck	Mucha	3100
8.	Thirion	Ka-2	2701
9.	Legrand	Mucha	2655
10.	Goethals.	Austria	2254

While visiting St. Auban in France, Michel Doutreloux, of the Aéro Club de la Meuse, set up a Belgian absolute altitude record of 8,120 m. (26,640 ft.) on 8th June, together with a gain-of-height record of 7,320 m. (24,016 ft.). Previous national records: 7,600 m. by Marcel Cartigny on 13th January, 1960, and 6,500 m. gain by Roger Meulemans on 4th December, 1960.—AVIASPORT.

CANADA

AT Brantford, Ont., Canadian soaring champion Dave Webb, of Montreal, has retained his title by winning the 1964 Canadian National Soaring Championships held there 21st-30th July. Webb, flying a British Skylark 4 high-performance sailplane, scored 5,462 pts. He retains the Shell trophy, awarded to the top Canadian soaring pilot.

In second place was Peter Mortensen, of the Gatineau Club, Ottawa, with 4,758 points. Charles Yeates of Montreal came third with 4,652. Roy Gray of Brantford was fourth with 4,639. Gray also won the Dow trophy for the best speed over a triangular course, covering a 66-mile triangle at 32.8 m.p.h. average.

Two Toronto brothers, Guy and Pat Newman, won the team event and were awarded the Carling team trophy. The Southern Ontario Soaring Association trophy for the best performance by a novice contest pilot was awarded to Johann Kuhn of Detroit, who was in fifth place. A second Dow trophy for the best speed to a goal was awarded to Dick Schreder of Bryan, Ohio, who covered 146 miles to Glencove, Ont., and return at 45.8 m.p.h. average.

The soaring championships were held at Brantford municipal airport and were sponsored by the Southern Ontario Soaring Association under the sanction of the Soaring Association of Canada. Twenty-four high-performance sailplanes and 40 pilots were entered in the contest, including seven aircraft from the U.S.A. —SOUTHERN ONTARIO SOARING ASSOCIATION.

Gatineau Club's annual Whitsun competition at Pendleton was also won by Dave Webb in his Skylark 4, and Ed Laenen came second, also in a Skylark 4, out of 11 competitors. Two of the three days were soarable. On the last

day, in addition to competition flights, six pilots took off for Megantic, Quebec, 205 miles east, trying for Diamonds, but only John Chesbrough in his Ka-6BR is believed to have made Gold C distance with 190 miles.—SOARING.

CZECHOSLOVAKIA

RESULTS of the national championships are reported in *Skrzydlata Polska*. The table includes only the leading Czechoslovakian pilots, but all the foreign visitors.

Pilot and nationality	*Pts.*
1. Julian Ziobro (Pol.)	5,867
2. Milan Svoboda (CzSl.)	5,538
3. Vaclav Marecek (CzSl.)	5,344
4. Jan Satny (CzSl)	5,139
5. Rudolf Mestan (CzSl)	4,980
6. Janos Csepan (Hung.)	4,919
21. Aleksander Rusew (Bulg.)	3,323
26. Jozas Jaruszawicius (USSR)	2,737
29. Pal Szereday (Hung.)	2,650
31. Andrzej Kmiotek (Pol.)	2,419
35. Stojan Jofczew (Bulg.)	2,237
38. Albert Durnow (USSR)	1,921
39. Manfred Warstat (E. Ger.)	1,783
41. Reinhard Woelk (E. Ger.)	421

Tasks and their winners were:—

118-km. Goal: Svoboda (CzSl.) at 88.2 km./h. (54.8 m.p.h.). Completed by 16 competitors.

114-km. Goal: Ziobro (Pol.) at 56.4 km./h. Completed by 12.

102-km. Triangle: Kmiotek (Pol.) at 67.2 km./h. Completed by 36.

204-km. Triangle: Svoboda (CzSl.) at 65.2 km./h. Completed by 34.

521-km. Triangle: Not completed. Svoboda (CzSl.) and Rusew (Bulg.) made 467 km.

107-km. Goal-and-Return: Svoboda (CzSl) at 60.9 km./h. Completed by 30.

116-km. Goal-and-Return: Smolka (CzSl.) at 65.5 km./h. Completed by 15.

(Jaruszawicius and Durnov were mentioned as likely members of the Soviet team for next year's Internationals, in the article we published in June, p. 180. —ED.)

DENMARK

THIS year's Scandinavian Championships were held in Denmark, with visitors from Sweden and Finland. Total points:

Sture Rodling (Swe.)	Vasama	7666
Niels Sejstrup (Den.)	Ka-6	6928
Mat Wiitanen (Fin.)	Kajava	6578
Juhani Horma (Fin.)	Vasama	6503
Ib Braes (Den.)	Ka-6	6085
P. A. Persson (Swe.)	Vasama	5985
Irve Silesmo (Swe.)	Ka-6	5767
O. Didriksen (Den.)	Libelle	5473

SWISS AERO REVUE does not state whether these were the only pilots. The Libelle could be either the well-tried East German type, or the new fibreglass Hütter 301.—ED.

FRANCE

TWENTY entries for the Second French Military Gliding Championships at Dole included 1 *Lieut-Colonel*, 4 *Lieutenants*, 1 *Sous-Lieutenant*, 5 *Sergents-chefs*, 1 *Sergent*, 1 *Adjudant-chef* and 6 *Adjudants*, while Colonel Mantelli came from Italy to fly *hors concours* with a Canguro. The Wassmer 21 was the most popular machine with six entries.

June 22nd: only Cartry completed a 241-km. triangle, so it became Distance along a Line, and Barry won after *coefficients de finesse* had been applied. 23rd: three pilots reached a 165-km. goal in pure thermals; Henry won. 24th: on a 107-km. out-and-return Henry went fastest but Berry won with a handicap. 25th: "turbulence rendered the pure thermals inexploitable". 26th: with cumulus and cu-nim, no one completed a 177-km. triangle but four went 124 km., one of them being taken to hospital with minor facial injuries. 27th: Cartry won easily among 11 who completed a 126-km. triangle. 28th: everyone completed a 112-km. goal-and-return to Besancon and 10 did it again. Cartry was best with nearly 80 km./h.

Though Lieut. Henry performed best overall, the handicap applied to his Edelweiss with its 1:35 gliding ratio put him in second place with 4,681 points, and Lieut. Berry with a Wassmer 21 won with 4,715 points. Sous-Lt. Cartry with a Breguet 905 was 3rd with 4,715 points.

The Siren firm at Versailles has begun producing the Edelweiss in series.—AIR ET COSMOS.

Pierre Bonneau points out in *Air et Cosmos* that in 1948 France had nearly

1,600 gliders; now there are less than 900, and during the past eight years only 275 new gliders have been acquired, including 12 from abroad. He attributes this decline primarily to gliding being a costly sport, and among secondary causes are restrictions on freedom of the air in the Paris region.

In 1963, 99,724 hours of gliding were done in France; certificates obtained were 1,083 C (including 650 pupils under 21), 179 Silver C (50 under 21), 30 Gold C (5 under 21), and 2 completed Diamonds. Accident statistics were:

Private associations and persons (85,350 hours' flying), 46 accidents of which 22 were attributable to piloting faults: 2 were fatal and 5 others caused personal injury.

At National Centres (37,934 hours), 8 accidents of which 4 were attributable to faulty pilotage; no injuries.—AVIASPORT.

HUNGARY

DURING the Polish Championships the two Hungarian visitors, Gyorgy Uivari and Gyorgy Petroczy, each went round a 535-kilometre triangle on 10th June at 80.6 km./h., which was only 3.1 km./h. below the day's winner. This was a Hungarian national record for the 500-km. triangle; but in the report received from Poland, Uivari alone is designated as the record holder. In the whole contest Petroczy finished 9th and Uivari 19th among 36 competitors.

Alex Aldott claims a Hungarian national distance record for a flight of 465 miles he made from Texas to Nebraska on 31st July, the day Al Parker flew over 1,000 km. He averaged 90.9 km./h. (56.5 m.p.h.). He "chose a northerly course over a wet irrigated area" in order to be in time for a show he and his wife were doing in Wisconsin.

IRELAND (Dublin)

SINCE the last issue, we have been offered the use of a Bergfalke two-seater and trailer, originally used by the Cork Gliding Club, in return for paying the cost of a C. of A. overhaul, and Comprehensive Insurance. Naturally, such a generous offer was too good to refuse, and the modification work on our Tutor has been suspended for the time being.

All our solo pilots now hold C Certificates, which has led to much secret planning for Silver C requirements, and fierce competition to be "first". Our old Kite, however, is the only aircraft yet available for cross-countries. Our Ka-7 is best for soaring, but still lacks a trailer. (Can anybody please offer us a Ka-7 trailer, reasonably cheap?) Anyway, this Bergfalke should ease the burden of instruction on the Ka-7.

The soaring season is now in full swing here, and various complicated schemes exist to give everyone a fair chance to soar. At the moment, a group of advanced members have again taken the Kite and some Instructors to visit our friends in Clonmel, all hoping to achieve five hours on the ridge there.

C. G.

ITALY

A VISITOR to the Italian National Gliding Centre at Rieti, Wilfred Harper, of the Bristol Club, describes it as "magnificently located in a wide basin

Success for Crossfell Variometers and Audios

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in the Apennines, and there are plenty of thick strong thermals, blue skies and warm sunshine, not to mention the wine and the company". Although he arrived "unknown and out of the blue", he was welcomed with exceptional courtesy. Of Snr. Vitelli, the resident instructor, who took him up in the Bonaventura and Canguro, he writes:

"For the past two years he has been building up Aosta as a gliding centre, but has now returned to Rieti as resident instructor. He will remain there for this season at any rate, and as you will know, he is also a ski-instructor and may take this up during the winter."

Sr. Ugo Goggi is the Director, and Sr. Scano, who lives in Rieti, instructs in his free time.

Entries in the Italian Championships number 35, including four visitors: Rolf Spänig (Germany) with a Ka-6, Rudolf Seiler (Switzerland) with a Ka-6, Marian Gorzelak (Poland) with a Foka, and a Yugoslav pilot. Of the 31 Italian entrants, 20 are flying the M-100s type and three the Uribel; Skylarks are entered by Antonio Ferrari, Giorgio Orsi (3F) and Adele Orsi (Skylark 4).—VOLO.

Total glider flights in Italy during 1963 were 17,826; flying hours were 11,341 soaring and 2,974 training, against 10,620 hours in 1962. Distance flights were 377, covering 38,687 km., but these figures include 21 flights of 6,597 km. total during the World Championships in Argentina. One full Diamond, one Gold C and 12 Silver C's were completed. The country's glider fleet is composed of 97 single-seaters and 39 two-seaters; total 136.—ALI NUOVE.

NEW ZEALAND

AUCKLAND Provincial Championships were held at Waharoa airfield in the last four days of February. J. Cooper won with a Ka-6 and R. Court came second with a Skylark 4, among 15 entries comprising seven Ka-6's two Olympia 463's, a Skylark 4, two Skylark 2B's, a Ka-7, a Standard Austria and a Grunau Baby. A Government Met. Officer's briefings were "always accurate and well presented".

First task: 160-mile Triangular race. A sea breeze from the Firth of Thames killed all lift on the final leg. Four pilots, after rounding the second turning-point, went back along the second leg to the last lift and, from 5,500 ft., glided 22 miles against a headwind and reached Waharoa below 1,000 ft. They were J. Cooper, who won with 5 hr. 2 min., R. Reid, D. Yarrall and R. Court.

Second task, 114 miles Out-and-Return, proved impossible with a 2,000 ft. cloud base due to a cold front. Cooper and Reid drifted over 20 miles down wind in no sink till brought down by high ground and rain.

Third task, on a day of rain squalls, was Distance to Te Poi then a Triangle from there via Viou and Morrinsville and back to Te Poi. Most took the maximum three launches before reaching Te Poi. Cooper, Court, Cameron and Reid reached Wiou upwind "by tucking in against the face of the Kaimai Range and using the fringe of the lift feeding a cumulus laying along the top of the ridge". Cooper went farthest.

Fourth task: 111-mile Triangular race. "The day quickly over-developed and a large area of rain and thunderstorm activity brought most pilots down before the first turning-point." But Cooper and Cameron went well off course to the north and waited for the rain to move from the turning-point area. Cameron "worked a weak sea-breeze front" and reached the first turning-point, while Cooper, who had deviated less far, came down more than half-way along the second leg and won the day.

—AUSTRALIAN GLIDING.

Leading Final Results

J. Cooper	Ka-6	3000
R. Court	Skylark 4	2077
R. Reid	Ka-6	1916
A. Cameron	Skylark 2	1720
D. Yarrall	Olympia 463	1569
H. Scoffin	St. Austria	1358
P. Heginbotham	Ka-6	1084
D. Wright	Olympia 463	1076
R. Connor	Ka-6	973
J. Roake	Ka-6	920

POLAND

BRIEF results of the National Championships, which were won by Franciszek Kepka, were given in the last issue (p. 337). We have now received a full table of each day's results from Adam Zientek, and some particulars are given below.

June 7th: 222-km. Triangle, won at

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51.3 km./h. by Gyorgy Petroczy, one of two Hungarian visitors. They, and two visitors from East Germany, flew their own Fokas, and all 32 Polish competitors also flew Fokas. Only three others completed the course this day: J. Popiel, J. Adamek and M. Krolikowski. More than half the field exceeded 200 km.

June 9th: 333-km. Triangle, won at 64.4 km./h. by Jan Wroblewski, last year's champion. Only two others completed it, F. Kepka (eventual winner) at 64.1 and A. Kmietek at 58.4. No one else exceeded 255 km.

June 10th: the great day when 34 of the 36 completed a 535-km. Triangle, Leszno-Lubien-Olesno-Leszno. There was a remarkably narrow spread between the fastest and the slowest. Speeds were as follows (83.7 km. = 52.01 miles, 63.7 km. = 39.58 miles):—

Pilot	*Km./h.*	*Pilot*	*Km./h.*
Gorzelak	83.7	Makula	77.8
Pieczewski	83.5	Krolikowski	77.4
Kluk	83.4	Niechwiejczyk	77.2
Kepka	82.9	Wroblewski	76.9
Kmietek	82.6	Gora	74.1
Skolski	82.4	Sienkiewicz	73.9
Krasinski	82.3	Jakob	73.6
Muszczynski	82.2	Rakowski	73.2
Merlo	81.9	Wielgus	72.0
Popiel	81.6	Popiolek	71.0
Uivari	80.6	Szachewicz	69.9
Petroczy	80.6	Smolinski	69.5
Kucinski	79.8	Pasierski	66.5
Witek	79.5	Fuchs	65.3
Adamek	79.3	Kochanowski	65.2
Makne	79.2	Dankowska	64.2
Ziobro	78.9	Wissmann	63.7

June 11th: Out-and-Return Miroslawice, 198 km.; won at 40.8 km./h. by J. Adamek (who flew in the 1961 British Championships). Only two others finished the course: F. Kepka at 37.7 and J. Pieczewski at 37.2. Other competitors' distances were fairly evenly spread between 189 and 65 km.

June 12th: Twice round a 104-km. Triangle. Of the 36 competitors, 25 went twice round, at speeds between 75.1 (Jan Wroblewski) and 41.3 km./h. Three went less than once round, including J. Popiel.

June 14th: A 207-km. Triangle completed by 26 pilots. Fastest, F. Kepka at 80.9 and S. Kluk at 80.6 km./h.; slowest 46.7 km./h.

June 17th: Twice round a 104-km. triangle, won by M. Gorzelak at 65.7 km./h., among 26 who went twice round; slowest 43.9 km./h.

June 18th: Out-and-Return Zarnow, 524 km. No one succeeded; Edward Makula went furthest, 358 km., and scored 521 points; shortest flights, 187 km., 210 points.

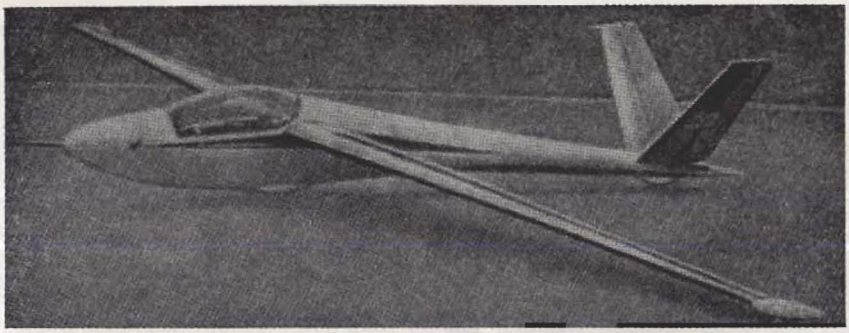
In total points, Petroczy of Hungary led after the first day with Kepka in 9th place, Wroblenski after the second with Kepka as runner-up, and thereafter Kepka took the lead and stayed there till the end. The Hungarians finished 9th (Petroczy) and 19th (Uivari), and the East Germans 12th (Horst Rakowski) and 33rd (Wissman). The one feminine competitor, Adela Dankowska, finished 24th; her highest placing was 9th on the second day with 623 points.

SOVIET UNION

NEW world records were set by Soviet glider pilots at contests over the week-end 1st-2nd August.

Vladimir Shuvikov of the Central Air Club established a new world record in a KAI-19 two-seater with a passenger. He flew along a 300-km. triangular course at an average speed of 92 km./h. (57.16 m.p.h.), 10 km. above the world record set by Ross of the United States in 1958. Four world speed and distance records have been set in the KAI-19 in the last two months.

Victor Ilchenko covered a 100-km. triangle at an average speed of 103 km.p.h. (63.38 m.p.h.) in a two-seater Blanik. This tops the world record which belonged to the Soviet glider pilot Kovshirko of Bobruisk.



Soviet high-performance sailplane Vega, which is going into production.

A new U.S.S.R. two-seater record for Goal-and-Return was set up by Tamara Kuverina, a student of the Moscow Machine Tool and Instruments Institute. She covered 280 km. in a Blanik with a passenger, bettering by 20 km. the previous record held by the Ukrainian glider pilot Solovei.—SOVIET INFORMATION SERVICE.

A new Soviet high-performance sailplane, the Vega, has passed its flight tests and is now going into series production. Designed by W. Spivak and A. Kolesnikov, it is an all-metal mid-wing machine with V-tail. The span can be either 17 m. (55 ft. 9 in.) or 15 m.; length is 6.6 m. (21 ft. 8 in.). Data for the 17-metre version are:—

Wing area 10.8 sq. m. (116 sq. ft.).

Aspect ratio 26.6.

All-up weight: normal, 280 kg. (551 lb.); with water ballast, 340 kg. (750 lb.). Water ballast 13.2 gallons.

Wing loading 26 kg./sq. m. (5.3 lb./sq. ft.); with water ballast, 31 kg./sq. m. (6.35 lb./sq. ft.).

Best gliding ratio 1:33 at 95 km./h. (51 kt.) with water ballast.

Minimum sink 0.68 m./sec. (2 ft. 2.8 in./sec.) at 75 km./h. (40 kt.).—AEROSPORT.

SWITZERLAND

LEANDER M. RITZI, who won this year's Swiss Championships with a Skylark 3, will not bring it to South Cerney next year, as he intends to enter the World Championships in the Standard Class and will be testing a Ka-10, Standard Elfe and Phoebus. Ritzi was born in 1931, learned to fly in a military flying school, joined Swissair in 1952, and has commanded Convairs since 1959.

In the Decentralised National Contest, Rudolf Seiler was leading on 15th July with 43,912 points, against Rudolf Hachler's 27,830.—SWISS AERO REVUE.

UNITED STATES

ALVIN H. PARKER'S breaking of the World Distance Record on 31st July with the first soaring flight to exceed 1,000 kilometres is reported elsewhere. Before it was done, the Sagebrush Soaring Society of Texas had founded a Club for all sailplane pilots in the world who had exceeded 1,000 km.

Also described on another page is the breaking of the World Goal-Flight Record by Wallace A. Scott, of Odessa, Texas, who flew 505 miles from there to Goodland, Kansas, on 23rd July. This beat Alvin Parker's world goal record of 487.24 miles set up on 27th August last year.

Another world record broken is for speed round a 300-km. triangle. George B. Moffat flew an HP-8 round a 324-km. triangle (201 miles) from Odessa via Hobbs, New Mexico and Lamesa, Texas, in 2 hr. 40 min. 7.4 sec. on 6th August, starting at 2.30 p.m. He holds the existing record for this feat, 67.18 m.p.h. (108.12 km./h.), set up in the HP-8 last year, and also the world's record for the 100-km. triangle, 79.77 m.p.h. (128.38 km./h.). Moffat teaches English at a private school in New Brunswick, N.J.

Two national records for two-seaters, Distance and Goal Flight, were broken by Harland C. Ross on 24th July with a flight of 340 miles from Odessa to Boise City, Oklahoma, in his home-designed and built Ross R-6, with James Turkle as a passenger. On the same day Al Parker flew his Sisu 1A 475 miles from Odessa to Winfield, Kansas; Ben Greene made the 465 miles "milk run" from Marfa, Texas, to Boise City; and Alex Aldott flew 457 miles from Marfa to Hichland, Texas. Campers at Marfa did not find weather up to 1,000-km. expectations, owing to much over-development, so moved to Odessa.—LLOYD LICHER.

Miss Helen R. Dick, of San Diego, Calif., is claiming a national feminine record for goal-and-return for a 250-mile flight from Inyokern to Laws (near Bishop, Calif.) and return in a Zugvogel 3B. Previous record, 120 miles; world's record, 284 miles (Poland).

The following wave flights to 20,000 ft. and over have been made this year so far:—

February 3rd: Harry Higgins from Enumclaw, Wash., in Weihe, 27,200 ft.; height gain, 17,856 ft.

March 29th: Marshall Claybourn (Kansas) in Pike's Peak wave, 25,700 ft.

April 5th: Allen Fritzi from Tehachapi, Calif., in 1-26, 26,100 ft.; gain 19,900 ft. Harold Lawson from Colorado Springs, Colo., in 1-26, 24,300 ft.; gain 14,300 ft. Nels Niemi from Tehachapi in 1-26, 24,700 ft.; gain 17,400 ft. Lee Brody from Tehachapi in 1-26, 26,000 ft.; gain 17,500 ft.

April 17th: Richard Lehmann from Tehachapi in 1-26, 28,700 ft.; gain 18,602 ft.

April 18th: Jerry Austin from El Mirage, Calif., in Zefir 2, 20,900 ft., gain 12,300 ft. Edward Musselman from Tehachapi, in 1-26, 24,000 ft.; gain 13,600 ft.

May 16th: Gordon Lamb from Waitsfield, Vt., in 1-23H-15, 20,000 ft.; gain 15,000 ft. (Francis Popp, same place, 19,000 ft. in BG-12A).

June 6th: Bruce Beebe from Reno, Nev., in Ka-6CR, 23,000 ft., gain 16,900 ft.

The 250th Schweizer 1-26 has come off the manufacturers' assembly line; it is painted white and gold.—SOARING.

WEST GERMANY

THE first Central Gliding Contest for the Armed Forces (*Bundeswehr*) was held before the Nationals at the same place, Roth near Nuremberg; 21 pilots from 14 *Bundeswehr* sportflying groups took part. Sailplane types taking part were Ka-6, Ka-7, Ka-8, L-Spatz and Zugvogel 4, also three privately-owned—Ka-6, SF-26 and Lo-150. All but the Ka-7, Ka-8 and L-Spatz were handicapped by losing 10 per cent of points earned.

Tasks were: 153-km. triangle, 209-km. out-and-return Hornberg, 107-km. and 135-km. Triangles; then, after five unflyable days, a 320-km. triangle not completed (best flight 304 km.) and a final small triangle, making seven contest days.

Winner was Römer in the L-Spatz with 2,593 points. Lowest total score 277.

Best distances so far done in 1964 are published by the Aero Club's Gliding Commission: 514 km. from Freiburg to Avignon; 340-km. goal flight, Langenlonsheim to Troyes; 340-km. goal-and-return Freiburg-Hornberg—all by Heinz Schmitt. (He did not fly in the Nationals.)

The Federal Institute for Flight Safety (*Bundesanstalt für Flugsicherung*) reports that on 10th May three sailplanes were reported to have flown in cloud in the Stuttgart area alone. The investigation is not yet closed, but all must reckon with the withdrawal of their pilot's licences.—AEROKURIER.

Dr. Reimar Horten, now at Cologne University, has a hand in the design of a new "Flying wing" sailplane, the Colonia, built to OSTIV Standard Class specification. The all-up weight is 575 lb. and a gliding ratio of 1:34 is hoped for. It is being built under the auspices of the *Flugwissenschaftliche Vereinigung Köln* (FVK), a body formed in November 1962 from representatives of the University, the city's sporting organisation, and the State Engineering School there. This body is doing research on aluminium-plastic combinations, the aerodynamics of sections of the Colonia, and studies on Eppler and Wortmann wing-sections with a stationary centre of pressure.—AUSTRALIAN GLIDING and AEROKURIER.

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