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SEPTEMBER 1950

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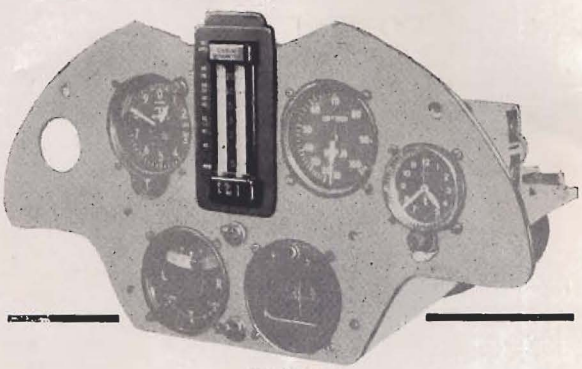
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THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

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COVER PHOTO:

P. Wills in his "Weihe" at the National Competitions. Contax 1/100, F.8., Super XX, Yellow Filter. John Pressland.

Editorial

IT has been noticed that the two winning machines in the recent National Contests were German—a "Weihe" and an "Mu 13". The third machine was an "Olympia", British stressed and built. The fourth was also German—a "Rhonbussard". It was also noted with some sense of National shame, that three of the machines used by our International Team at Orebro were also "Weihes" and one "Gull IV," which was placed second of the British entries.

This seems to indicate that the "Weihes" are better machines than the "Gull IV," or rather, that the "Gull IV" is a little inferior to the "Weihe's." So be it.

Now whatever may be the ethics of using a German machine at International Contests, there is clearly no reason at all for using them in purely British contests. (It's true in the rules—but what rules—and who made them anyway)? We imagine the aim was to win the International Contests, but to do so in foreign machines, and these acquired from a defeated enemy, must have seemed the height of Anglo Saxon insensitiveness even to the hardened French, who acquired more machines by this means than any other of the Allies, but at least had the grace to appear in the Comps. in machines of their own design and construction. Indeed, to have won these Contests in these machines would have left an unpleasant taste, and there would have been little cause for National pride in so doing.

Now we find that two of these "Weihes" were also engaged in the National Contests, limited to British pilots. We marvel at the moral hardihood of those who could permit such entries, especially when there is apparently so little credit surrounding the manner of their acquisition.

We would like to dispel the mystery of their appearance in this country and to ask a few questions, the answers to which we bind ourselves to publish, however unpalatable they may be.

To begin with we would like the Chairman of the B.G.A., who since the war, as has been acclaimed in the Press, has won the National Contests five times, and in his own "Weihe," to say how he came to acquire this machine. Did he do so as a private individual. Further, did he at any time offer it to the B.G.A. ?—(we believe he did—for the good of British gliding, but it was returned to him as being in the best hands for that purpose—what we want to know is when this offer was made).

Our readers may remember that when several German aircraft were acquired or procured by the Minister of Supply, after the war, some of them found their way into the hands of various clubs. One of them, a "Weihe," was loaned to the Surrey Club "for research". That is several years ago. We shall be happy to report in full all the results of such Research, news of which has so far escaped us. But in the meantime, what right have the Surrey Club to use or loan this machine for National Competitions ? Is it not time this machine was moved on to another Club, if another Club could be found willing to silence its conscience and accept it ? (We know of at least one Club which decided not to apply for a free German machine —all honour to them). It is true the Surrey Club is not a members' club but is privately owned, and to that extent the members are unable to influence its policy, but we wonder how they feel about it.

We would like to revert to the subject of the conditions under which the International Team was selected. In the early stages—about a year ago—The B.G.A. announced in a circular that they did not propose to send an official team, preferring to reserve their resources for 1952, but that anyone who was willing to pay their own expenses might apply for B.G.A. sponsorship. At the Annual General Meeting in March, the annual budget was submitted, but no mention was made of the proposal to use the funds of the B.G.A.—the balance of the Competition Fund for 1948—for the International Competitions this year. Whereupon there was a spontaneous movement to raise funds to send a leading member of the London Club and sufficient money and support was promised to send him and a crew. But the B.G.A. turned down his application for sponsorship on what we consider to be spurious and suspicious grounds. They did announce that they were proposing to use some of these funds for the benefit of competitors, or some of them.

Now we would like to ask if the use of these funds was legitimate, whether the consent of the members of the B.G.A. was necessary, and if so, was it received ? We would also like to be able to publish the competitions accounts, which we are sure would interest all our British readers, even though everyone who went to Sweden paid his or her expenses.

We complained last month about the leadership of the B.G.A. How can British gliding be effective whilst questions such as the above are biting at the loyalty of its individual members ? We look to the B.G.A., its Chairman and Hon. Secretary to supply the answers.

SOARING IN FRANCE

By GUY BORGÉ

THE CORBAS REGIONAL COMPETITION.

THE Rhone Aero-Club organised a regional competition from 9th to 15th July in which 13 Sailplanes entered (3 " Weihes ", 4 " Nord 2000 Olympia ", 1 " Castel 310 ", 3 " Nord 1300 Baby ", 2 " Emouchets ") belonging to 5 Aero Clubs. A fourteenth competitor was engaged, Ruff from Grenoble, but he died two days before in testing Marmol's " Lunak ". He spun on the slope and crashed. Ruff was a good pilot with 500 hours' soaring and credited with a nice flight of 262 miles from Beynes.

The weather did not appear perfect for the Competitions, the thermals being very narrow and turbulent and the performances were not outstanding. The best were :—

123 miles. Corbas—Nimes by Durand.
107 miles. Corbas—Caderousse by Borgé.
94 miles. Corbas—Orange by Serge Lizere.

But in three soaring days the 13 Sailplanes flew 1,736 miles. The final results:

1st. Durand (Villefranche Aero-Club) "Olympia"
2nd. Borgé (Rhone) "Weihe".
3rd. Serge Lizere (Dauphine). " Weihe "
4th. Maximoff (Rhone). " Olympia "
5th. Domet (Rhone). " Baby "
6th. Pelluet (Bourg). " Baby "
7th. Jeoffre (Rhone). " Olympia "
8th. Jean Lizere (Dauphine). " Castel 310 "
9th. Depeyre (Annonay). " Emouchet "

and so on.

It may be interesting to speak about the rules because they were well studied and gave good results.

Points were given for altitude and distance.

1. For altitude.

gains under 500 metres did not receive any points.

Between 0 and 1,000m. (3,280 ft.) each 100m. gain earned 3 points.

Between 1,000m. and 2,000m. (6,560 ft.) 5 points for each 100m. gain.

Between 2,000m. and 3,000m. (9,840 ft.) 8 points for 100 metres.

Above 3,000m, 10 points for 100 metres.

For instance a 2,800 metres gain (9,180 ft.) received 30 x 50 x 64 points = 144 points.

2. For Distance in straight line N points were given by the formula

$$N = \frac{800}{500 \times Dm} \times \text{Distance in Kilometres.}$$

Dm being the arithmetic average of the 3 best daily distances in Kilometres. For instance if on one day Dm is 200 Km. (124 miles) a competitor flying 320 Km. (198 miles) receives :—

$$N = \frac{800}{500 \times 200} \times 320 = 365 \text{ points.}$$

In a goal flight accomplished with success N is multiplied by 1.40. For distance in a circuit N is multiplied by two (the distance in Km. being of course the total length flown) and the number of out and returns.

These flights seem the most interesting and give great enjoyment to spectators, rather than the free distances where nothing is amusing but the starts. When the spectators at the turning points see the pilots descend for recognition and struggle with thermals to gain altitude again, they understand why soaring remains the most intriguing sport. Retrieving costs are then not great for Competitors.

I prefer that the pilots fly the greatest number of circuits rather than to record the best cruising speed along one out and return. Soaring cannot become a race, like for instance automobile or horse races. The thermals do not last long and a competition must appreciate the pilot's ability to soar for the longest time.

THE COMPIEGNE REGIONAL COMPETITION.

Another regional Competition was organised at Compiegne but with different rules, basing the classing upon Sailplanes entered not by one pilot but by a team of pilots (as in England). Best flight was 118 miles from Compiegne to Bruxelles in 6 hours 26, a remarkable achievement for a " Baby ". During the Competitions 111 Soaring hours and 202 launches were registered.

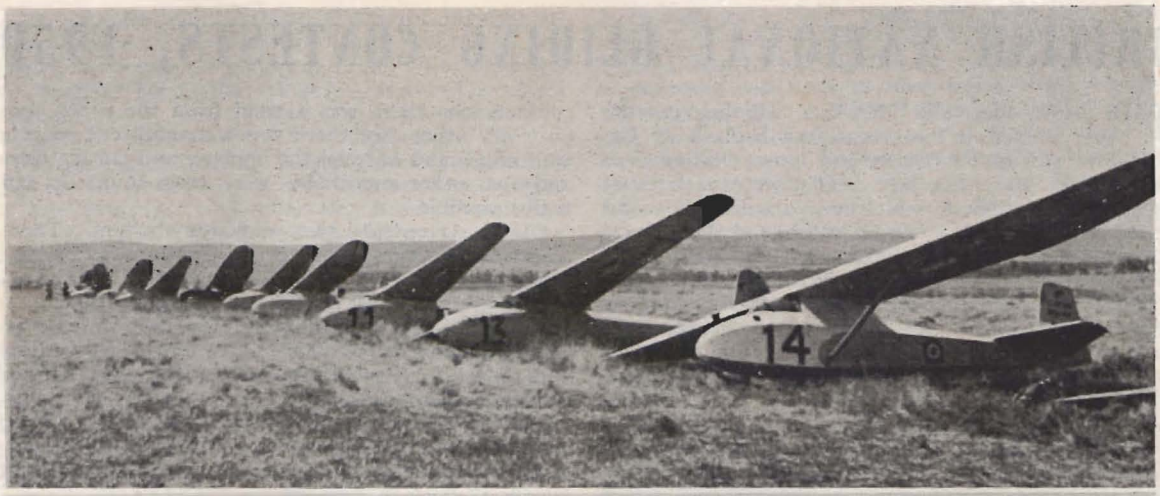
DISTANCE PERFORMANCES.

Meantime an improvement in the weather caused many successful performances. On July 9th, M. Ambrosi, an Instructor, starting from Pont Saint Vincent in an " Air 100 " landed at Villefranche his goal, getting his Golden " C " and a Diamond Leg.

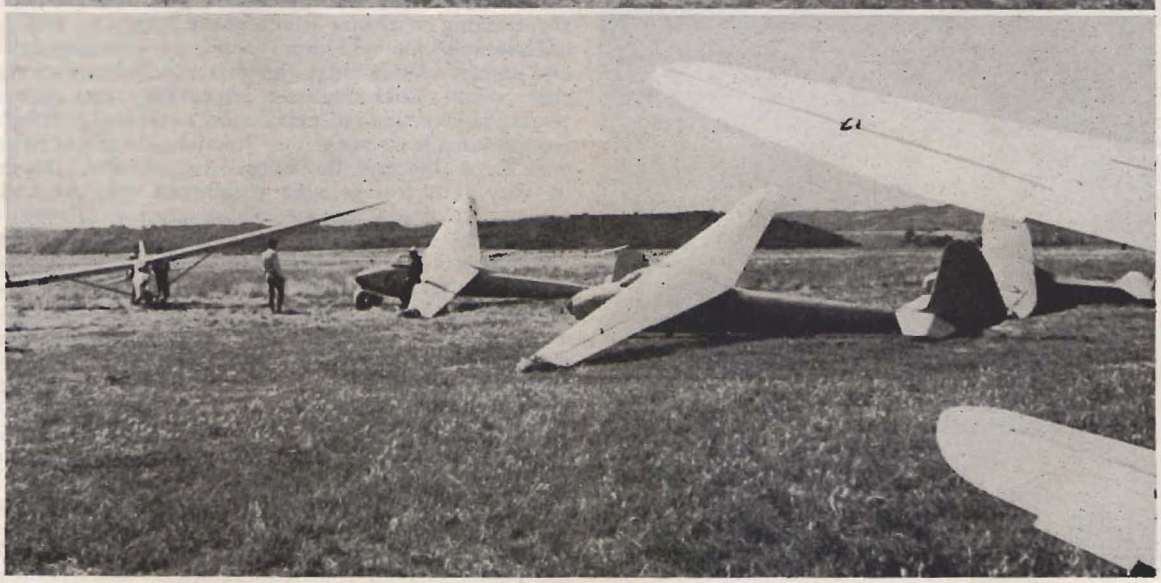
At Chavenay, Miss Jacqueline Leroy in a " Nord 2000 Olympia " gained 15,250 feet in a storm cloud on July 5th. She left at this level plus some 16 ft./second, but she feared lack of oxygen and descended.

Other women pilots also accomplished worthy performances on the 17th July at Beynes. Mrs. Choisnet-Gohard announced that she would land her "Air 100, Gondolo " at Liege (204 miles). She reached her goal and acquired a Diamond " leg " and the feminine French record. Two days later she repeated this and won an original competition that M. Heron, the Beynes Centre Chief had organized between three women pilots, Mrs. Choisnet in her " Air 100 ", Miss Berthe Delecolle in an " Olympia " and Miss Andree Fruitier in a " Weihe ", for the best time on the circuit Beynes-Orleans-Beynes (128 miles), the recompense being the world feminine out and return record, Miss Delecolle made the circuit in 6 hours 47, Miss Fruitier landed during the return only 5 miles from Beynes but Mrs. Choisnet only took 6 hours 12 to fly the circuit, but as she had asked for a supplementary control at Etampes her distance was 131 miles. This is the new world record but by the same record holder as she previously held this record.

(*Continued on page 206*)







Corbas Regional Competitions. (1) *Line up.* (2) *"Emouchet," "Olympia" and "Baby" at the start.* (3) *A spattering of "Olympias."*

BRITISH NATIONAL GLIDING CONTESTS, 1950

THE most successful National Gliding contest ever staged in Gt. Britain took place at Gt. Hucklow, site of the Derby and Lancs Gliding Club this year. After the last year's grievous trial of unsuitable weather, in which only about a thousand miles were flown, this year's total of 6,000 miles is indeed remarkable. At Bramcote, 1947, 4,371 miles were flown but with fewer machines.

History relates that in 1937, when the contests were also staged at Gt. Hucklow, the weather was perfect for three days, with piled up cumulus and a strong west wind. On the last day of this year's competitions there was a wind from the south, but on every other day there was a magnificent soaring west wind, and only on the opening and closing days and two other mornings, were cross-countries not really possible.



1. "*Prefect*" } *Over the edge just after catapult*
2. "*Sedbergh*" } *bungy launch.*

Of the 31 entries, two were non-starters. There were 15 "Olympias," 3 "Slingsby Sedbergh" 2-seaters, a "Gull 1," "Gull Prefect" and a "Petrel". The rest were German pre-war machines. Five clubs sent 11 machines. The rest were seven private entries A.T.C. and R.A.F. and Navy Gliding and Soaring Associations. So much for Service preponderance.

The gathering day, Saturday, July 22nd, offered slope soaring in a south wind, in which however there was a lot of rain. There was a competition for height which "Nick" Goodhart (Lt. Cdr. H. C. N., R.N.), won in the "Mu 13," designed for light thermals and light winds.

Sunday, was the first day of the west wind, but with low cloud good only for slope soaring, but with the congested conditions which obtained, apt to be a little "dicey". The results were not inspiring. Wills landed in a valley 19 miles away, hit a stone wall with his tail, and Jock Forbes' "Weihe" tail had to be collected from Detling. Wills could not fly the next day. The A.T.C. "Rhonbussard" lost an argument with a tree and had to retire from the contest. Marks for the day were: Wills, 19, Bomber Command's "Olympia 18" for height, and the other Goodhart "Tony" (Lt. Cdr. G. A. J.) got 20 marks for an 1,800 ft. height gain. Marking was simple, a point a mile, but double for each mile return, a point for each 100 ft. height. There was a system of handicapping with the "Weihe's" as scratch machines, less efficient types got a 10% bonus except the training machines which got a 25%.

Monday to Thursday were hectic and strenuous days and nights. On Monday the west wind was so strong that winch looked almost impossible, and many pilots had their first experience of being catapult bungy launched, even the "Sedberghs". It was goal flight day and the word "Ingoldmells" made its way into the popular vocabulary for the first time. It is a well known holiday camp at Skegness over 80 miles away. (We have not heard what her name was but she was mighty attractive—pilots could not keep away for the rest of the week). A thoughtfully large cumulus came along at about noon and a covey of sailplanes set off under its umbrella. Half an hour later a few more got away under a group of little parasols. The surprise of the day was the "Mu-13", commonly believed to have no penetration and only to be effective in light thermals, which reached the goal in two hours 38 minutes. The Cambridge Club's "Kranich" and "Steve's" "Olympia" arrived in two hours and 56 minutes, a minute shorter than Frank Foster's "Rhonbussard." Andrew Coulson flying a pre-war German "Olympia" ran out of land at Anderby Creek. Whilst cruising over the sea the uninvited attentions of a "Lincoln" and consequent slip-stream caused him to lose

height rapidly and without choice of landing he just managed to reach the coast in a field which was hardly favourable as a landing ground and damaged his machine somewhat severely. N.B —The day's placings were the " Mu-13 ", " Rhonbussard ", " Kranich " and "Steve's " " Olympia."

The next day, Tuesday, July 25th, was an unhappy day for the " Met " man who forecast two troughs of low pressure with blue sky interval and an intimation that Sailplanes might be well put away for the day. But by noon there was bright sunshine, lots of cumulus and soaring for all.

This was the day when Don Brown gave as his goal the airfield at East Fortune near Edinburgh. Even in the Surrey Club's " Weihe " this would have been a spectacular performance as his course was North, North West across the twenty m.p.h. West Wind. Actually he almost made half the journey, flying 90 miles N.N.E., before landing near Middlesbrough. This goal flight might have been thought to be a joke, but it was the sort of venture which British Pilots must achieve time and time again if they are ever going to be in the top international class. The forecasted troughs were N. and S. which might have indicated masses of converging air which usually results in a cold front and consequent lift. Whilst flying over York some three hours after the start he saw a standing wave cloud in the lee of the Pennines but was unable to make it. It is the writer's belief that Billy Nilsson or Paul MacCready would have made for the Pennines at the very beginning and made it. But it is only by efforts and failures like these that we can learn.

The siren of Ingoldmells was evidently on the air again as several people landed there but Archbold of Bomber Command Team caught up in the aftermath of the fast travelling trough managed to get as far as the Wash. Several people landed in Yorkshire. Wills reached North Coates, 75 miles downwind. " Steve " and the Goodhart's machines each had 334 points and were leading.

History was made on the next day, when for the first time in Britain, on July 26th, there was an optional goal flight speed race. The target was the Boston Aero Club, 73 miles, and time began on releasing the cable. Of the 17 entrants, 6 completed the course, Wills doing so in 2 hours, 3 minutes (35.6 m.p.h.) and being first. Lt. Cdr. H. C. N. Goodhart was second (29.8 m.p.h.) and C. Staffurth (Bristol) 3rd, with 26.1 m.p.h. The Cambridge " Kranich ", force landing in a cornfield made the sort of approach Dudley Hiscox warned pilots against in *Sailplane* last year. Result, one wing broken off, and exit " Kranich ".

There were pilots with other ideas than Boston however, Bell (Cambridge) nominated Gt. Yarmouth as his goal and flew 101 miles, being beaten by D. Ince who made 108 miles in an attempt to reach Gt. Yarmouth.

July 27th was the fourth day running which was good for cross-countries, and the siren of Ingoldmells was again in evidence. Nine people made for the camp, but the stone-hearted " Tony " Goodhart, turned away from Ingoldmells, finding much buoyancy thereabouts and flew 13 miles across open sea—the Wash—to Happisburgh—140 miles. Nobody appears to have done this cross-Wash effort before. (What does he become—Bleriot minor ?). Donald Brown attempted an out and return to Ingoldmells, and made 18 miles of the return journey. His outward speed was about 26 m.p.h. but the return was about half that speed. The longest flight so far recorded by a British designed and built two seater was done by F/L Anderson representing the A.T.C. from Detling, with Pete Mallett as his official passenger, who covered 75 miles to N. Coates. Wills had the bad fortune of being neglected by somebody at Coltishall (134 miles—who had promised to observe his circuit in an out and return flight. He received no recognition signal on arrival at 4,000 ft. and had





1. *Basil Meads, S. Beswick, M.P. (Parl. Sec. M.C.A.); Eric " Windak " Taylor, R. Poland.*
2. *Basil Meads, Chairman Derby and Lancs. G.C.*

reached 500 before he did, with the result that no return was possible. In the end the " Mu 13 " was at the top of the table at the end of the day, with Foster second, Ince third and Wills in the fourth place.

The 28th July was unpromising with a depression hanging about, but to everybody's surprise it cleared up after lunch. By general agreement another day of cross-countries would have been too tiring and so a spot landing competition was substituted.

The last real day was Saturday, the 29th, with really good soaring weather, with cloud base at about 3,500-4,000 ft. But thermals were very teasing. Time after time the onlookers were disappointed to see a pilot apparently catch the threads of a cumulus, only to see it disappear and dissolve and the hunt begin again. Finally after as much as an hour and a half's pottering about, several pilots managed to get away. It was do-or-die day for at least three pilots. Wills had declared for an out and return to Boston, 72 miles, which would have also earned the British record for this sort of flight. Archbold, Deane Drummond, Don Browne, and " Steve " all declared for Lympne. Wills, Ince, Murden, Ellis essayed the Boston return flight, but only made 66 miles to Heckington on the outward leg, and fared better than anyone else Boston bound, except Wills who did excellently in a gallant attempt on the task he had set himself. Boston was reached with apparently not too much difficulty, but facing the return journey he saw, as far as the eye could reach, from North to South, a sort of dark brown haze, commonly believed to be " Industrial murk ". The fact that it formed a layer lying from 4-8,000 ft., indicated some instability, and in scarce areas of lift, progress was more difficult than ever. After 7½ hours in the air he was compelled to descend at Bakewell, only three miles from Gt. Hucklow.

The last hours of the late afternoon were exciting and tense. If " Steve " reached his goal, he could win the contest and also his Gold " C ". Foster might also be in the running. Also Ince stood a chance if he made his out and return, but he was an early casualty. Deane Drummond's flight to Dunstable, with no news of "Steve", Brown and Foster, raised high hopes that they had not landed. Then Brown telephoned from Southend—154 miles—when news of Wills landing came in it remained to hear of " Steve " and at last and via Dunstable and telegram it was learned that " Steve " was down at Woodham Ferrers, south of Chelmsford—151½ miles. It is worth noting that Wills and Brown flew " Weihes " and " Steve " an " Olympia ", an interesting comment on his skill.

	Goal	*Landed at*	*Distance*	*July 29th Height gained*
Goodhart	Southend	Southwell	36 miles	5,000 ft.
Archbold	Lympne	Ossington	36 ,,	3,300 ft.
Ellis	Boston and return	Heckington	66 ,,	3,700 ft.
Ince	Boston and return	Helpington	64 ,,	6,500 ft.
Murden	Boston and return	Gainsbro	45 ,,	4,800 ft.
Hall	Boston and return	Fulbeck	48 ,,	4,000 ft.
Pick	Southend	Sedgwick	50 ,,	4,000 ft.
Foster	Friston	Castle Ashby	85 ,,	6,500 ft.
Lee	Downham Market	Supperton	59 ,,	3,700 ft.
Deane Drummond	Lympne	Dunstable	111 ,,	6,700 ft.
Wills	Boston	Bakewell	142 ,,	7,200 ft.
Stephenson	Lympne	Woodham Ferrers	151.5 miles	8,300 ft.

Unofficial Final Placings as of 6 p.m.—30.7.50. A.K.

I. FINAL PLACING OF AIRCRAFT.

(The figures in brackets indicate the handicap category).

Place	*Aircraft No.*	*Handicap*	*Comp. No.*	*Points*	
1.	Weihe	(1)	2	867	
2.	Mu 13a	(2)	27	827	
3.	Olympia	(2)	21	805	
4.	R-Bussard	(2)	4	799	
5.	Olympia	(2)	30	722	
6.	Olympia	(2)	10	694	
7.	Weihe	(1)	8	587	
8.	Olympia	(2)	14	583	
9.	Gull IV	(2)	20	553	
10.	Olympia	(2)	13	514	
11.	Petrel	(2)	17	496	
12.	Olympia	(2)	23	452	
13.	Olympia	(2)	25	432	
14.	Olympia	(2)	9	390	
15.	Olympia	(2)	16	380	
16.	Kranich	(2)	24	378	(Retired)
17.	Olympia	(2)	1	368	
18.	Olympia	(2)	5	355	
19.	Olympia	(2)	6	343	
20.	T 21	(3)	31	278	
21.	Olympia	(2)	15	230	(Retired)
22.	T 21	(3)	19	229	
23.	Grunau IIb	(3)	26	189	
24.	Olympia	(2)	3	175	
25.	Olympia	(2)	7	167	
26.	Prefect	(3)	22	65	(Retired)
27.	T 21	(3)	18	53	
28.	Gull I	(2)	12	24	(Retired)
29.	Rhon Bussard	(2)	11	—	(Retired)

Scratched : Entries 28 and 29.

Unofficial Final Placings as of 6 p.m.—30.7.50. A.K.

II. FINAL PLACING OF PILOTS.

(Note : No allowance is made in this list for the fact that most Pilots shared aircraft with others.)

	Pilot	*Marks*
1.	Wills	867
2.	Stephenson	805
3.	Foster	799
4.	Ince	722
5.	Goodhart, C. A. G.	632
6.	Brown	512
7.	Staffurth	463
8.	Deane-Drummond	317
9.	Fisher	300
10.	Blanchard	273
11.	Archbold	272
12.	Ellis	262
13.	Murden	248
14.	Sanders	238
15.	Hall	231
	Lee	
17.	Meidzybrodski	214
18.	O'Grady	213
19.	Hurry	211
20.	Heron	201
21.	Goodhart, H. C. N.	195
22.	de Redder	194
23.	Grantham	185
24.	Ladley	175
	Redshaw	
26.	Bell	168
	Campion	
28.	Anderson	167
	Coulson	
	Thompson	
31.	Beck	163
32.	Alexander	162
33.	Dickson, N. J.	156
34.	Latham	134
35.	Hooper	120
	Turner	
37.	Edwards	113
38.	Cartwright	112
39.	Jordan	104
40.	Pick	89
41.	Gilbert	82
42.	Martlew	81
43.	Dennett	80
	Phillips	
	Rowley	
46.	Kahn	75
47.	Swinn	74
48.	Butt	62
49.	Pressland	60
50.	Allan	53
51.	Pelling	43
52.	Erdman	39
53.	Watson, H. R.	26
54.	Irving	25
55.	Dickson, R. D.	24
56.	Clayton	21
	Neubroch	



III. AWARDS OF CUPS.

Londonderry Cup—London Gliding Club—(G. H. Stephenson).
Du Garde Peach Trophy—Royal Naval Gliding and Soaring Association.
Firth Vickers Trophy—S. C. O'Grady.
Eon Cup—London Gliding Club.

IV. AWARDS OF PRIZES.

1st. P. A. Wills, £20.
2nd. R. N. Gliding and Soaring Association, £15.
3rd. London Gliding Club, £10.
Longest Distance—Surrey Gliding Club, £5.
Best Height—Frank Foster, £5.
Best Out and Return Flight—P. A. Wills, £5.

NEW CANADIAN DISTANCE RECORD

We wish to offer our heartiest congratulations to Frank Brame of the Toronto Gliding Club on his recent record breaking flight in the "Loudon". Frank took off from Oshawa Airport one fine Sunday, and five hours and 41 minutes later startled the boys at Kingston Airport by appearing over their field. The distance covered by Frank was 118 miles and it is certainly something to be proud of.

We hear tragic news from Yugoslavia. The "Orao" has crashed and Borisek is dead.

Maurer's "Mosway VI" has also crashed. Maurer was thrown out and saved by his parachute. His passenger was killed.

Guy Borgé, our expert French Correspondent, has got his Gold "C" and a Diamond. A full account in next month's SAILPLANE.

THE SCHWEIZER "1-23"

By PAUL and ERNEST SCHWEIZER

THERE has long been a need for a low priced, high performance sailplane—particularly one that is rugged small and compact and one with good performance under "light thermal" conditions. Schweizer Aircraft Corporation feels that it has the answer to this need in the new "1-23."

The ship has been described as "a perfect combination for week-end sport flying and contest competition."

With a low rate of sink and a 32 m.p.h. stalling speed, it can gain altitude by making tight circles in the smallest of up-currents, and yet it has a cruising speed of 75 m.p.h. All this is done in 43 feet 10 inches span in a ship that is completely metal.

Although design of the "1-23" started in 1947, construction of the prototype did not begin until mid-May, 1948. By concentrated effort, it was "completed" by July 4th in time to make its debut at the 15th National Soaring Contest.

It did not take long for Bill Frutchy of Elmira, owner of the first "1-23," to demonstrate its merits. Although almost half of the Contest was over, Bill's performances in the new ship placed him well up in the running. This he accomplished despite being handicapped by unfamiliarity with the craft, and by the fact that the ship itself was still incomplete. The tail fairing was missing, a temporary canopy was used, and a temporary seating arrangement hampered him to the extent that it caused the early termination of several flights.

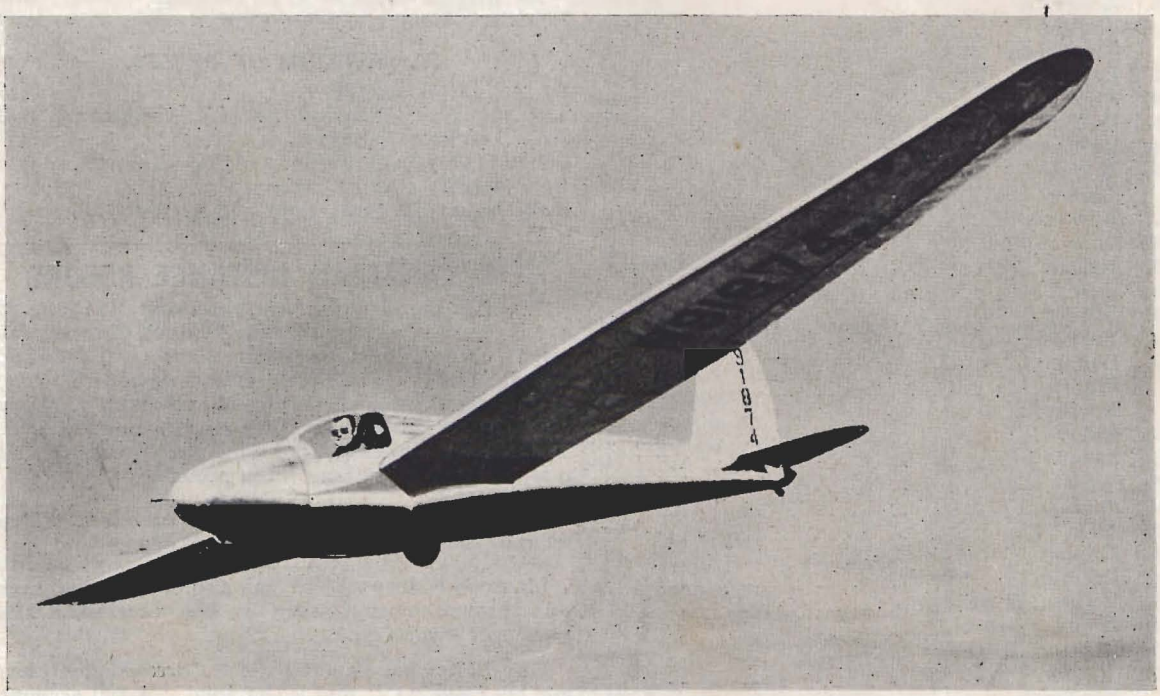
However, the "1-23's" entry in the meet provided an opportunity to compare the ship with other sailplanes. On one occasion the "1-23" and the "Minimoa," after leaving a thermal, flew along together for several miles at a speed of 45 miles per hour with no apparent difference in sinking speed.

On another flight, 42 miles were made in less than 45 minutes. This combination of low sink and high speed established the "1-23" as a real "all round" sailplane, and much is expected of it in future competition.

On the day after the contest closed, many of the top pilots gave the "1-23" a try. Johnny Robinson, Paul MacCready, Dick Comey, Ray Parker, Emil Lehecka, Dick Lyons, Wally Wiberg and "EJ" Reeves, all flew it and expressed enthusiasm, for the design and performance.

Since that time the company has been steadily flight testing and experimenting with minor design improvements so that now, with the "1-23" ready for production, it is a well proven sailplane.

The "1-23" is all metal in the fullest sense since no fabric covering is used at all, a factor which makes it very sturdy and long lasting, requires a minimum of maintenance and provides a maximum of resale value.



Paul Schweizer in his "1-23"

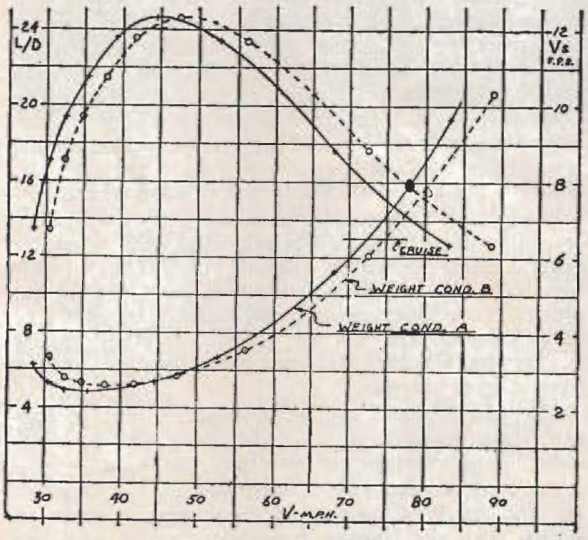
The ship weighs only 358 pounds. It is designed as a Class I sailplane with design speed of 123 miles per hour. A generous amount of 75ST alloy is used in the butts of the spar and in the fuselage centre section, the balance of the construction being of 24 ST Alclad.

To maintain a low price and to make the ship easy to handle and to store, the " 1-23 " was made as small as possible while retaining the high performance characteristics desired. The small stabilizer with a width of only 7 feet can be left on for trailing. It is easy to assemble and disassemble.

The cockpit is probably the roomiest one ever built in a high performance sailplane. This is possible without any increase in outside dimensions, due to the new heavy-skin monocoque construction. This eliminates many frames and gives the pilot the full width of the cockpit where he needs it. The canopy is moulded of lucite, providing good vision with minimum drag. The large instrument panel holds a complete set of instruments, and there is ample room behind the pilot for radio, barograph and oxygen equipment.

Flight characteristics of the " 1-23 " are excellent. In spite of the high performance, it is very " tame." Stability of the stall is good and the ship must be forced into a spin from which it recovers easily. The wings are fitted with a set of large spoilers which give the necessary glide control for landing. Spoilers and brake are on the same control. The standard type landing gear is used—a single wheel with rubber mounted skid forward of the wheel.

Performance data and curves show two conditions : Condition A, such as the average weight pilot would experience with standard equipment ; and Condition B, for heavier pilot with parachute, oxygen equipment, full instruments, radio, battery, etc.



The performance curves and figures are based upon performance calculations which are definitely conservative. Flight tests and comparative data indicate that these performances are substantially correct.

The Schweizer company intends to carry out a performance flight test programme in the future, but at present, satisfied with the new craft's performance, it is concentrating its flight testing upon improving the glider and completing preliminary airworthiness tests.

Span		43 ft. 10 ins.
Length		20 ft. 4 ins.
Height		6 ft. 10 ins.
Aspect Ratio		12.88
Wing Area		149 ft.²
Aileron Area (Total)		16.64 ft.²
Vertical Tail Surface Area		9.11 ft.²
Horizontal Tail Surface Area		15.13 ft.²
Spoiler Area (Total)		2.50 ft.²
	Wt. Cond. A	*Wt. Cond. B*
Empty Weight	358 lb.	358 lb.
Pilot Weight	170 lb.	190 lb.
Extra Equipment		52 lb.
Gross Weight	528 lb.	600 lb.
Wing Loading (G. W.)	3.54 P.S.F.	4.02 P.S.F.
Minimum Sinking Speed	2.40 ft./sec.	2.60 ft./sec.
Maximum L/D	24.60	24.60
Cruising Speed (G.W.)	72.50 m.p.h.	75 m.p.h.
Design Gliding Speed Vg		123 m.p.h.
Minimum Design Load Factor		8.34
Auto Tow Speed		70 m.p.h.
Airplane Tow Speed		90 m.p.h.
Glide or Dive (Placard Speed)		110 m.p.h.

The company is currently determining the market for the " 1-23 " based on a price in the vicinity of $2,000, FAF, Elmira, and a tentative production schedule of 20 ships.

As soon as enough firm orders are received, the company will turn to CAA approval work and go into regular production, probably during early 1949.

Design Study

There are many factors influencing the design of a practical high performance sailplane, in addition to aerodynamics and structural conditions. Such is the case of the new SGS " 1-23." The design of the SGS " 1-21 " illustrates this and is very much involved in the design of the " 1-23."

In 1946 when we proposed building the SGS " 1-21," we talked with and sent inquiries to pilots and persons interested. The response was quite varied but, generally, the demand indicated that pilots wanted a ship with the highest possible performance and with competition in mind, naturally suggested having one that was just a little better than the rest.

In the preliminary investigations, three tentative designs were set up—one was a large version comparable to the " AIR 100 " and " Weihe " in size and sinking speed but designed for higher cruising speed, and was later designated the SGS " 1-21-C " ; the second design was smaller and lighter ; and finally the " 1-21-A," the medium size version, was built. We felt it was the best compromise between cost, performance, and utility.

Two " 1-21's " were built in 1947. The first, flown by Richard J. Comey, gave a very good account of itself during the 14th National at Wichita Falls, Texas, and indicated exceptional high speed performance. Due to the limited market for such an expensive ship, we were forced to postpone the CAA

approval and production set up until a greater demand was indicated.

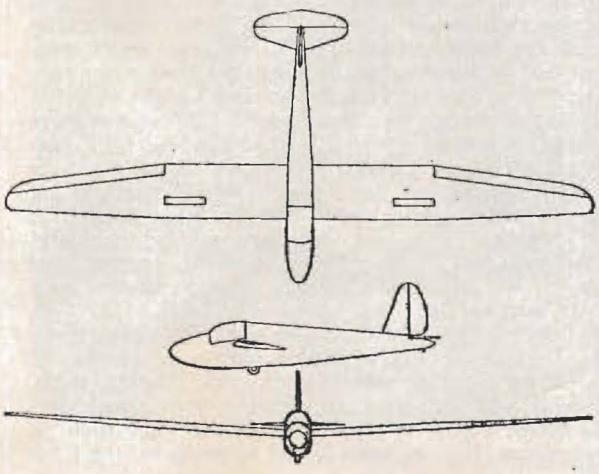
Due to a reduction in subcontracting work in the spring of 1948, we considered running a few " 1-21's " as fill-in work, but it was decided that it would be better to build a new design which would have a greater potential market and probable use. This brought us back to the " 1-21-B," the smallest version, and another preliminary design for a small metal sailplane originated a few years ago.

From the lessons learned in the " 1-21," we felt that a smaller ship could be designed with better sink and small turning radius, yet having a high speed range approaching that of the " 1-21." The final design was not a " 1-21 " with a small wing but an entirely new design.

Due to the high cost of dope and fabric and because of its greater durability, all the surfaces were covered with metal. While this involved a slight weight penalty, the structure could be designed to make the best practical use of all-metal skin.

The size of a sailplane is a major consideration in practicability and performance. Recent emphasis has been on extremely small sailplanes. However, since minimum sinking speed is a function of size, gliding ratio also is a function of size to a lesser degree, and it becomes a question as to how little performance a pilot will put up with in order to have the handling and cost advantages of small size.

Radius of turn is a function of minimum speed. The span affects the efficiency of turn, that is, the variation of rate of sink with rate of turn. A desirable goal would be to reduce the span so that the glider on its trailer could be stored in an ordinary garage. This could be done, but would mean more sacrifice in performance than is desirable now. A span was chosen which would give the desired performance with the estimated weight. The wing plan form with a straight section was used rather than a straight tapered wing because it is more economical to build and possesses certain aerodynamic advantages. The ailerons are conventional differential ailerons with uniform chord and internal horns.



The spoiler system consists of a single, simple flap type spoiler on the upper surface of each wing. These are adequate for ordinary flying but additional spoiler equipment could be installed with only minor design changes. The elaborate dive brake spoiler system of the SGS " 1-21 " is extremely effective but was necessarily sacrificed to keep the cost down.

There are no wing ballast tanks built in, but this could be accomplished in the same manner as in the " 1-21 " if it should be desired.

Structurally, the wing is different from our previous designs in that it uses two spars. The main spar carries all the bending loads and the auxiliary spar carries only drag and torsion loads, being pin jointed at the root. The main spar is 5.85 in thickness at the root, with an overhang of 252 ins. and a cantilever ratio of 43.4.

In covering the entire wing with metal it was possible to reduce all skins to minimum gauges since the stress in the skin was very low compared to the previous D-tube monospars tructure. To prevent undue buckling of the thin skin at reasonable load factors, the spar bending stresses were kept at a low figure.

The structure is designed for a minimum ultimate load factor of 8.34. It seems probable that static testing would indicate a comfortable margin of safety above this figure.

The wings are assembled to the fuselage by two spar taper pins and a shear pin. These are all inside the fuselage and are accessible by opening a hinged hatch just aft of the pilot. The wings are so arranged that they slide into the fuselage and the butt end of the skins fit over the fuselage contour rib eliminating the need for gap covers. Control connections are conventional using pins and safety pins.

The fuselage is a simplified monocoque construction using flat sheet except for the spun nose and two forward panels in the nose section. The main section at the cockpit is of .064 24ST sheet. This gives a roomy cockpit with good pilot protection, a feature practically non-existent in a wood and plywood monocoque fuselage.

By properly arranging the controls it was possible to place the pilot very low and the resulting cross section area of the fuselage is approximately 8 per cent less than the " 1-21 " with more room in the cockpit.

The " 1-23 " is expected to be used more with auto or pulley launchings and is provided with a greater ground angle to reduce take-off run. The " 1-21 " type of solid rubber tail wheel is used. This has proven very durable and eliminates the necessity of picking up the tail for ground handling except in very rough fields. It is also desirable for operating from a hard runway.

The tail surfaces are all aluminium and of thin cantilever construction. The only trailer-to-air assembly job consists of installing the wings.

Convenience and ease of operation will help a lot to sell the sport of soaring to those who have to be shown, and the soaring fraternity cannot help but benefit by increased flying activity that will result. Needless to say, these features will also add considerably to the enjoyment of soaring for every present glider pilot who becomes the owner or part owner of a " 1-23."

245 MILES OUT-AND-RETURN FLIGHT

A first class soaring pilot, Laroy Mansson, sergeant of the Swedish Air Force has just entered the record lists. Some time ago he put up a Swedish out-and-return record of 125 km. (about 80 miles). This record was beaten about two weeks later, during the pre-training for the World Championships, by Billy Nilsson and Tage Lof in "Weihes", a few days after which Pelle Persson recorded a still better flight. (Sven Alm was on the point of doing the same but landed a few miles short). However, Mansson was firmly determined to regain his record. On the 7th July, during the World Championships, he set out for an attempt to break not only the Swedish but also the World Record in out-and-return flight. The starting place was Ljungbyhed in the southernmost part of Sweden, and the turning point



Laroy Mansson (*Photo S. Blomber*)

Jonkoping about 120 miles to the north, on the southern end of Lake Vattern. Mansson was thus not taking part in the Championships.

An outstanding flight by Mansson a few days earlier also ought to be mentioned. He then flew Ljungbyhed-Noirkoping in a "Grunau Baby"—335 km. (about 210 miles). The weather was fairly moderate for soaring. It was a goal flight, and so he got a diamond.

During the last week of the World Championships, he served as a tug pilot. Here is his own story of his 245 miles out-and-return flight which will probably be recognised as a World Record.

"The weather forecast for July 7th reported unstable air with wind about 40°, and a wind velocity of 15-20 miles per hour at 2000 metres. Cloud base 1,200 meters in the morning rising to some 1,700 metres after 13.00 hrs. An inversion layer was to be expected above 3,000 metres. I had contemplated making an attempt for a World Record out-and-return flight for a time, and, as the weather seemed promising and as I was allowed to take one of our two "Weihes" of the wing (the other one Pelle Persson had in Orebro) I resolved to go off.

Everything was well prepared in advance. The controller in Jonkoping was twice during the day contacted on the telephone and the flight was reported to the Traffic Leader at Ljungbyhed to be an attempt to break the World Record in out-and-return flight. I had two barographs with me in the sailplane and during the towing, one was brought in the tug-plane.

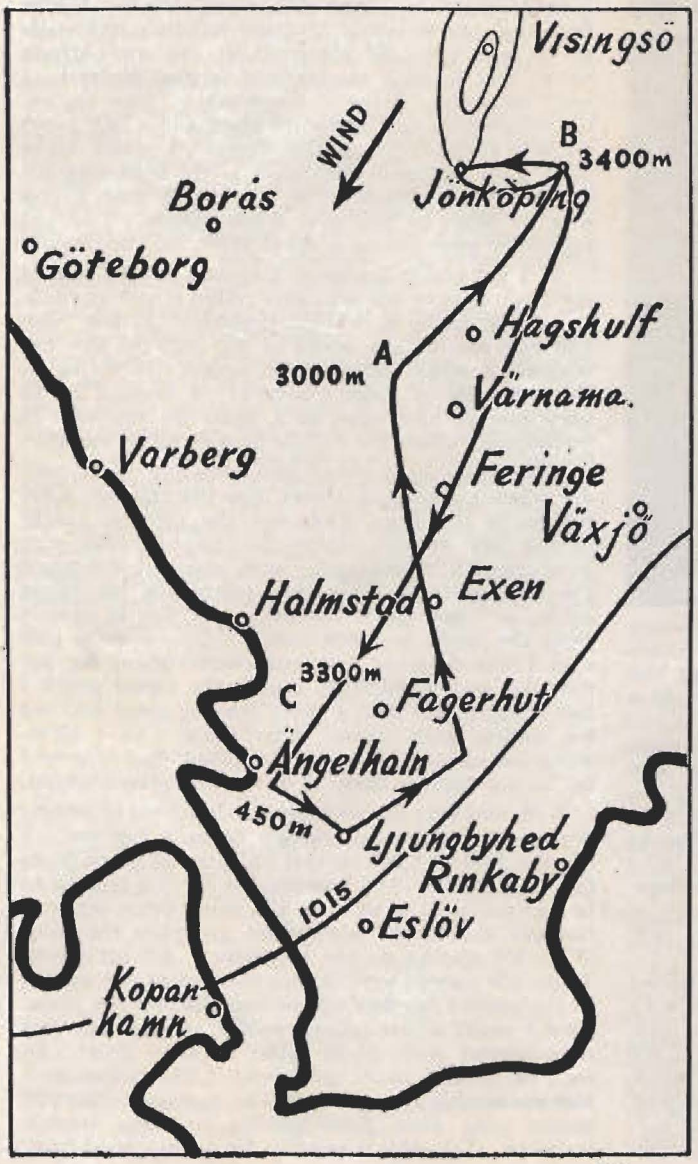
At 09.50 I released over the airfield at 800 m. Owing to rather weak thermals my climb was very slow at the beginning. Not until I got to a point about 10 miles N.W. of Markaryd did the thermals begin to get noticeably stronger, and for half an hour I could press on under fine cloud-streets. I now flew in a course which deviated 30° from my route which was 10°. At about 11.30 the cloud-streets ended and larger cumulus was formed instead. I went into this, flying a considerable time on my instruments (in fact I flew for three and a half hours on instruments during the flight). I could make some 2,500 metres in the clouds at the beginning but as the ground temperature by and by rose I was able to climb to well over 3,000 metres. I gained especially good lift at a point N.W. of Varnamo.

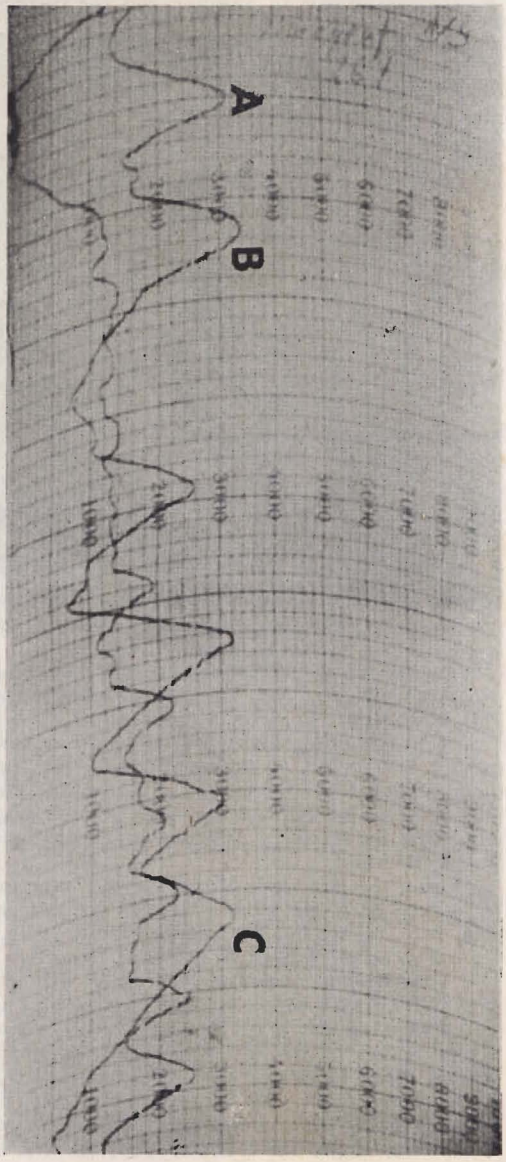
As I got nearer my turning point I began cudgling my brain how to reach it, turn round it and go back. It seemed to be a delicate problem. 15 km. west and east and 30 km. south of my goal the sky was without a single little cloud, apparently owing to the influence of Lake Wattern; I decided to be very careful, and went to a point 20 km. east of Jonkoping, where the clouds looked more soarable.

After entering a cloud and climbing in it with 4-5 m/sek I got out of it very near the top with 3,400 metres in the bag. This was the greatest height during my flight. From this height I had very good chances of making my goal, round it and reach the area south of Jonkoping where the lift began again, so I got off to the field, and flew in over it from the north at 1,800 metres. To be quite sure that I was observed I stayed there circling for ten minutes, and in addition I took the signal pistol I had brought and fired 4 shots, leaving green and red fire bullets with smoke, after them. As I afterwards heard, quite a number of people had observed me, so my flight is likely to be recognised as a record.

Well, now only one problem was left, that of getting home again, but that seemed to be a big one. I left the field at 1,200 metres and pressed on to go to the lift quickly. The best area of lift still seemed to be eastwards so I went to the same place where I had got the height with which to reach the field. With 550 metres on the altimeter I got lift again. These 550 metres were in fact reduced to 350 metres as the ground lies 200 metres over the starting place. Now I could go on rather rapidly as good cumulus were spread with 25-30 miles between them. In each of them I could get about 3,000 metres so I had no trouble in getting to the next one. Rather severe icing from 2,500 metres was one trouble however. Like this it went on for quite a good time.

As the sky grew more and more overclouded and prevented effective sun radiation the thermals on my intended route were very weak. In the west, however, it looked a bit better, and therefore I went 10 miles west of my course to gather a little more height. Here 3,300 metres was reached. Theoretically my home field now could be reached, as I had only some 45 miles left. My knowledge of this special " Weihe " with its bad wing surface, and the fact that the plane was heavily iced over told me however that I was certainly not to reach Ljungbyhed again unless some friendly thermals were willing to help me. Therefore I went on watching for possibilities to go up again. When some 25 miles were left I saw an area on which the sun was shining. Expecting to find lift there I went out of my course about 30° to the west. From this area to my goal it was only 10 miles so could I only reach the lift and get some height there, everything would be O.K. As a sea-wind was prevailing, no down-wind could help me to go to the lift. However, at Asljunga I turned west and reached the area of lift in 450 metres. It was situated N.W. of Ostra Ljungby. After a tough struggling with meagre thermals I worked myself up to 600 metres in 10 minutes. Now the lift got better. At 800 metres I knew the field could be reached, and it was a wonderful feeling of relief to me to know this. To be quite sure, I rose to 1,500 metres. From this height I went to the field at a high speed and when I got there I had height enough to greet my comrades on the ground with some turns. Everybody seemed to be upset at my coming back and they had evidently not expected me to return by air, but they were all as glad as I over my flight.





(*Continued on page* 206)

TWO FLIGHTS AT THE NATIONAL GLIDING RALLY 1949

SOUTH AFRICA

Time : 12.45.
Date : 7th October, 1949.
Location : Kroonstad.
Aircraft : " Air 100."
Pilot : H. R. Lasch.
4,500 ft. A.S.L.

THIS was already the 5th day of the competitions. The weather having been bad, I decided to go back to Johannesburg for some work, and waking up and seeing a clear sky I immediately leapt into my car in order to hurry to Kroonstad and start flying.

The wind was from the south east, approximately 15 knots, and after a smooth aero-tow by Peter Leppan I got away at 12.45. I released in 3 ft. lift which worked up to 8 ft. and entered cloud at a little over 10,000. My new artificial horizon was humming, and this was the main reason for going into cloud as lift was less strong in cloud than outside, and my blind flying was somewhat shaky through lack of practice. I had chosen Middelburg, Transvaal, as my goal, counting on the wind to go more westerly in the afternoon, as this is its usual habit in these parts. After two hours Vaal Dam hove in sight which was dead on my course, and here the decision of the flight had to be made. Ahead of me was 50 miles of clear air with cloud streets to port and starboard. I had the choice of flying a short up wind leg to start with, and then going back on to course, or to change my goal altogether, and go down wind to port and make for Pretoria and Warmbaths. Some rapid calculations decided me to take the former course, and after flying hard an hour or so I discovered that my progress up wind was too slow to circumnavigate the widening hole and still make Middelburg. So with my heart in my boots I went straight down the hole. I flew very carefully and of course the " Air 100 " showed on such an occasion that speed and gliding angle will put miles behind you, and inspecting every ploughed field carefully, I found a thermal which gave me lift to 10,000 feet, which I knew would enable me to cross the remainder of the gap and to tag on once more to friendly cloud. Heidelberg and Nigel hove in sight to port, and I was pleased with my navigation which showed me still right on course. Navigation is not as simple as it sounds over the Free States, if you fly over country where neither main roads or railways are running, as it is as flat as a dish and all very similar. The time was now 15.30, well advanced, and I still had to go almost 90 miles to reach my goal. I pressed on and hurried towards a good looking cloud which began to dissipate just as I arrived. This made the position serious, particularly so as it was blowing as hard as before, and no change in the direction of wind. In order to be safe for retrieve, I now switched course towards the nearest main road which was between Springs and Witbank, and here again I found lift over a large ploughed field, sufficient to give me almost 11,000 feet above the deck. I knew that Middelburg would be a matter of anything up to 6 miles short, and so I decided to make for Witbank to land if possible on the Aerodrome, in order to get a fast aero-tow retrieve. I arrived at Witbank 17 p.m. with 1,600 feet in hand, and getting over a carbide factory I found some lift as expected, which gave me an additional 600 feet. I set myself a minimum height of 2,600 feet in hand in order to make the remaining twelve miles, but hard as I tried I could not squeeze out an extra foot of altitude. I knew that I would get to Middelburg, but without sufficient height for a landing with approach, so I decided to sit down at Witbank.

Time : 12.45.
Date : 10th October.
Location : Kroonstad.
Aircraft : " Air 100."
Pilot : H. R. Lasch.
4,600 ft. A.S.L.

The sky was clear and the wind from the south east. My goal was Balfour. I released at 12.45, and after spiralling up to 10,000 feet, I cruised off at a rather gay 110 k.m.'s towards my goal, I found that I covered some 30 odd miles in half an hour, and with the going so good I decided to abandon my goal and fly straight down wind in order to try for Gold " C " distance. I had no trouble at all for the first 45 miles flying at my high cruising speed, as I found that I could count on some lift every ten miles or so. But since leaving the last thermal, I began to get uncomfortably close to the ground, and ending up with only 1,000 feet in hand over Baragwanath, which I know like the palm of my hand, and its breeding places of thermic. I arrived Vredefort the outlook was very gloomy. I managed to find some broken lift here and there, and after a battle for half an hour to stall a landing I once more found respectable thermal. On my way up I saw " Boet " Dommisse arriving in the good old " Minimoa." " Boet " had taken off simultaneously with me, and this showed me how fast the " Air 100 " really was. I waited for " Boet " upstairs, but he did not feel like going on, and so I went on my way towards Vanderbijl Park, Johannesburg. I arrived at Johannesburg at 15.30, and rather than stooging all over the place to find some probable lift, I went some six miles off course to my home port, there with about 1,000 feet above deck, and just wandered over to my pet local thermal, with whom I am on very friendly terms, and he promptly took me up to 12,500 feet, the greatest height during this flight. All things being normal, this should have taken me to Pretoria, but little was I to know that for the next twenty miles I would lose about 6 feet per second. It was an awful scramble to get to Grand Central, half way between Johannesburg and Pretoria, and here once more I found lift which gave me some 5,000 feet. Pretoria, being barely 20 miles away, I thought I would arrive there with almost sufficient height in hand to make Pienaars River. I

was, however, sadly shaken when the same performance repeated itself which I experienced between Baragwanath and Grand Central. I arrived at Roberts Heights, a little over 10 miles away, with barely 1,500 feet in hand, and searching in vain for lift over the workshops, barracks, hangars, airfield, tarmac strips, there was no lift, and so I landed at Zwartkops, the home of South African aviation, just over four hours after leaving Kroonstad, a distance of 139 miles. Zwartkops is a large military aerodrome, and as luck would have it Pikkie Hammond, the 1947 Champion, was there to receive me. The " Air 100 " was soon under lock and key in one of the fine Air Force hangars, amidst " Venturas," " Dakotas," " Spitfires," etc., in other words—in very good company.

Time : 10.45.
Date : 12th October, 1949.
Location : Kroonstad.
Aircraft : " Air 100."
Pilot : H. R. Lasch.
4,600 ft. A.S.L.

Taking the weather reports into consideration, I was most careful in choosing my goal as Zastron in the Transkei, 190 miles from Kroonstad. The skies were clear, and the inversion was at 10,000 feet, or a little over 5,000 above ground. I released rather early at 350 feet, and I had a most anxious time to make real good contact with the thermal. I kept on saying to myself " that comes from showing off," and it was touch and go whether I would have to land or be able to get away. However, in the end I sat at 5,300 feet and nosed off towards my goal. After 3½ hours I arrived over Marquard barely 100 miles from Kroonstad, a lousy average time. It was obvious that the wind must have ratted on me, but after such an early start I thought Zastron should still be possible. I now corrected course, and after a further hour I was south of Thaba N'chu, ready to land, barely 300 feet above deck. I felt very sorry for myself, and in approaching my chosen landing spot, a dried up pan, I felt a little lift, and working like an eager beaver I managed to make 2,000 feet, and felt somewhat relieved. I noticed a couple of Hawks circling near by and hurried over to join them. The lift was very much better there, and we circled up together to 10,500 feet where they left for destination unknown, and me to Zastron. I soon passed Hobhouse at 16.15, and it seemed obvious that Zastron was too far away. In fact after Hobhouse at this advanced hour, it was improbable that I would find any more lift. I had enough height to get to Wepener anyhow, and here I found my last thermal of the day which carried me to 10,000 feet. It was now purely a question of flying at best gliding angle and pulling to best sink when hitting any air which carried a little, as evening thermic had set in. After gliding this way for about 30 miles, I scraped into a tiny field about 20 miles short of Zastron, after 6¾ hours' flying time.

SOARING IN FRANCE

(*Continued from page* 194)

On the 10th July, Andree Fruitier took her Golden " C " distance with 187 miles from Beynes to Metz in a " Weihe ".

During this period the men's performances at Beynes appeared less brilliant than those of their women fellow pilots. On the same day (10th July) Billard flew 179 miles in another " Weihe " and Rosset 152 miles in an " Air 100 ".

On the 14th July, for the National Day, Remande, a Beynes Instructor, climbed to 16,400 ft. during a storm.

17th July, also at Beynes, Malbrand flew 158 miles in a " Weihe ", Billard 148 miles in a " Mu 13 ".

But I think that the most astonishing performances during that period were accomplished at Fayence by Daniel Barbera, of whom I have already spoken in " Sailplane ". Barbera is the best alpine soarer in France, and a champion of flight inside clouds, and his last performances at Fayence in a " Weihe " not equipped with oxygen seem brilliant. On the 25th June, he took his Diamond " Leg " with a 17,550 feet gain, climbing to 18,200 ft. A.S.L. But he was not very pleased with this flight and he wished to climb higher. On the 19th July, the winch launched him at 13.00 hours to 590 feet. He picked the slope lift, reached 3,200 feet and very soon flew above the mountains, using them for going to Saint Auban at 56 miles from his starting point. At Saint Auban, sailplanes were too numerous for anyone to notice this supplementary machine on the Penitents Slope. But Barbera wished to come again to Fayence. He followed these slopes (so rich in lift and clouds, of which the base reached 8,200 feet) he entered a cumulonimbus, found 30 ft./seconds up and climbed to 22,570 ft. A.S.L., this comfortable altitude, certainly a top level without oxygen, allowing him to glide to Fayence at 18 hours 50.

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245 MILES OUT-AND-RETURN FLIGHT

(*Continued from page* 204)

The total flying time was 7 hrs. 50 min. Start at 09.50. Turning at Jonkoping at 14.30. Jonkoping was left at 14.40 and the landing took place at 17.40. Time out was thus 4 hrs. 40 min. Time home 3 hrs. Average speed out 26 m.p.h., average speed home 40 m.p.h. Average speed for the whole flight 31 m.p.h.

The toughest job I had was no doubt the turning at Jonkoping. The landing possibilities, all the way, are very sparse with little but woods and small lakes, but I was lucky, and got home safely."

ULTRA LIGHT AIRCRAFT ASSOCIATION

NOTES FROM RECENT BULLETINS

Note from The Royal Aeronautical Society's Garden Party.

THE French Hurel-Dubois " H.D. 10 " gave an outstanding demonstration of manoeuvrability and speed. This aircraft is a strut-braced high wing, all metal single-seater, with a retractable tricycle undercarriage, and powered by a " 75 HP Praga D " flat four engine. The main feature of its design is the extremely high aspect ratio of its wing, which reaches the astonishing figure of 32.5. For a span of 30 ft., the wing is only just over 1 ft. in chord! The aircraft has been built purely for experimental purposes to obtain data on the aerodynamic efficiency and structural problem of high aspect ratios, but the firm are planning later on a twin-engined transport embodying this feature. The pencil-like wing is fitted with long and narrow Fowler flaps. It is built of light alloy sheet and contains no spars or ribs ; its narrow chord giving it an inherent tubular strength which is amplified by internal stiffeners fitted spanwise along its upper and lower surfaces.

The Editor asked Mr. B. S. Shenstone, Chief Engineer of B.E.A., late President S.A. Canada, and one of the Committee who laid down the specification for the "Olympia" in 1938, to comment on the "H.D. 10." Here it is.

About the little "Hurel-Dubois". I have no figures available on it at the moment, but I had a good look at the machine at Orly last year, and of course recently on May 14th.

Essentially this machine demonstrates an excercise in aspect ratio. It is one attempt to use a high wing loading combined with a high power loading without requiring an excessive landing or take-off run. The wing area of this machine is about half that for a normal aircraft of its size and power. With a wing of the normal proportions, doubled wing loading would lead to considerable increase in induced drag which, quite apart from the take-off speed, would make the aircraft rather inefficient in flight.

To get back some of the advantages of the lower wing loading, the aspect ratio has been increased from the normal 7 or 8 to about 33. Although this does not affect the stalling speed to any extent, it does reduce the induced drag so that the take-off should be slightly improved, and certainly the cruising conditions would be certainly better.

It is always a problem to fly with relatively high wing loadings and very little power. The sailplane is an example where the effective power available is very low indeed. The only way to fly efficiently at high incidences is to have a high aspect ratio under these conditions. The " Hurel-Dubois " has, by going to an extreme, probably saved some weight in the wing because it is of far less area than normally. It has also saved some weight in the tail length and tail unit which would be shorter and smaller than usual. However, the wing weight has greatly increased on the weight per square foot basis.

His machine takes up even more space than the normal type because his span is greater than that of a normal machine with twice the wing area. In order to sustain his wing, he has used large struts, one of which probably contributes to the lift and thereby does in effect add to the wing area. The fact that his wing is so small in area enables him to make it entirely of metal and even make the tiny Fowler flaps entirely of metal.

I am not particularly impressed with the actual means that " Hurel-Dubois " took in producing this high aspect ratio. Aspect ratios as large as this have been produced with cantilever wings, which of course is far more difficult, but it could be done.

My feeling is, in this machine any advantages of the high aspect ratio have been neutralized by the drag of the struts and by the relative crudeness of the fuselage. It is unlikely that he has gained very much, and, as you know, the take-off run is considerable and the machine lands quite fast.

My impression is that it is an effort equivalent to some acrobatic feat, such as standing on one's head : it is very exciting, but one wonders why it was done.

We must congratulate Mr. E. O. Tips, the designer of the " Junior " on such an excellent report from the strictly impartial Experimental Establishment at Boscombe Down. On recollecting that the prototype has now been flying for three years, we can only regret that Fairey's have not so far produced any further aircraft. Our members will remember that the " Junior " was specially designed for construction in kits of parts by amateurs with limited facilities ; such an excellent design would fully satisfy the growing demand from would-be home constructors, and we can only hope that one day. soon Fairey's may decide to release the design for this purpose.

" Fairey Junior "

We have seen with great interest the first part of a repoit by the Experimental Establishment at Boscombe Down on the Fairey " Junior ". This report was reproduced by courtesy of the Ministry of Supply.

The M.C.A. had asked the M.O.S. for an assessment of the " Fairey Junior " for Student Pilots flying to gain experience for Private Pilot's License. The " Junior " OO-TIT was therefore sent to Boscombe Down for a brief programme of handling tests. The tests made covered all manoeuvres required to be made by Student Pilots under examination for Private Pilot's License—and included taxying, take-off, straight and level flying, medium and stoop turns, climbing and descending, gliding turns, stalling and recovery, practice forced landing and powered approach and landing. In addition some aerobatic manoeuvres including spinning, were made.

Extracts from the report are as follows :—

Taxying. Was very simple with the steerable tail wheel although with a cross wind from either side of more than 10 knots care was needed.

Take-Off. The take-off was easy. With the stick

held right back the aircraft became airborne at 22 knots I.A.S. but a normal unstick speed was 27 knots I.A.S. The elevator was sensitive and effective. During the take-off run there was a tendency for the aircraft to swing to starboard; this could easily be checked by a little left rudder.

Climb. At the recommended climbing speed of 50 knots I.A.S. at full throttle there was still a very slight pull force on the control column with no forward trim force used. Some left rudder was required to keep straight.

Level Flight. In level flight at the maximum cruising power the aircraft was in trim directionally. Fore and aft trim could be obtained with the "bungee" device so that the aircraft could be flown " hands off ".

Dives. The force to hold the aircraft in the dive was light, even with the trimmer in the tail heavy position. If the stick was released in this condition, the nose came up sharply. The rudder and aileron were light and effective throughout. Removing the feet from the rudder bar in the dive caused a slight yaw to port.

Stalls. There was no clear warning, but power on or off the stall was innocuous, the nose dropping slightly and the port wing dropping fairly sharply through 10-15 degrees. With power on or off recovery was immediate on easing the control column forward, and loss of height was negligible. The " power-off " stall occurred at 28 knots I.A.S. The " power-on " stall at 22 knots I.A.S.

Turns and Sideslips. The good view and good control made for accurate turns without any trouble at all. Very little bank was required in a straight sideslip even with full rudder.

Approach and Landing. At the recommended approach speed of 38 knots I.A.S. a very light pull force was required. At this speed, the view for landing was good and the angle of approach just right, allowing a gentle flare out to a touch down at just over 27 knots I.A.S. Cross wind landings were simple.

Aerobatics. The aerobatic manoeuvres included spins, loops, rolls and inverted flying. Spins of up to eight turns were made in both directions. Recovery was immediate and occurred before full opposite rudder was applied.

Conclusions. All who flew the aircraft were unanimous in saying that it was very easy and a pleasure to fly. All were enthusiastic over its flying properties. It had no vices and was considered to be ideal for Student Pilots flying to gain experience for Private Pilot's License. The only possible worthwhile criticism was of some of the cockpit instruments which were sluggish and not very easy to read.

EXECUTIVE COMMITTEE NOTICES.

Mr. R. W. Clegg and Flying Officer I. G. Imray.

The Executive Committee has pleasure in announcing that Mr. R. W. Clegg has accepted the presentation of life membership of the Association. This was offered to him in recognition of his valuable services in founding the Association and building up its structure, and in appreciation of the long period of hard work he put in as the first Chairman and Honorary Secretary.

Flying Officer I. G. Imray has accepted honorary membership of the Association offered to him in recognition of his hard work and loyal service over a period of nearly three years as the first Chairman of the Operations Sub-Committee.

Election of Chairman and Vice-Chairman.

At a meeting of the Executive Committee held on 5th May, 1950, Group Captain Mole was unanimously re-elected Chairman of the Committee and Mr. M. O. Imray was elected to the new post of Vice-Chairman.

KING'S CUP AIR RACE.

Our congratulations to Mr. Edward Day, who recently joined the Association, on his splendid victory in the King's Cup Air Race on his " Miles Magister " aircraft. Let us hope we shall see Mr. Day racing ultra light aircraft before long.

The Executive Committee wish to express their deep regret at the death of Mr. W. H. Moss in the King's Cup Air Race. Mr. Moss was a member of the Association and a great enthusiast for the sport of flying. He was keenly interested in our proposed ultra light " two-seater trainer " and had made us the generous offer of the design of his " Mosscroft " aeroplane with the view to our scaling it down to size to suit a 50/60 H.P. engine. He had also offered the facilities of his works to build a prototype of the " two-seater ". His death is a great loss in the sporting flying movement.

HOPE FOR THE HOME CONSTRUCTOR.

One of the means by which the Association originally intended to achieve its fundamental aim of cheapening the cost of the sport of flying, was to encourage the home construction of ultra light aircraft. Members may have felt that this sphere of our activities has been sadly neglected as so little visible progress has been made; the reason for the lack of progress was, of course, the absence of any approved designs of aircraft suitable for home construction, which could qualify for the issue of a C. of A. on completion.

To remedy this situation and to satisfy the growing demand from would-be home constructors, the Association's Design Sub-Committee has made intensive efforts to sponsor the development of suitable types of aircraft. Now, at last, we can announce that these efforts have been rewarded by the introduction of three designs produced especially for the purpose. The aircraft concerned are at present undergoing their C. of A. flight tests, on conclusion of which, they will be supplied in kits of parts for which we are planning to make hire purchase arrangements available.

The aircraft are all single-seaters, powered by the 36 h.p. " Aeronca JAP " engine, of which the Association holds a quantity, together with a considerable stock of spares. First, there is the Dart " Kitten ", a smart looking, medium performance, low wing monoplane which flew successfully before the war. Secondly, the Britten-Norman " BN-1F ", a parasol wing elementary type, designed throughout for extreme ease of construction. Finally, we have

the " Slingsby-Motor-Tutor ", an interesting development of the successful " Tutor " glider, which is of special value in that it offers glider pilots a simple means of conversion to powered flying without the expense of dual instruction.

The conception of home construction is not new. Before the war, widespread interest was aroused by the introduction of the " Flying Flea ", several thousands of people bought drawings of the machine, and several hundreds actually started to build it. Unfortunately, however, a fault in the design of the " Flea " led to a series of accidents and the aircraft was banned. Other designs, notably the " Luton Minor ", followed on, but home construction virtually ceased with the outbreak of war.

Today, with encouragement and control by the Association, there is no reason why interest in home construction should not become even more widespread throughout the country. Proved designs will soon become available and will be supplied in kits of parts to simplify construction ; our Materials and Construction Sub-Committees can advise and assist would-be constructors, and our Inspection Organisation can provide the necessary supervision to ensure that the aircraft will qualify for the issue of a C. of A. on completion.

The Association has already gained a fair amount of experience in amateur construction, having been in touch with twenty-three projects by our members. Some of these were re-constructions of pre-war " ultra light " aircraft, and the remainder were new aircraft built to pre-war designs ; eight completed aircraft have already flown, and six more are expected to do so before long. In nearly every case the standard of workmanship has been of an extremely high order.

Within the next few months, when the new aircraft types are cleared for their C's of A., the Association plans to start a publicity drive for the idea of home construction. We believe that the spread of craftsmanship, mechanical knowledge and airmanship to be gained by this means is of the utmost importance to the nation. We shall, therefore, do all we can to encourage the formation of constructional groups all over the country ; every town could have one, every A.T.C. Squadron and every Technical College.

Until now, the Association has relied for its continued existence upon a relatively small number of enthusiasts, consisting of eleven affiliated groups, and a hard core of individual members, who have stuck to us loyally despite heart-breakingly slow progress. We are sure that all members will wish us success with this new phase of our activities, for which we have worked so long, and will do what they can to support it. We hope that our efforts will eventually result in the home construction of aircraft becoming a nation-wide hobby, and so lead to a considerable expansion of interest in our movement and materially assist the attainment of our aims. Further information on the aircraft flight tests, and on the progress of the home construction scheme, will be published in future bulletins.

NOTES FOR THE GUIDANCE OF AMATEUR DESIGNERS AND CONSTRUCTORS.

In reply to many requests from members for information as to the regulations laid down and the general procedure to be followed by amateur designers and constructors, in order that their aircraft may obtain Certificate of Airworthiness upon completion, comprehensive notes (titled as above) have been prepared on the subject by Mr. A. R. Weyl, A.F.R.Ae.S., head of the U.L.A.A. Design Team, in collaboration with the Design, Construction and Inspection Sub-Committees.

These notes will be invaluable to all intending amateur designers and constructors. Copies can be obtained on application to the Hon. Secretary.

OPPORTUNITY FOR AN AMATEUR CONSTRUCTION GROUP.

Mr. F. N. Slingsby, head of Slingsby Sailplanes Ltd., has offered to make available one kit of parts of the " Motor-Tutor " for the special price of £250 in order to try out the home construction scheme. This kit will consist of a complete set of prefabricated components of the aircraft together with the necessary fabric, plywood, etc., for covering, but it does not include the " Aeronca JAP " engine or propeller. An engine can be supplied by the Association for £60 to members and a propeller is obtainable for about £20.

Mr. Slingsby offers full technical assistance to any constructional group taking advantage of this offer and groups so wishing are invited to write in at once to the Hon. Sec. stating their locality, technical experience and facilities. The Association will be glad to recommend any suitable group for a loan from the Kemsley flying trust to enable them to purchase their kit, together with the engine and propeller.

If such a loan is granted, the group concerned would be required to make a deposit and to repay the remainder by monthly payments within a reasonable period. For example, a group might offer to lay down a deposit of (say) £40 and pay the remaining £290 at the rate of £12 a month for two years, e.g., it would take a group of six people 10/- per week, per member. Once flying of course, full comprehensive insurance would be required for the aircraft to the value of the remainder of the loan unpaid.

NEWS FROM THE CLUBS

GLIDING IN SCOTLAND.

A relatively small group of members have been responsible for the renewed interest in soaring from Bishophill. By experimenting assiduously in all kinds of weather it has been found possible to soar in conditions which had been deemed adverse at an earlier period. As a result of these experiences, W. " Richard " Rozycki wrote an article for the club news sheet " Uplift " which, since it has much more than a purely local interest, we are producing, in edited



BISHOPHILL

form, below. The enclosed photograph does not do justice to the dominance of the ridge nor to the splendour of the scarp; it was taken at a distance of several miles away across Loch Leven. The main soaring site is apparently beneath the outside branches of the foreground tree, whilst the trees shadow is pointing N.N.W.

Before proceeding any further I would like to stress that our success has been achieved mainly because every suggestion, provided that it is logical, has been open to discussion and trial. In this way we have made some radical changes in our landing and soaring techniques.

Since the commencement of the use of the landing ground on top of the hill, a day of soaring has ceased to be one of hard labour. Normally, two minutes elapse between one landing and the next launch, and the hazards of landing have been minimised now that it is possible to "go round again" in the event of overshooting the landing strip. Should there be a sudden drop in the velocity of the wind one can always land on the shoulder abutting the strip, thus saving a pound which is the penalty one has to pay on landing at the foot of the hill.

Soarable Winds.

The direction of the wind and its strength at Balado airfield, are usually used as a criterion for the hill conditions. But rather erroneous conclusions can be arrived at, by merely guessing what the direction and velocity of the wind will be at the face of the hill a few hundred feet above the level of the aerodrome. The lapse rate, the wind gradient and the influence of Benato and the Ochil Hills must be taken into consideration, particularly on days when there is a certain amount of either north or south in the wind. The only reliable way of determining the flying conditions at the top of the hill would appear to be the measurement of the air velocity at the top of the hill. Admittedly this is the hard way, but with our limited experience it is the only way, unless the wind is blowing from the East or there is no wind at all. Incidentally, for those who have made an error of judgment in deciding that there is no point in going up the hill because there is no wind at the foot of the hill, I would mention that the hill has actually been soared on days when one could scarcely feel a breath of wind on the golf course, or even as far as one third of the way up the hill.

The hill was safely and successfully soared in a "Cadet" when the velocity of the air at the crest near the usual position of the wind sock was as little as 19 m.p.h. and as much as 52 m.p.h. In the former case there was a considerable amount of south in the wind. One successful soaring flight was carried out with the wind due south (taking off and landing at the usual point on the shoulder near the hut), proving that the lower and higher south ridges of the hill have soaring possibilities that should be fully investigated. A possible landing ground would be on the top of the ridge above the farmer's cottage.

Landing Grounds.

Since the possibilities of landing on the very top of the hill have been more fully investigated, it has been found that, provided that the pilot is correctly instructed as to how to approach the landing, the dangerous down draught area can be avoided. This landing ground has proved itself to be highly superior to that near the hut, due to its proximity to the crest of the hill. The air above this stretch of ground seems to be quite calm normally. On a very windy day with a low lapse rate and the velocity of the air at approximately 55 m.p.h., smooth air was reached at an altitude somewhere below 200-300 ft., above the landing strip.

Comparing the landings at the top of the hill with that near the hut, under the same conditions, the amount of down draught and turbulence experienced on the lower landing ground was greater, possibly due to its greater distance from the edge and also due to the configuration of the ground. The two hills form a narrow passage into which the air, spilling over the edge of the hill, is driven, resulting in an area of high air velocity and low pressure. In order to maintain position above the landing ground it is necessary to dive the "Cadet" or "Tutor". This fact, coupled with the normal down draught accounts for the very rapid loss of height above this area.

As I have not yet landed at the foot of the hill, I am not in a position to comment on the emergency landing ground!

Launching.

When the speed of the air at the crest of the hill is equal to, or higher than, the flying speed of the glider, it seems to me that the shoulder launch is quite safe and satisfactory. When the speed of the air is below 35 m.p.h. this type of launch is dangerous and should be avoided, particularly when the wind is not striking the hill at right angles. Under these circumstances the glider should be bungy launched.

Bungy launching has proved to be a very successful and safe method of becoming airborne. The only disadvantage of this type of launch is that at least six people are required, one at the tail skid of the glider, four to operate the bungy, and one to hold the wing. Eight people launching a "Cadet" at the top of the hill could give it an initial height of from 50-100 ft.

Normal Flying Procedure.

With the experience gained up-to-date, Bishop Hill can be soared in such inefficient aircraft as the "Cadet" in a very light wind, having very considerable North or South components. The lightest wind soared up-to-date was on 6.8.50 when the speed of the air at the crest of the hill was 18-22 m.p.h. with a very considerable South component. The maximum height obtained was 600 ft. above the top of the hill.

The normal flying procedure should be as follows: the gliders should be launched at the hut and taken up to the top landing ground by an experienced pilot, who, after his flight would advise pilots as to the soaring conditions. When landing on top of the hill, great care should be exercised in not undershooting because of the rough ground. In the event of overshooting it is a comparatively simple matter to "go round again". Should the pilot be unable to maintain height however, the 300 ft. difference in level between the two landing grounds enables a safe landing to be made near the hut.

BRISTOL GLIDING CLUB.

The frustration caused so far this Summer by the prevalent anti-soaring weather, has been somewhat relieved lately by the National Contest and by one or two good flights from Lulsgate. At Bradwell, the Club team, K. W. Turner and C. Staffurth, finished 8th; and the privately entered Olympia "Bluebird" finished 16th, J. M. Heron and E. A. Thompson finishing off their Silver "C's" in the process. In all, the two machines flew a total of 460 miles.

At Lulsgate the most notable flight has been G. E. Miller's 40 miles to Gloucester, flown mainly in cloud. D. J. Farrar made the Club's first out-and-return flight, to Wells and back, a distance of 35 miles. A number of shorter flights have been made to Filton and Whitchurch.

Thanks to the acquisition of a pair of "Tutor" wings, the unpopular "Green Cadet" has now become the popular "Green Tutor." We now have a "Tutor" both at Roundway and Lulsgate, thus enabling familiarity with the flat glide of this machine to be made over the unobstructed acres of the airfield. Another valuable addition to the Club's equipment is "V.V." a Ford V.8 Saloon, which is intended to be used mainly for cross country retrieves. It has, however, an interchangeable towing hitch and Ottfur so can also be used as reserve auto tow car.

Flying now takes place at both our sites most week-ends, and a camp was held at Roundway over August Bank Holiday. However, west winds strong enough for hill soaring have been extremely scarce and most of the soaring there has been in thermals.

On August 13th, a total of 100 launches was made at the two sites and the day was rounded off with a farewell party to J. M. Heron, our popular and hardworking Chief Ground Engineer.

This year's courses have been well attended thanks to an intensive advertising campaign. In spite of the weather good results have been obtained, the "two-seater" proving extremely valuable when conditions are unsuitable for solo training. Two course members who subsequently joined the club progressed from first slide to "Tutor" in 3 weeks.

SOUTHDOWN GLIDING CLUB.
Summer Meeting, 1950.

The above was held from July 29th to August 7th, when we were joined by the Portsmouth G.C., led by Ken Fripp and quite a goodly number of their members, including Audrey Johnson, Parslow, Pears and Townsend.

The flying details for the week were :—398 launches for 76 hours; Southdown "C" Certificates 2; Portsmouth 7.

Nothing startling happened during the week, but Ken Fripp in the "Kite" got up to 1,900 feet, and the writer, with Lee of London G.C. up to 1,800 feet on the only day that thermals really made their appearance.

Another outstanding event was the evening "Cuckmere Wave" which turned up on three occasions. This rather remarkable wave commences about 18.30 hours and goes on until dark. Indeed on one evening Ken Fripp was aloft after dark and landed by the light of car headlamps. He said that the view of the coast all lit up was wonderful. I should perhaps explain that when at 1,000 feet over our cliffs it is possible to see from Worthing to Hastings, so adding holiday illuminations to our show-piece is putting jam on both sides. Ken is the only one to have seen this so far, but I expect others will follow suit.

Various suggestions have been put forward to account for the steady lift, and the most acceptable is that when the sun gets low, the valley warmth is pushed upwards by an inflow of cold air from the sea. Strangely enough the lift comes on for perhaps an hour; dies away, and returns for another hour or so. We discount the theory that it is the caravan camp cooking their evening meal, for none of us could report smelling sausages and onions frying.

Towards the end of the week Portsmouth were getting very excited as more and more of their "B" members got their "C's" and finishing up with seven quite exceeded their expectations.

Nothing untoward happened to mar the holiday; even the weather played ball except for an odd spot of rain.

The Southdown attendance was not large except for the week-ends and Bank Holiday, but all those living locally managed to get over to Friston at odd moments and a few had holidays and slept at the Hangar.

Taking it all round, it was a very successful meeting and the sight of five machines all weaving along the cliffs was one for sore eyes. Portsmouth put up the "Kite" and "Grunau", and we had our two "Tutors" and "T21B". The latter doing very well with instruction and joy flights. Barring accidents and the U.S.S.R. we all hope to do the same next year.

SQUEEGE.

LONDON GLIDING CLUB.

Week Ended, Sunday, June 4th.

The month started somewhat in-

auspiciously. There was no flying for the first two days, and little was done during the week-end apart from circuits, on which Ron Reid was kept busy in the " T 21 ". Dudley succeeded in contacting at the third attempt and sailed around for a couple of hours, but apart from that the best times were only about a quarter of an hour.

Week ended, June 11th. For the first two days only circuits were done, chiefly initiating the members of the June course. Some soaring was done on the Wednesday by Periera, Frank Foster and George Scarborough. the latter in the " Scud II "; and on Thursday Hanks soared the " T 21 " with a course member, Parker, for nearly an hour and George again soared the " Scud ". Friday was much better, and the high spots included a Silver " C " cross-country to Blackbushe by Russell in the "G.B." and Bridson taking the " Prefect " to 3,800 ft. in a two hour flight, while Rowley soared the " Gull IV " for two and a half hours. Saturday was not so good, though Carr took the " Gull IV " to Knebworth and Lee got to 3,600ft. in the "Olympia." Sunday, with a N.N.E. wind was limited to circuits.

Week ended, June 18th. A much fuller week. Monday was confined to east wind circuits, but on Tuesday a good hill wind let some of the course members get in soaring practice, Doughty doing over 2 hours in a " Tutor " and Savage three and a half in the " G.B. ". Of the club members Leech, Randers, Wheatcroft, Hanks, Periera and Scarborough put in a total of over ten and a half hours. Thursday also was an excellent day and a variety of machines took the air, fifteen or so members putting in respectable times. Dan Smith landed the " CA 1000 " on top so that it could be bunjied off to give Clay, a course member, his " A ". The " Dagling ", however, was slightly damaged in another landing on top. Friday was notable mainly for the course members qualifying, three " A's " and five " B's " being the total, Parker getting both. Apart from that, Buckle, Ellis, Randers and Cleaver got in quite a lot of soaring. Saturday was very active, and there were 23 flights of periods between one hour and five, the latter being a Silver " C " duration by Ruck in his " Kite I ". Stevens got his " C " with 33 minutes, and Steve successfully used the " Olympia " as a two-seater by wearing one of the twins as a parachute. On Sunday there was a light bowl wind and although about sixteen hours' soaring was done times were generally short. Jeffrey, Buckley and Scarborough being the only members to do more than an hour. Cooke got caught out in a " Tutor " and landed it undamaged behind the bowl, so Rivers was allowed the special treat of a bunjy off the top.

Week ended, June 25th. Monday was the start of the A.T.C. course under Fl. Lt. Anderson, and although they were mainly confined to delayed descents in a S.S.W. wind, Wilson managed to soar the " Prefect " for 35 minutes. On Tuesday in a similar wind, Periera managed to get in three hours in the " Olympia " but there were no other considerable times. On Wednesday the wind veered but decreased, and although Tarnow, Hands, Scarborough and Dodd made nearly five hours between them, it was not an active day. Thursday was just right ond full advantage was taken of it. There were three Silver " C " durations, Tarnow in a " Tutor " and two A.T.C. members, Casewell and Taylor in the " Buzzard " and " G.B. " respectively. Fifteen other flights of over an hour and up to 4½ were carried out. Allen took the " Krajanek " to 4,000 ft., including 1,400 ft. in his first cloud flying. Lang took the "Buzzard" to Royston, 28 miles away but did some damage on landing, and Joan Price flew the " Olympia " to Great Dunmow, 37 miles. Another landing was made on the Golf Course, this time by an A.T.C. member, Everet in the " G.B. ". Wilson was bunjied back. Friday produced two more Silver " C " durations by A.T.C. men, this time Watson and Everet. There were six other longish flights ranging up to four and a half hours, and Nixon and Dale both took their " C's " in the " C.O.A. Tutor ". Saturday yielded two more " C's ", Hamnett and Nancy Moffatt, and eight others made flights of over an hour. The Golf Course had another visit, this time J. C. James, and Dodd got the bunjy. Sunday was another fairly good soaring day, the most notable item being a climb to 9,300 ft. in cloud, by Steve.

June 26th to 30th. On Monday there was a light bowl wind and ten launches were made for a total of eight and a half hours. Of this, Periera accounted for three and a half, but five launches were only slides. In similar conditions on Tuesday there were only seven launches, and Ron Reid with Button as P.2 did the only long flight. Ginn and Scarborough, however, flew the " Gull 1 " (the old Blue Gull) which Ginn has so remarkably rebuilt. Wednesday brought another good soaring wind and seventeen launches gave over 20 hours' flying, including a Silver " C " duration by Williams in a " Tutor ". Still another Golf Course trip, this time Leech ; and Buckle was shoulder launched from the top. We really ought to lease a few of the greens for emergency landing purposes. Thursday was still a soaring day, but uneventful, and only three machines were taken out by the seven members present. To finish the month Friday gave a 10 knot W.S.W. wind and good thermals in which Jack Hanks flew the " Olympia " to Halesworth, 96 miles away. There were fifteen launches altogether for nearly twenty-five hours' flying.

Totals. 1,116 launches, 372 hrs. 40 mins. 4 " A ", 6 " B " and 5 " C " certs., 7 Silver " C " durations, 1 distance, 1 height, and six cross-countries totalling 247 miles.

Saturday, July 1st, and Sunday, July 2nd, were purely circuiting days with light variable winds, and the only item of news was a " B " by Riddell.

Week ended, July 9th. Flying started on Tuesday with the July course, Alan Yates as volunteer Instructor. For the first three days there was no soaring. Redfern got his " A " on the second day. On the Friday there was a light S.S.W. wind and Hanks and Huggett each managed to keep the " G.B. " aloft for ten minutes. Redfern got his " B ". Saturday was a better day for soaring though only a few managed to contact. Steve went off in his " Olympia " to Feltwell, 64 miles, and Cadman took the Club " Olympia " 25 miles to Tempsford, with a maximum height of 3,000 ft. and a total time from launching to landing of 50 minutes. Sunday was poor

until late afternoon, when the wind veered to West and a limited amount of soaring was possible. Currie did two hours in the "Prefect" and Scarborough nearly two in the "Scud", but generally flights were rather short.

Week ended, July 16th. Monday, as so often happens, brought good soaring but few people to take advantage of it. Periera, however, flew the "Olympia" for nearly five hours, and Williams, Hanks, Ron Reid, Yates and Lawrence Wright also made use of the lift. On Tuesday in a strong W.S.W. wind Jack Hanks took the "Gull IV" to 8,000 ft. but had to land at Luton Airport, and seven or eight others got in quite a lot of soaring. Wednesday was poor on the hill but Marshall managed to contact and kept the "Gull IV" up for a couple of hours. There was only course flying on Thursday, but conditions improved once more on Friday. Huggett and Kay put in nearly five hours between them in one of the "Tutors" and there were ten or a dozen other longish flights, including over an hour by Ginn in his re-built "Gull 1". Redfern, a course member, got his "C" and Barnaby and Gates their "A's". On Saturday there was nothing but a few "T21" circuits before rain stopped all flying. On Sunday the wind was barely on the hill and activity was therefore limited, but Bud Marshall went 30 miles to Gransden Lodge, Cadman, Hurry and Frank Allen managed to stay up for an hour each and a number of others flew for shorter times.

Week ended, July 23rd. On Monday only Periera (again) and Rogers used a perfectly good wind. No flying on Tuesday, but on Wednesday seven members flew five machines for a total of 5½ hours. On Thursday there were three hops by Haigh, and on Friday only four flights by Doughty, Allen, Winter and Ginn, though these totalled three and a half hours. On Saturday nothing but circuits again, but Sunday made up for it with 44 launches and 39 hours' flying in a strong W.S.W. wind. Ginn went up for a five hour attempt but had to descend after three and a quarter. Haigh got his "B".

Week ended, July 30th. Again Periera and one other (Bennett) were the only ones to enjoy a really good day. Periera took the "Olympia" 60 miles to Southminster, and Bennett tried five hours in a "Tutor" but got only nine tenths of it. Then there were only a few circuits until Thursday, when West went 25 miles to Buntingford in the "G.B.". Nothing more until Saturday, when Anson, Tony Reilly and Lawrence Wright managed to find some thermal. Anson took the "Olympia" to 6,000 ft. and Tony just flew around for three and a quarter hours. On Sunday there were only a few "Dagling" hops.

Monday, July 31st. Nine members attended and got in a little soaring, 13 launches for a little over two hours.

Totals for July. Four "A's", three "B's", one "C", one Silver "C" distance, one Silver "C" height and six cross-countries, totalling 212 miles. Total launches 823, and flying time 145 hours 48 minutes. Not a good month.

B.A.F.O. ANNUAL GLIDING CHAMPIONSHIPS

In this year's B.A.F.O. gliding championships, held over 10 days at Scharfoldendorf, in Germany, more than 125 hours were flown from 415 launches, although soaring conditions were seldom ideal for long.

Last year, in more favourable weather, B.A.F.O., captured a British Gliding Association distance record for British "multi-seat" gliders, when from Gutersloh, the 1949 venue, Flying Officer K. Hirst, now of the R.A.F. Celle Gliding Club, flew to Hamburg, an officially recognised distance of 138.9 miles, in a "Kranich".

This year's greatest distance was flown by Flight Lieutenant R. A. Carson, in a "Weihe" single-seater high-performance sailplane. He landed at Remsfield, near Kassel, in the U.S. zone, 65 miles south of Scharfoldendorf. This officer, who runs the R.A.F. Gutersloh Gliding Club and who opened the B.A.F.O. Air Demonstration at Gutersloh last June with a polished display of glider aerobatics, also captured the competition's height record by reaching 2,250 metres—almost 7,000 ft.

Among the ground crew entrants, every whit as keen as the officer and aircrew competitors, Corporal Peter Alan Linsell, a radar fitter (air), of R.A.F. Station, Fassberg, was a winner in the duration class with an airborne time of 5 hours 48 minutes.

The only woman competitor was Corporal Myrtle May, W.R.A.F. a member of the Headquarters Gliding Club, who holds the distinction of having once remained airborne in a "Grunau Baby 2" sailplane for 5¾ hours, one of the longest times recorded by any woman glider-pilot in Germany since the war.

Consolidated results were :—

B.A.F.O. Challenge Cup. 1, Headquarters, B.A.F.O., 1,526 points; 2, Gutersloh, 748½ points; 3, Royal Engineers, Hameln, 254. points.

Brady Trophy. 1, Flight Lieut. D. E. Osland (the Headquarters Club chief flying instructor), 1,060 points; 2, Flight Lieutenant R. A. Carson, Gutersloh, 585½ points; 3, Corporal A. Goff, Scharfoldendorf 313½ points. (These three won the "A" Team ("Weihe") prizes.

"B" Team events, covering other high performance sailplanes. 1, Corporal L. Simpson, R.A.F. Buckeburg, 269 points; 2, Flight Lieut. A. L. Crocker, Gutersloh, 95 points; 3, Major Macey, Royal Engineers, Hameln, 91½ points.

"C" Team events ("Grunau Baby 2's"). 1, Lieutenant D. W. Dall, Royal Engineers, Hameln, 104½ points; 2, Lieutenant R. M. Barwell, Royal Engineers, Hameln, 58 points; 3, Sergeant J. J. R. Davies, Gutersloh, 51 points.

The prizes were presented by Air Chief Marshal Sir Roderic Hill, Rector of the Imperial College of Science and Technology, London, one of the earliest gliding enthusiasts in the United Kingdom, who was staying in Germany for a few days as the guest of Air Marshal Sir Thomas Williams, Commander-in-Chief, British Air Forces of Occupation. Sir Roderic and his brother built and flew their own glider in 1912.

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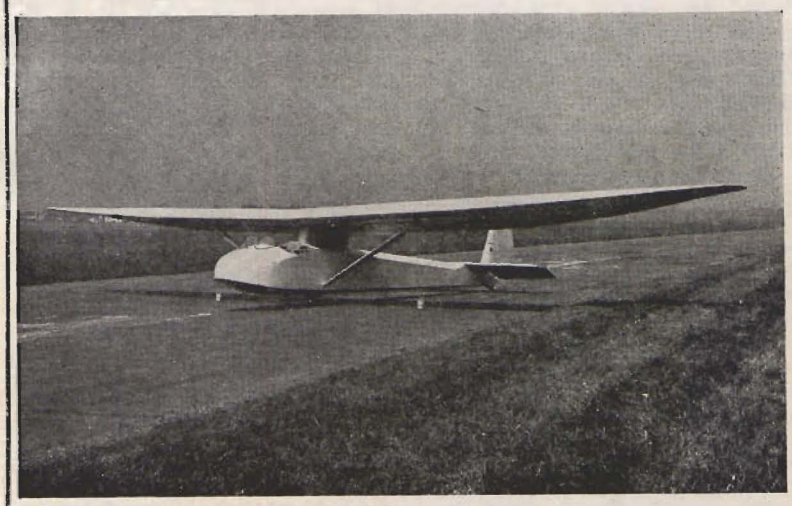
Saturday, 3rd June Wind 5 m.p.h. northwest. Cloud 8/8 st.cu. "Coogee" and "Rhon" both having good, high launches. Stewart Meyes most capably kept

the " Rhon " up for five minutes and now holds the primary duration record. We seem to recall Derek Reid having a flight in the " Rhon " too, and doing several very effective stalled turns. It is certainly no reflection on Derek's pilotage if one recalls that the " Rhon " looked like a swallow intent on catching gnats. In " Coogee ", launches to 1,450 ft, circuits of 8 and 9 mins. Gordon Macdonald promoted to " Coogee " for his preliminary low straights.

Sunday, 4th June. Wind 5/10 m.p.h. north-west. Cloud 8/8, assorted. Only 18 flights in "Rhon" and " Coogee " before a cold front moved in from the south-west, trailing heavy rain after it. Grace Roberts and " Coogee " released at 750 ft. and rocketted to 1,600 ft. in the strong, delightfully smooth lift ahead of the front, base of which was down to 1,000 ft., then had to leave and return to the field through the thinnest part of the front, base of which was down to 1,000 ft. (Sorry, we said that before, didn't we? Haven't got any erasing ink and anyway the newspapers do it, why shouldn't we?) One of these days, a front will come along; and it won't be moving in on hilly Tiger country, and it won't bumble along ten minutes before pitch dark, and there'll be a jolly little retrieving crew on the ground, and one of us, by heck, will get into a glider and ride that damned front away to hell-and-gone down East Gippsland way, instead of having to leave the thing and spend the rest of the day dreaming of what might have been. The weather cleared later but the winch developed rumble-guts again.

Saturday, 10th, Sunday 11th, Monday, 12th June. Before the winch trouble, the idea had been to have a really good week-end's flying before stopping to do some necessary maintenance jobs. However, we were determined to get Gordon MacDonald on to his " Coogee " circuits, and conditions were quite ideal for that project, so, by kind permission of Bill Iggulden, Senr., we borrowed the Iggie winch. Gordon carried out six excellent circuits in warm, sunny conditions. Then, of course, the big earbash was on. As all V.M.F.G. types quickly clapped their hands over their ears, Gordon went next door to the Beaufort Club, where he climbed a ladder and started talking to Len Travers and Doug Lyon, who unco-operatively clambered madly away from him over the rafters. They were ruthlessly followed up and finally cornered when the only alternative was to leap to their death from the hangar roof. They chose Gordon instead. All jokes aside, we warmly congratulate Gordon on his smooth conversion from primary to sailplane. On Monday, there was a thick fog until noon, when it began to lift sufficiently for us to start flying "Coogee ".* The first few people to fly entered cloud at low altitude, emerged above the fog-bank at 500/600 ft. then climbed up for another two or three hundred. To the east, south and north the cloudfield stretched unbroken, shining in brilliant sunshine, with a vivid, blue sky arching overhead, while the Dandenong Ranges away to the north, reared blue heads from the clouds like dolphins leaping from a pearly sea. A gradual sinking towards the cloudtops reminded the reluctant pilot that Mother Earth was exerting her irresistible pull, so one turned and flew back to the broken clouds, which framed entrancing little cameos, the nicest of which was the corner marker. Later, the fog bank rolled completely away and hot sunshine gave us a very pleasant afternoon.

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NEWS AND VISITORS.

It was with very real pleasure that we welcome a visitor from the Derby and Lancs. club, namely Pauline Neill, who is in Australia for a while, doing physio-therapy work. We've always liked what we've heard of the Derby and Lancs. people and Pauline did nothing to disillusion us. In eleven hours, we pretty well caught up on gliding activities in our respective clubs, but had by no means exhausted the subject. Derby and Lancs. have an excellent ambassador in Pauline and we only wish she was staying here longer.

There's a gliding club at Dubbo, N.S.W., now. We've been writing back and forth to Jack Coomber, who says they have about 21 members and are hoping to build a Hawkridge " Venture " two-seater.

Nancy Ellis (of the Hinkler Soaring Group, N.S.W.) who spent last A.N.A. week-end with us at. Berwick, has flown the Group's "Grunau" now and also knows what an aero-tow is like from the sailplane end. When Nancy was dropping the rope after giving one of the boys a tow, one end of it went into the lake in the middle of the aerodrome (left over from the floods). When Nancy landed, the boys asked her—please, if she intended dropping the rope in the lake, would she bait the hook to make their fishing worthwhile ?

NEWS FROM U.S.A.

Official word has just come in from the N.A.A. and the F.A.I., that William G. Eriegleb's soaring flight round a 100 km. triangular course has been recognised as an international record in the multiplace class. ' Gus ' made the flight August 12th, 1949, in a " BG-8 " sailplane, flying from El Mirage Field, Adelanto, Calif., with Jack La Mare as passenger, and averaged 27.873 m.p.h. This gives the U.S. three international soaring records (others are Paul MacCready's goal-and-return flight of 229.19 miles and John Robinson's ascent to 33,500 ft. a.s.l.). Still in the works are Harland Ross' performances of 22,244 ft. gained and 36,100 ft. a.s.l. reached, both turned in January 28th, 1950. This should bring the total up to five. It was as recent as the first half of 1947 that the U.S. didn't have any. Looks like we've been making good progress and the rest of this summer should present an excellent opportunity to capture a few more, especially in the speed and distance categories.

The Motorless Flight Institute, c/o Joe Steinhauser, Mundelein, Ill., is going great guns these days, has 60 students and customers; a dozen sailplanes and gliders, two " Stearman " tow planes. Located just outside of Chicago, the school is a setup to give glider courses under the G.I. bill, as well as regular soaring instruction. Joe recently completed a tour of the country, visiting various soaring centres, including Bishop, where he tried for his Golden ' C ' altitude, only to have two friends of his, comparative newcomers to the sport, reach 29,000 ft. Steve and Ginny Bennis have also been touring the soaring centres from coast to coast and report activity is looking up all over. After the National they plan to settle down at their old stamping ground of Sanford, Florida.

The Government have decided to grant to Gliding and Power Flying Clubs a rebate of the 9d. per gallon duty which was recently put on to Petrol just before derationing. Precise details as to how this is to be arranged have not yet been settled.

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Letter to the Editor

Dear Mr. Editor,

I hope this letter is only one of many you will receive on the same subject. There is no doubt at all that The Derbyshire and Lancashire Gliding Club made an excellent job of running the National Competitions last week ; it was as happy and cheerful a gliding meeting as ever was, and a grand thing to see the affair managed so efficiently and yet without fuss, or any degree of officiousness, by the sheer continous hard work of such a splendid team.

To mention any names without mentioning the lot—and that would be just about the whole membership list of the Club—seems unfair. However, in congratulating especially Messrs. Slater and Smith, who did a responsible and difficult job so efficiently and so cheerfully, one congratulates at the same time and equally the grand crowd of Club workers who made it all possible. These contests have shown that the strength of British gliding does not repose in a few carefully groomed experts, but in a large number of pilots of good average standard, rich in the qualities of worthwhile individualism and high initiative.

Yours very sincerely,
George Hinchliffe,
(Yorkshire Gliding Club).

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