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APRIL 1957





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SAILPLANE AND GLIDING

OFFICIAL ORGAN OF THE BRITISH GLIDING ASSOCIATION

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COVER PHOTOGRAPH.—A Kookaburra two-seater taking off from Hanmer during the Christmas Competitions of Canterbury Gliding Club, New Zealand.

—Photo by Mannering & Donaldson
also those on Pages 51, 52 and 78.

CROSS-COUNTRY GLIDING IN NEW ZEALAND

by Christopher Wills

(Hon. Sec., New Zealand Gliding Association)

HITHERTO, it has been the popular belief that New Zealand conditions were most suitable for extraordinary altitude performances and that cross-country flights over the wild, sparsely populated terrain were not practicable. However, with the advent of new high-performance machines, this field has suddenly opened up and some remarkable flights have been achieved.

Before last Christmas, the only cross-country flying of note had been carried out by Dick Georgeson in the Weihe, who had once flown 205 miles in three hours, missing his Gold C only because he had started too high. Mrs. Georgeson had gained New Zealand's first Silver C in the same machine. However, nobody else had had much success although several unsuccessful attempts at Silver C distance had been made in the Eon Babies and T31's.

Then during the last Christmas holiday, which brought frustration to the South Island, startling success came to Auckland. During the period west winds prevailed. These had been very strong in the South Island but brought to the Auckland Gliding Club the weather they had been waiting for. Almost 200 hours were flown and six Silver C's gained, five of them in the Olympia and one in the Bergfalke. The most spectacular was perhaps a triangle flight of 60 miles (not quite 100 kms.). The club has just landed an L-Spatz, and Messrs. Court and Hookings will take delivery of the Georgeson/Hamilton Skylark III at the end of the season. Thus, for the next season the club will be armed with six machines.

The sparks which seemed to set things off in the South Island were the remarkable efforts of a top-dressing pilot, Mr. Keith Wakeman. His flights started just before Christmas and set in motion a ferment of competition to get New Zealand's second Silver C. Things gradually reached such a crescendo that it seemed as if New Zealand's first local Gold C was being contested also. During the month before Christmas, Mr.

Wakeman had made two cross-country flights in the new Skylark II. Neither had been quite far enough for a Silver C. After the first one he had landed in a field, only to be aero-towed out to set off again, northwards. Nobody quite knew where the Skylark would be heard of next and the retrieve took the rest of the week.

The next cross-country was made by Fred Dunn, who built the Skylark's fuselage. Determined to achieve New Zealand's second Silver C in his own machine, he hurtled off in extremely rough conditions across a 45 m.p.h. wind. His flight, often at very low altitude, has been described by some as "an aerial pub crawl," but ended up 55 miles away among the Maoris at the Wood End pub which sells beer by the pound (lb.)! This was almost the only success of the Canterbury Gliding Club's



Christmas camp, where two of the gliders were broken, including the beautiful Weihe. The fuselage and one wing were blown over on the first day due to bad ground-handling in the strong wind.

However, after Christmas, hearing of the Auckland Gliding Club's success, the remaining machines were rallied and flung into the air. Wakeman began carrying out cross-countries in all directions. Among them were 57 miles north for his Silver C, 90 miles south to Timaru and then—an incredible one—right over the Southern Alps, in thermals, from east to west. This received tremendous publicity in the Press. The crossing was done at low altitude and could only have been safe for a pilot who knew the country intimately.

Another remarkable flight was carried out by Jon Hamilton, one of the owners of the Skylark III. The flight only started when

a bonfire downwind of the aerodrome failed to give the expected lift and the pilot was too low to get back. The flight, which was a first cross-country, ended 90 miles away from Christchurch at Timaru. The pilot thought he had used lift, inshore, produced by the easterly sea breeze meeting the prevailing north-westerly. The weather seemed definitely unsuitable for cross-countries as a thin layer of cloud veiled the sun. Dry thermals were few and far between and had to be circled in.

The next week brought the sensational crossing of the Alps and two wave flights by Dick Georgeson to 15,000 and 17,000 feet respectively.

Then came last Saturday, the 26th of January, and the climax to them all!

Delegates to the Annual General Meeting of the Gliding Association had assembled in Christchurch, including G. Hookings and



At the Canterbury Gliding Club's Christmas Camp: (L. to R.) Skylark III, Skylark II, and the Tiger Moth tug.

R. Court from the Technical Committee in Auckland. A light north-westerly was blowing and the great arch (an enormous wave cloud) could be seen right across the sky in the far distance. Dick Georgeson was towed off in his Skylark III at 11.30 a.m. and long faces were pulled when it was heard that he had been on tow for 55 minutes and had released over the mountains at 8,500 ft. Ower, the tow pilot, was frozen stiff.

In the evening, the A.G.M. had been assembled for an hour, waiting, when in walked Georgeson, accompanied by the two members of the Technical Committee. When asked where the devil he had been, he replied quietly: "I've done it." Then, before an incredulous audience, he related how he had completed an out-and-return flight of over 200 miles, south along the Arch, almost to Mt. Cook, and back, never below 20,000 ft., 4½ hours on oxygen. During the flight, he had photographed his release point, Lees Valley, at 8,500, his turning point, the end of Lake Tekapo at 25,000 and Lees Valley again at 17,500 ft. and the two members of the Technical Committee seemed satisfied with the negatives.

This flight was not easy, as was found out by a pilot during the next day trying to do the same thing in seemingly better conditions. Also on the next day, the Skylark II rose from 3,000 to 13,000 ft. over the



B. G. Dingwall, president of New Zealand Gliding Association and of the Canterbury Club, shows the oxygen equipment to Peter Scott and his wife.

aerodrome with Derek Studham, who used to be at Lasham, on board. He flew 32 miles. The wind was very strong and the wave much closer, and the T31 reported going up at 5 ft./sec. on the final approach with the spoilers out.

And so it looks as if our dream of the world's out-and-return record might not be quite so improbable as first thought. Indeed, things seem to have started, and we have not looked back yet.

Gliding Certificates

SILVER C CERTIFICATES

No.	Name	Club or School.	Date of Completion
615	D. A. Lethem	Empire Test Pilots' School	11.7.56
616	H. T. Snare	R.A.F. Oldenburg	6.8.56

C CERTIFICATES

Name	Gliding Club or A.T.C. School	Name	Gliding Club or A.T.C. School	Name	Gliding Club or A.T.C. School
J. W. B. Hawkins	Southdown	S. M. Alexander	Surrey	D. Lindsey	Bristol
M. R. E. Bates	Southdown	W. R. Thomas	R.A.F.	B. C. Cooper	Midland
H. Sowden	Yorkshire		Moonrakers	R. A. Sandford	R.A.F.
J. A. Pearson	Oxford	H. J. Greenway	Coventry		Wessex
P. R. Philpot	Bristol	D. A. Murkin	B.A.O.R.	R. A. Hills	621 G.S.
R. Ward	Perak F.C.		Hamelin	R. M. Taylor	621 G.S.
C. A. Greenhill	Midland	T. G. Turner	Coventry	R. P. Hubble	Kent
R. W. Golding	Surrey	K. B. Watson	R.A.F. Geilenkirchen		

Salisbury-Bulawayo Milk Run: A Rhodesian Goal-Flight Record

by Eric Burditt

FIRST take-off with my Skylark II was planned to be half-an-hour too soon to give me the satisfaction of knowing, during the second launch, that I could not have got away any earlier; but, of course, I started half-an-hour late, at 10.10 hours. A good first thermal took me up to the limit of my impatience and I set off; the lift was poor, not nearly up to the standard of the first, and I was dismayed to find the trailer getting ahead of me, even after passing through the city. Much time was lost circling in zero sink looking for something better, the while being drifted back by the headwind, which persisted all day at 10 knots as reported by the Met. Dept.

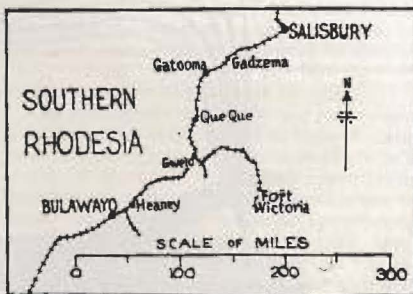
Radio contact by Pye walkie-phone was good, and since I had to follow the road while lift was poor, the trailer was visible for the first 60 miles.

Feeble cumulus began to form at noon, and I switched on the horizon to get into their bowels, but they were unwelcoming and more time was wasted; and here another lesson was learned because, after some hours, when I needed the horizon in the bigger clouds, the batteries had given out.

There was only one moment of uneasiness about finding lift, but a kindly providence put a veld fire on track, which took me smokily up to 13,000 ft. Then the lift improved, and after being observed by the trailer crew over Gatooma, 60 miles from Salisbury, I left them behind and made some good time.

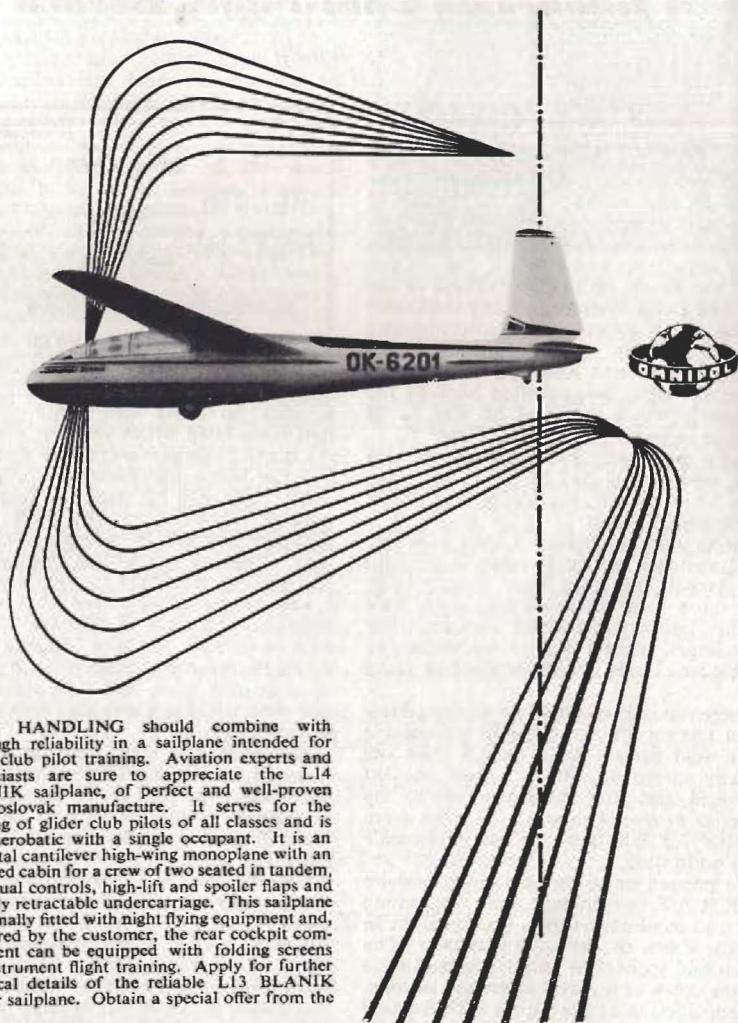
We pressed on to by-pass Gwelo, where an R.R.A.F. aerodrome with swimming pool and comfortable mess beckoned me in like the sirens of old—and why not? The clouds had spent their enthusiasm and were settling down to a placid afternoon decline. It seemed too late to get to my declared goal and the ground between was rugged and the cloud shadows were still drifting against me at one-third of the speed of cars on the road.

However, out of cussedness I decided to try out the air on the other side of Gwelo, and after a time it would have been silly to



go back; so on we went within view of the new main road which was not marked on my map. Haze was increasing and lift was still fair below cloud-base but a long way apart. On and on over the inhospitable country, some of it roadless native reserves with few features by which I could map-read. The sun was getting perilously near the horizon, and right on my course when I saw Heany airfield, but could not see Bulawayo city about 10 miles on. I had been told to identify the goal, Denver airfield, where the Bulawayo Gliding Club operates, by a near-by long, thin dam running east and west, and I saw one such dam and then several others.

The time was then 17.40 hours and I doubted my courage to go straight for the dam and hope that it was the right one, because the ground was barely visible with the setting sun in my eyes and the air full of industrial haze. So then I searched for lift, and to my relief and astonishment found it. With ample height to go to where the goal ought to be, and if unable to find it, then just to get back to where Bulawayo probably was, I set off apprehensively. Getting up-sun of the airfield, it then stood out clearly, and we landed at 18.00 hours after a trip of 7 hours 50 minutes, a distance of 245 odd miles, missing the British goal record by a few miles and just beating the South African. The Bulawayo pilots had given up hope of my arrival, but laid on some lavish hospitality to mark the proving flight of the Salisbury-Bulawayo milk run.



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The British Gliding Association Chairman's Report on 1956

ONCE again I have to report a year of growth for our movement, limited only by the physical capacity of most of our Clubs to take on new members.

There comes a point when the number of people waiting to fly each aircraft is so great that frustration reaches an unacceptable point. If, as is the case with almost all our Clubs, it is the site itself which is saturated and it would be dangerous to put up the number of aircraft flying from it, then the only course is for the Club to shut down enrolment of new members, and this has had to happen in a number of cases.

We still have the utmost difficulty in finding new sites, and quite inadequate official support when we do find one.

The future of our country will be very much influenced by the people who have an inborn urge to explore the mountains, the sea and particularly the air. The more these are prevented from doing so, the worse for us all. It will be a national tragedy if we do not encourage the creative and enquiring mind.

In most countries, and in nearly all European countries, gliding is supported by means of government subsidy. Here in Britain the great bulk of our movement values our independence as of the highest importance, and feels that rather than a subsidy, our greatest need is for more co-operation from the Government in such matters as the acquisition of sites, and more regard for our needs before they promulgate further legislation restricting the use of the air.

Within these particular limitations, however, we must realise that we have received a great deal of help. We are now universally regarded as responsible and intelligent folk, and have been granted a greater freedom from official control than any gliding community in any other country I know of. We are left in complete control of airworthiness, pilot licensing and training, and we have just received further evidence of confidence from the Air Registration Board, who are in process of accepting various fundamental revisions of British Air-

worthiness Requirements for gliders which have been put forward by us, which will in our view enable us to continue to design and produce (and export) the best aircraft in the world for many years to come.

The enthusiasm created by our movement is such that technicians of the highest order have been happy to do thousands of pounds worth of work for us in their spare time, drawing up a set of complex requirements, based on our own acquired experience, which will tailor our future aircraft even more closely to the requirements of the air and so retain for us our present international pre-eminence.

We cannot be too grateful for this sort of thing, and if it can be made sufficiently widely known, it should not be impossible to persuade our authorities that we should receive even more encouragement than is forthcoming at present.

On the flying side it has been a memorable year. The Spring drought produced conditions which were only equalled in the similar Spring of 1938, conditions which are better than any I have experienced in any other country (although I have not flown in Texas).

Unfortunately, we failed to realise this in time, and so listened too much to the meteorological forecasts which consistently underestimated the possibilities—let us remember this when we next experience a Spring drought, and may the next one come a little more quickly than in 18 years' time! There was at least one day on which I believe a flight from Southern England to Scotland would have been possible, but the best achieved was by a pilot who took off at lunch-time from Andover and landed in the Pennines, near Camphill.

Nevertheless, a record number of long-distance flights were achieved, including nine Gold C distances, of which five flights also qualified for the 300 km. goal-flight Diamond.

Summer weather then proved wet and poor, but there were some interesting cumulo-nimbus flights in the Autumn, and over one week-end the worst icing and hail

conditions I have experienced. An increasing number of pilots proved capable of negotiating these conditions safely, although much of the credit must also go to our excellent aircraft.

Next we had the unusual and pleasurable experience of seeing Tony Goodhart achieve the international 300 km. triangular speed record, by his flight in a Lo-150 in Australia at an average speed of 76.6 km./hr. This is the first international gliding record gained by a British pilot since 1938.

Finally, the high spot of the year was, of course, the victory of the Slingsby Eagle in the World Two-seater Championships at St. Yan, in the brilliant hands of Nick Goodhart and Frank Foster. I can think of no other sport in which a comparatively simple machine could completely outclass competing equipment costing up to fifteen times as much. It was indeed notable that out of the first eleven places in the Single-seater Class, six were taken by aircraft of British manufacture, the remaining five places being taken by aircraft manufactured by five different countries.

Membership

This is now (1955 in brackets):

Full Member Clubs	18 (17)
Associate Member Clubs	16 (12)
Private/Group Owner Members	41 (32)
Individual Associate Members	37 (28)

Operations

At the time of writing, 25 clubs have completed the Annual Questionnaire and report that from their club sites they have flown a total of 15,726 hours, involving 99,429 launches. This shows an increase of 956 hours and a decrease of 195 launches. The R.A.F.G.S.A. Clubs (who reported 1,816 hours and 19,465 launches) and the R.N.G.S.A. Clubs (who reported 125 hours and 1,500 launches) are included in these totals.

There are now over 175 gliders (this includes 31 two-seaters) being operated from club sites by approximately 2,500 active pilots.

These returns cover all active U.K. Clubs included in 1955 totals except for the Isle of Wight Gliding Club.

Over and above these totals, the Air Training Corps report 5,186 hours and 65,200 launches.

The total number of certificates issued by the Association shows a decrease of 151 as

compared with 1955, which is probably due to the poor weather conditions during the second half of the year. Certificates were issued as follows (1955 figures in brackets):

A 1,815 (1,877); B 1,836 (1,892); C 315 (348); Silver C 69 (71); Gold C 3 (4); Diamond legs 5 (3). These were made up as follows:

	A.T.C.	Service	Civilian
A	1,456 (1,407)	148 (191)	211 (279)
B	1,461 (1,407)	153 (193)	222 (292)
C	86 (106)	87 (85)	142 (157)

Finance

A substantial surplus of income over expenditure has resulted from the year's activities, and is largely accounted for by sales of books, publications, ties, scarves, cable and other articles of equipment in widening range, available to members of the Association. There has been a reduction of 3.7 per cent in gliding certificates issued.

Inevitably there has been an increase in the expenses of administration to which salary increases and higher rent for more spacious office accommodation are contributory. In other respects the increased costs are commensurate with the increasing activities of the Association, and call for no particular comment other than that, but for the watchful vigilance of our Secretary and staff over all items of expenditure, the very satisfactory results for 1956 would not have been possible.

Kemsley Flying Trust

During 1956 thirteen Clubs were approved for loans and, with two approved applications brought forward from the previous year, the total amount to which the Trustees were committed in relation to the Gliding Movement alone for new loans was £13,865. Additionally, five applications for loans on behalf of Private Member Groups to a total of £2,600 were approved. Four of the loans to Clubs were for site development and buildings, and seven new Clubs have been approved for loans for purchase of gliders and essential equipment. The establishment of permanent gliding centres is the first consideration of the Trustees and two such projects are now being examined.

Work of the Council

Much time was devoted during the year in doing everything possible to encourage Clubs to maintain the high standard of operational discipline on which our con-

tinued freedom from official control must always depend.

The collision risk, particularly at soaring sites, was a matter of concern, and a poster was designed by Mrs. Welch which was printed and circulated to all Clubs; a number of these posters was also bought by overseas clubs. Some cases of illegal flying in control zones and airways, few in number but of very serious import, occurred and the Council instructed me to take these up with the clubs concerned. This was not a pleasant job, but I am pleased to report very good results, and I feel certain that the standard of cross-country flying discipline is at present higher than ever before.

This must, unfortunately, be a never-ending battle, and we must never forget that a single selfish pilot may, by causing an accident or near accident in controlled airspace, one day put an end to all our sport.

We have also been successful in tightening up Certificate of Airworthiness procedure in a few clubs who had not been observing it as carefully as they might have done.

It cannot too often be repeated that all these ends have to be reached by agreement:

we have no powers of control, and certainly do not wish for any.

AIRWAYS AND CONTROL ZONES.—In the latter part of the year, we did much work towards a revision of the proposed new Airways and Control Zones which the Ministry of Transport and Civil Aviation plan to introduce in 1957 and 1958 to cope with the increasing flow of air traffic. We managed to improve the position of the London Gliding Club by getting them out of the London Control Zone, but were faced with a more intractable problem in the case of the Derbyshire and Lancashire Gliding Club at Camphill. The new plans envisage the creation of an Airway directly over the site, and, at the time of writing the maximum concession offered has been to investigate the possibility of lifting the base of the Airway from the original figure of 3,000 ft. a.s.l. (only 1,600 ft. above the site) to 5,000 ft. a.s.l.

Camphill is, of course, one of the finest sites in the country, and over the past twenty years the Derbyshire and Lancashire Gliding Club has expended much money and prodigious effort and enthusiasm in its development. We have held the National

GLIDING CLUB STATISTICS FOR 1956

(as shown in annual returns sent to the British Gliding Association)

Gliding Club or Association	Aircraft including private	Launches		Hours		Cross-country miles		Members	
		On club site	By club gliders	On club site	By club gliders	From site	By club gliders	Flying	Non-flying
AIR TRAINING CORPS ..	—	65200	65200	5186	5186	—	—	—	—
BRISTOL	11	4791	4490	619	554	511	243	125	59
CAMBRIDGE UNIVERSITY ..	5	3165	3804	414	672	763	1687	180	—
COVENTRY	9	6740	6422	1008	873	205	55	80	6
DERBYSHIRE & LANCASHIRE	15	5265	4439	1324	735	1073	150	186	132
LASHAM CENTRE*	30	20808	19068	3231	2550	6586	4050	480	120
LONDON	22	7895	7278	2181	1520	1808	776	316	80
MIDLAND	12	4708	4028	2467	1785	3160	544	150	50
NEWCASTLE	12	3055	2809	305	265	1256	67	91	92
OXFORD	6	3047	2525	326	227	215	25	55	—
SCOTTISH G.U.	9	4149	4149	345	345	456	456	96	18
SOUTHDOWN	4	2513	2459	331	331	62	62	79	51
YORKSHIRE	7	1527	1461	589	545	10	10	45	71
KENT & ROYAL ENGINEERS	5	3507	3227	283	237	63	63	93	41
ABERDEEN	4	744	744	—	—	—	—	30	10
AVRO	3	1698	1698	133	133	—	—	125	—
BLACKPOOL & FYLDE .. .	4	954	954	—	—	—	—	25	290
COLL. OF AERONAUTICS ..	3	1130	1208	106	148	135	183	54	—
HANDLEY PAGE	4	998	998	88	88	5	5	24	1
ISLE OF WIGHT	—	—	—	—	—	—	—	—	—
NORTHAMPTON	8	860	860	35	35	—	—	32	1
PERKINS	4	900	900	—	—	—	—	60	—
R.A.F.G.S.A.*	—	19465	19465	1816	1816	—	—	600	—
R. NAVAL G.S.A.*	—	1500	1500	125	125	—	—	—	—

* Lasham Gliding Centre includes the following Gliding Clubs: Surrey, Army, Imperial College, Polish Air Force Association and Crown Agents. The Royal Air Force and Royal Naval Gliding and Soaring Associations each operate a number of separate Gliding Clubs.

Championships there no less than eight times, and the World Championships there in 1954. Steadily and pertinaciously Club members have explored and exploited its now famous standing wave, reaching heights of up to 14,500 ft., and only this year a flight was made in this wave as far north as Newcastle, so it is clear that more remains to be discovered still. Indeed, Dr. R. S. Scorer, of Imperial College, recently estimated, in a letter published in the *Manchester Guardian*, that the knowledge of wave formation obtained from the study of the Camphill wave would have cost a sum exceeding a million pounds, if it had had to be acquired by special experiment in the absence of the club on the spot.

This new Airway would, of course, put a ceiling over the club which would finally prevent it from continuing any of this sort of advanced flying. Therefore we are up against a precise instance of our fight for the recognition of our especial values.

It is easy on commercial grounds to show that commercial air traffic cannot afford to defer to the needs of a mere gliding club. It would be easy on commercial grounds to show that a main highway and bus route should be driven across the centre of Hyde Park. But if activities such as ours are finally extinguished, what sort of people will be left in our country to sit in the seats of the endless airliners and buses?

It would have been easy on commercial grounds to decry the expenses of the Everest expedition; Camphill at present offers all its members the prospects of their own Everest within ten miles of Sheffield. This kind of challenge, available to the people of our overcrowded island, has a value particularly at this present time of frustration, which is in my opinion beyond mere commercial assessment.

We propose to resist the imposition of this Airway to the limit of our powers, and we are delighted to record that the Peak Park Planning Board have also written to support us, on the grounds that our club forms one of the amenities of the National Park.

A further important task carried out towards the year's end was in arranging reasonably generous petrol allocations to clubs and private owners during the rationing period arising from the Suez crisis; in the absence of this, our whole movement would have certainly collapsed, since no clubs have the financial facilities

to enable them to carry on for a period of months with no launching facilities available.

During the year a good deal of assistance was given the Kent Club, the Perkins Club, and to a lesser degree the Air Service Training, Birmingham, Cornish, Lakes, Northampton and Taunton Vale Clubs in their formation and acquisition of sites.

Useful work was also done in relation to the disposal by the Air Ministry of 40 surplus Tutor aircraft. These were distributed around various maintenance units, so in order to save the expense involved by each club independently surveying each aircraft, the Council arranged for one central survey to be made and circulated to all possible tenderers. For this we must thank Mr. C. Faulkner and Mr. F. Breeze, who carried out this work for us.

Committees

During the year the following Committees were set up:

- Flying Committee
- Technical Committee
- Instructors' Panel
- Equipment Committee
- Publicity Panel
- Magazine Committee
- Design Requirements Sub-Committee
- World Championships Master Committee
- O.S.T.I.V.
- Help Yourself Payment Scheme Committee

Reports from the Technical and Design Requirements Sub-Committee, the Accidents Analysis Officer and the 1956 World Championships Master Committee are given separately.

Flying Committee (Chairman: John Furlong).—Over the past year the Committee had two meetings, the bulk of its work being done by telephone and letter. One World Record, five British National and six U.K. Records were checked and recommended for homologation. The Committee will, as usual, recommend the award of the Annual Cups and Trophies which will be presented by Lord Brabazon at the Victory Ball on 15th March.

One of the Committee's special functions is to administer the Alex Orde Fund which was founded in 1955 to help young and promising pilots to reach World Championship standard. In April the qualifying age was raised from 25 years or under to

30 years or under, as no applications for grants had been received up to that time. Subsequently, seven grants ranging between £3 and £10 were made to young pilots for flights of over 150 miles.

The Central Council of Physical Recreation generously allocated to the Association £110 from the Whitbread Sports Fund for the purpose of assisting pilots with little experience to continue their glider training. In conjunction with the Instructors' Panel, the Flying Committee supervised this scheme, and ten Bursaries of £10 each were awarded to members of six different clubs who had started gliding in 1956 and each done under 50 launches. As a result of the success of this scheme, the Central Council have recently given a further £50 to the Alex Orde Fund and grants made from this money will be known as Whitbread Bursaries. We are very grateful to Colonel Whitbread for these donations, which are doing much to help and encourage young pilots.

The Flying Committee also considered the proposals put forward for dividing the Entrants in the 1957 National Champion-

ships into two groups. The scheme of having a League 1 and a League 2, as circulated to members, was recommended with a few minor amendments and agreed. The Committee is now proceeding with the drafting of the Rules and Regulations for the Competitions.

Instructors' Panel (Chairman: Ann Welch).—During 1956 the Panel carried out 21 new category tests and granted categories in 18 of them. The total number of Instructors' Categories now held in the U.K. is 100.

The A Category was discarded, as it was found that it was not achieving the object for which it was intended, and the B2 category is now the only B.G.A. Instructors' Category. Should anyone want a B1 Category to carry out solo training, they are treated as a special case.

It was felt that the aero-towing requirement, which had been in the form of an endorsement to the B2 Category (because of the difficulty some applicants had in obtaining tows), should now be re-instated as a necessary qualification.

The B.G.A. No. 1 Instructors' School

COSIM VARIOMETERS

were used by all countries competing in the **WORLD CHAMPIONSHIPS 1954** in England, and were also used on all British machines in the Championships in Spain which gained 1st, 3rd, 9th & 11th in a field of 39 single-seaters.

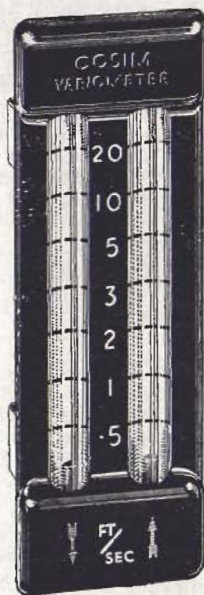
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was formed and ran several courses for Instructors. More courses are planned for 1957.

Whenever circumstances require, the Instructors' Panel is prepared to give facilities to an approved person to grant categories on its behalf overseas. In September, J. D. Mason, of Bulawayo, Southern Rhodesia, was so approved for the Central African Soaring Association.

As many applicants have shown on test that they are not clear as to what is required of them, the Panel has produced some detailed information about the Category test to help them. During 1956 a large proportion of the applicants passed by a small margin only. It is hoped that in 1957 the standard will be higher, and that more work will be put in, particularly on the subjects of Principles of Flight and Legislation, before the test is taken.

Equipment Committee (Chairman: Philip Wills).—The sales of equipment and publications have become one of the main financial supports of your Association.

Sales of winch cable continue and we currently have only about one year's supply left. We are trying to find some more surplus stores, but it is proving difficult.

The supply of second-hand parachutes also started to dwindle; we have just found a few more, but these also may cease in the fairly near future. Ties, scarves and blazer badges continue to produce a steady income.

A number of new books on gliding appeared during the year, all of which sold well. Two particular books, prepared especially for and published by the B.G.A., were Lorne and Ann Welch's new and enlarged *Instructor's Manual*, and a cheap edition of *On Being a Bird*, both of which are selling well. Clubs can add to their income by purchasing all publications at wholesale prices for resale to their members, and whilst some do so, others do not seem to pursue this as actively as one would expect.

We have to thank Peter Scott for designing our Christmas Card, of which we sold over twice as many as ever before.

Magazine Committee (Chairman: Philip Wills).—The amalgamation last year of **GLIDING** and **SAILPLANE AND GLIDER** has proved to be a great success; the circulation of the new paper has continued to expand and its quality to improve.

Peggy Miéville has done a splendid job on the advertising side, and Anstace Gladstone on the distribution side.

How to get "SAILPLANE AND GLIDING"

"Sailplane & Gliding" can be obtained in the U.K. at all Gliding Clubs, or send 2/8d. for it or better still, 15s. for an Annual Subscription to:—The British Gliding Association, Londonderry House, 19, Park Lane, London, W.1. Back issues are also available, price 2/8d. post free. Enquiries regarding bulk orders, 12 or more copies, at wholesale prices, should be made to The British Gliding Association.

OVERSEAS AGENTS

AUSTRALIA:	Stockists: Hearn's Hobbies, 367, Flinders Street, Melbourne.
NEW ZEALAND	F. M. Dunn, c/o 51 Stapletons Road, Richmond, Christchurch.
SOUTH AFRICA:	The Aero Club of South Africa, P.O. Box 2312, Maritime House, Loveday Street, Johannesburg.
CENTRAL AFRICA:	Maurice Pike, P.O. Box 492, Salisbury, S. Rhodesia.
U.S.A., CANADA &	Please apply direct to British Gliding Association.
OTHER COUNTRIES:	Single copies 2/8d. or 16s. annually. (50 cents or \$3.00 annually).
SCANDINAVIA:	Hans Ellerstrom, S:t Johannesgatan 2, Malmo, Sweden.

Green Leather Cloth Binder, taking 12 issues (2 years): 15s. post free from B.G.A.
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It was found desirable to bring the production side of the paper into London-derry House, so that the assistance of the B.G.A. Secretariat and others was instantly available in the emergencies which always seem to arise whilst getting out the next issue. Accordingly this work was transferred from Alan Betts, whose professional touch had done much to improve the appearance and presentation of our paper, and for three issues was undertaken by John Blake, who also produces the *Aero Club Gazette*. Unfortunately, he soon found that this was too large a load for his available spare time, so other arrangements are currently being considered.

Dr. Slater remains, of course, the pillar on which the whole magazine depends, whilst Godfrey Harwood continues to do steady work in the Club News section.

The advertising pull of SAILPLANE AND GLIDING is remarkable. We usually include a form in the Christmas issue for applying for publications, ties and so on, and these come back to us from all over the world, with a steady stream of postal orders for the next twelve months.

Publicity Panel (Chairman: Wally Kahn).—During 1956 the Publicity Committee was re-formed as a Panel to allow a larger number of clubs to participate in this work. Each club was asked to appoint a Publicity Officer to work in conjunction with the Chairman of the Panel.

The main object of the Panel was again to find stories and geographically interesting items for the Press. Due to a five-minute broadcast on the B.B.C., which mentioned gliding holidays, we received over 700 letters from interested people. Due also to our successes in the past, we are now—fortunately or unfortunately—no longer regarded as a “News Editor’s pigeon” but have been moved to the “Features” or “Sports Editor’s” departments. Because of this, it is now more important than ever for clubs to interest the local newspapers in their activities, rather than expecting the great National Dailies to report our everyday happenings.

Inspection of the B.G.A. scrapbook, so’ely compiled by Mrs. Ann Procter, will quickly show the type of publicity we are receiving and the prodigious number of press cuttings which were obtained during the year.

O.S.T.I.V.—The Association was represented at the 1956 Meeting of the Inter-

national Scientific and Technical Organisation for Soaring Flight at St. Yan by K. G. Wilkinson and Alan Yates. Also papers were read by Dr. R. S. Scorer, Mr. C. E. Wallington, Mr. F. N. Slingsby, Mr. F. G. Irving, Mrs. Lorne Welch and Mr. Lorne Welch. The latter produced proposals for the new Restricted Class of Competition Sailplanes which look like proving of fundamental importance for the future.

Help Yourself Payment Scheme Committee (Chairman: Ann Welch).—The Committee was set up during the year to formulate a plan for distributing any monies received as a result of the Association’s decision to take part in the Help Yourself Scheme. Thirteen clubs took part and, as a result of their members’ efforts in selling tickets, the Association has received from the Help Yourself Society a cheque for £200, which will be circulated as agreed.

The Secretariat

At long last we have acquired a larger room for our Secretariat, and no longer need fear that their working conditions might receive official disapprobation. This has, of course, increased our rent, but the improved efficiency now possible should more than pay for that. It was a marvel how we used to produce the volume of work which we did from the old room, not much larger than a large cupboard, with three people inside it and numerous visitors.

The competence, efficiency, cheerfulness and enthusiasm of our Secretary are beginning to become traditional, but we must never take them for granted, but continually realise how fortunate we are, for they are certainly not due to the large salaries which we should like to, but alas cannot pay.

The Future

The immediate future is clouded by the uncertainties of petrol rationing, and if this continues for some or all of the soaring season, we must clearly foresee a really serious crisis ahead. As an example, it is currently uncertain whether or no we can plan to hold the 1957 National Championships, which the Surrey Gliding Club, in conjunction with the Army and Imperial College Clubs, have agreed to organize at Lasham in July.

The main difficulty is not so much the operation of each club itself, since some petrol has been made available for this, but the difficulty of each member getting to his club at all, since most clubs are in places comparatively remote from public transport. If their members cannot get to the clubs, revenue will drop, and it will be impossible to retain their staffs, which, though small in number, are highly specialised and expert; and once lost it may well prove impossible to replace them.

However, we have taken over twenty-five years to build up our present flourishing movement, and it can be taken for granted that we shall not let it collapse without a struggle.

PHILIP WILLS,
Chairman.

World Championships Master Committee Report.

The budget was raised to £1,500, of which the Society of British Aircraft Constructors provided a very generous £1,000. The crews raised contributions at the rate of £25 per member, and donations from the clubs and other well-wishers raised sufficient to see us through. In fact, there is still some money in hand.

Philip Wills and Geoffrey Stephenson flew their own Skylark IIIs, which incidentally saved a substantial amount of insurance, as they used their own policies endorsed to suit. Nicholas Goodhart and Frank Foster flew the T42B, despite the short time available for familiarisation. This machine was generously loaned by Slingsby Sailplanes Ltd., to the team.

The Standard Motor Co. finally supplied four estate cars to the British team. These cars were extremely fully equipped from B.B.C. radio and overdrives down to extra wing mirrors and continental spare kits. They operated very successfully and gave 12,000 miles of trouble-free motoring under arduous conditions.

The cross-channel transportation of cars, trailers and crews went off without a hitch going out, but coming home there was some serious delay due to an accident to one of the regular boats.

Dr. K. E. Machin organised a meeting of pilots and crews together with their tow cars and gliders at Dunstable in March, and he then supervised the fitting and testing of

the ground and air radio sets. The sets used were those generously given to the Association by the manufacturers Pye Telecommunications Ltd. The manufacturers also sent an engineer and service van to St. Yan for the period of the Championships, and all agreed that the "Pyeman" was a great asset.

Messrs. Normalair supplied four sets of light-weight oxygen equipment, together with spare bottles, and sent a most helpful representative to St. Yan. This equipment gave every satisfaction and was generously presented in each case to the pilot after the Championships.

The Committee wish to thank manufacturers and all those who helped to make this a very successful British entry, and trust that the results were a satisfactory reward for their generosity, hard work and enthusiasm.

JOHN FURLONG,
Chairman, Master Committee.

Technical Committee Report.

During 1956, five meetings of the Committee and two meetings of the Design Requirements Sub-Committee were held. 154 Certificates of Airworthiness have been issued (119 in 1955) of which 45 were initial applications. Twelve new inspectors were approved and 25 inspectors and three firms renewed their approval. Mr. Pinniger, Examiner of Inspectors, has visited two clubs and examined four inspectors.

As mentioned in the last Annual Report, the B.G.A. is now permitted to grant C's. of A. to manufacturers' new machines. The Slingsby Skylark III was certified early in the year, and after approval of the IIIB development, current production IIIB's are being granted B.G.A. Certificates. The Slingsby Type T42-100 was granted a Permit to Fly and participated with great success in the World Gliding Championships. A Type Certificate of Airworthiness was granted in December on completion of the formalities.

The Committee has also received a number of enquiries from potential private constructors, and one of these has submitted detailed design calculations for examination.

Several members of the Committee flew the AV-36 at St. Yan, and reported that the modifications had greatly improved the landing characteristics and no difficulty was

encountered. It was then agreed that the Committee would consider applications for Certification of machines of this type.

DESIGN REQUIREMENTS SUB-COMMITTEE (Chairman: C. O. Vernon).—Although only two meetings have been held in 1956, there has been a good deal of correspondence with the Air Registration Board, culminating in a large measure of agreement regarding the Sub-Committee's proposed revision of B.C.A.R., Section E. In particular, lower design diving speeds, modified definition of glider categories in respect of cloud-flying and aerobatics, and a rough-gust case of reduced severity (tied to a mandatory air brake and a declared rough-air speed) have now been agreed in all but final details. Take-off and landing cases and Flight Test Requirements are still under discussion with the A.R.B., and it is hoped that agreement on these will not be

long delayed. When this is achieved, and a few other general points have been cleared up, the task for which the Sub-Committee was formed will be virtually complete.

The Committee again wish to thank the Secretariat: not only have they dealt most efficiently with the routine work of certification, which in the case of older machines sometimes involves considerable juggling with weights and centres of gravity, but with minutes which, even more than last year, have often been quite impossible to render in shorthand.

The manufacturers and inspectors have given their usual support; in particular, the firms have generously given considerable technical aid to the Design Requirements Sub-Committee by providing collected data unobtainable elsewhere.

F. G. IRVING,
Chairman, Technical Committee.



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RIJEKA 1956

by Paul Minton

DURING the summer of 1956 seven Lashamites went to Rijeka in Yugoslavia, and would like to recommend it as the ideal gliding holiday. The attractions in this region are numerous: Opatija, a few miles away, is a first-class resort, food and wine are good and cheap, the weather is fine, the sea warm, and there is a gliding club with two water-gliders. (Some of the visitors feel that the virile instructors should be added to this list!) To make the picture complete there is the courtesy, friendliness, and hospitality which seems to be a natural attribute of the people.

The five of us who were touring thought we might drop in and stay the night on our way to Vrsac. Arriving unannounced in the middle of a thunderstorm caused a little confusion, but the three women were soon established in a room with the only girl in the club. The men's bunkhouse was of the Mark I Lasham variety, as was the sanitation, so we felt quite at home. One difference was the presence of the Military guarding the airfield, who were greatly amused by our presence. They did cause us some concern on one occasion by staging a most realistic manoeuvre on the hill behind which we used for our "morning constitutional". Luckily, everyone survived.

The next morning was bright, and we found the pupils on the field, parachutes at the ready, leaping with gay abandon from the Pfizier, a high-powered Tiger. Among them was Marta, whose room the women had invaded the previous night. Although only sixteen, she spoke good English as well as a couple of other languages. Even those who didn't speak English were almost psychic when it came to understanding, so it only took the women a day to produce a basic vocabulary—unfortunately this was so basic that it contained little of use on the flying field.

Jumping ceased when the wind rose and we waited for the C.F.I., due to arrive at 10. Shortly after lunch an incredibly ancient Ford staggered on to the airfield; Aco, a small grey-haired man with sparkling eyes, jumped out and the place was galvanised into action. He was very pleased to see us and we learned that we were the first visitors to fly at Rijeka. From that moment everything was organized for us, and later for the Hamptons, who found out that Aco's well-deserved nickname is "Alexander the Great."

The following days were spent sunbathing, swimming and flying in glorious weather and the best of company. David's



The Yugoslav water sailplane, which the pilot has to paddle to the shore, after "landing".

check in the Kranich caused some amusement when he landed, to discover that the excessive stick forces were due to the reverse method of connecting the trimmer. We flew the Cavka, Jastreb, and finally, the Jadran, which is named after the Adriatic. This water glider is very similar to an Olympia with a hard chine, step, and floats which are operated pneumatically by furious pumping in the cockpit. Unfortunately the retraction, extension, and locking mechanism for the floats is not completely reliable, but the effect of an asymmetric float arrangement in flight is not serious.

After a briefing which stretched our dozen words of German to the limit, Aco said he would demonstrate a landing. We rushed off to the bay and saw the tug and glider arrive, and then our first water landing. Then, to our amazement, the canopy was unshipped, out came the paddle from its storage on the starboard, and Aco paddled himself ashore like the last of the Vikings.

Next day Dave and I were deposited in a similar manner, to be followed some time later by Peter Hampton and Hazel Kitcat. The landing was a long hold-off with the wings level, a dash of spray, and then the slapping of the waves on the bottom.

Even then, the day's entertainment had only started, as the Pfizier appeared a third time with the parachute instructor, who jumped, landing a hundred yards from the shore, to show that gliders haven't a monopoly of airborne water sport.

By the time we had retrieved the gliders and returned to the sea, a fish barbecue was in progress with the local equivalent of the "Two Bills" providing the music. The entertainment finished in time to see the landing of the night's catch of sardines on the beach—an unforgettable sight, and a grand finale to our visit.

There is no doubt that until you have been to a Yugoslav gliding site, you don't know what hospitality is!

THE DIFFICULTY OF GETTING DOWN AT NAKURU

The following extract is from a letter from

A. I. Molineux of Nakuru, Kenya

"... I should say gliding prospects are very good. Nakuru Airfield, the only place we have flown from, is in a hollow and not very suitable. Launching (by tow-car) is often difficult because often there is not a breath of wind, and when it comes it is seldom steady from any one direction.

"However, if you can reach 1,500 ft. it is almost too easy. Any thermal which doesn't work up to 10 ft./sec. is considered a poor one. Very often the green ball of the vario is jammed at the top of the tube, so we can't tell how fast we are going up.

"But, to give you some idea, only the other day two heavy fellows were in the T21. A rain-belt about 10 miles away and moving slowly towards us must have caused a local cold front. The glider got about 1,000 ft. on the launch; after release they turned and immediately found lift of more than 20 ft./sec. In two slow circles they gained 2,000 ft. The sky was overcast, with cloud base about 10,000 ft. (our airfield is

6,200 ft.). When about 400 ft. below cloud they tried to leave the lift but couldn't. With spoilers fully open and diving 60 knots, they were still going up at 2 to 3 ft./sec. Eventually, by increasing the dive to 65 knots, they started to sink at 2 ft./sec. and had to keep this up until they were down to 8,500 ft.

"On clear days, thermals are often so close together that you have to hunt for and circle in the down-currents when you want to land. Even the Cadet makes the most remarkable flights at times and only comes in because the pilot is frozen.

"We have also done hill-soaring and wave-flying within four miles of the airfield. We haven't done any cross-country yet because we are almost all beginners and no one likes the possibility of landing away and finishing the training for the others that day. However, the possibilities seem limitless."



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"NOW IT CAN BE TOLD"

or, You Can't Be Too Careful

by "S/L Ops."

SORTING some wartime diaries and papers, I have come across a bit of Intelligence Work that gave me a laugh at the time, and can now, I think, safely be shared.

In February 1943 the Security Officer at "X" Wing, R.A.F., received a letter from Command Intelligence (Ref. XC/S.852/6/Int. SECRET) bringing a grave matter to his notice:

"The attached photostat letter, intercepted by censorship, is forwarded so that specialist's opinion may be given to decide whether the contents give information which should not reach the enemy."

The attached photostat was from a letter written by a supposedly British civilian to an R.A.F. officer prisoner of war in Germany, which would, of course, be read first by a German Intelligence Officer. What an opportunity to pass information! What frightful breach of security was afoot? More work for the firing squad? Or just an unintentional boob, deserving only a few years in jail?

The Security Officer, noting the request for "specialist's opinion", promptly passed the covering letter and the fatal photostat to "S/L Ops", who handled glider operations and was understood even to fly the things. For "X" Wing worked with airborne troops, and the letter was about gliding.

"S/L Ops", studying the photostat, received a bad shock from the heading which gave the name of the sender. The potential spy was Dudley Hiscox. But, like von Rintelen, he has survived his war, and thirteen years later he bravely consents to the publication of the documents. To each paragraph of Dudley's letter I append the comments of the commanding intelligence known as Command Intelligence.

(i) "Dear Walker,

Your mother having recently communicated with Arthur Sweet, the Accountant/Secretary of the London Gliding Club, I have just learned that you have been a P.O.W. for a couple of years . . ."

Comment by Command Intelligence: "L.G.C. would appear better than London Gliding Club."

(ii) "... The position of the Club is the same as it was then except that those suitable of the machines that were so carefully stored away in the old brewery have been taken away for the A.T.C. boys to play with. In that connection I act as an instructor at week-ends."

C.I.: "Tells where machines were stored away and when instruction takes place."

(iii) "... Quite a few of the older members of the Gliding Clubs are doing this work. To mention a few names: John Furlong of Woolwich, Simpson the schoolmaster, Stevens of the Southdown Club, Aubrey Higson of the Surrey Club, Jack Rushton of the Midland Club."

C.I.: "Should names of clubs be mentioned?"

(iv) "... We all had to pass out as instructors at a course held at Fred Slingsby's place . . ."

C.I.: "This tells where the course was."

(v) "... Other members of our Club and of other Gliding Clubs have been engaged in training pilots for military gliders, or aerial barges, as I prefer to call them. Here are a few names you probably remember: Tim Hervey, Peter Davis, Greig, Stanley Sproule, Cyril Ruffle, Philip Cooper, Briggs, John Saffery, Pop Furlong, Dixon and Lacey."

C.I.: "This gives further notes of Club (sic) training activities . . . the letter appears to give quite a lot of useful names, well-known in the gliding world."

"S/L Ops" was happy to assure both Security and Intelligence that these references to gliding clubs were about as dangerous as chat about boating clubs; that so many members of the Luftwaffe had already flown at the London Gliding Club that the use of the initials "L.G.C." was unlikely to deceive them for long; that everything "given away" in the letter had already appeared in print, except perhaps the fact that our military glider effort was using pre-war glider pilots (and not winkle fishermen as the German Intelligence might have supposed); that F/O Walker, having

become a prisoner some months before the first military glider reached the R.A.F., was unlikely to know much about such matters."

One tries to picture the scene at the *Luftministerium* in Berlin when the fatal letter comes in. In a deep shelter fifty high-ranking officers are in conference at a long table with green-shaded lights, below a map of Great Britain with red flags marking the *Segelflugplätze*. There is a dramatic interruption. Colonel Führer Ritter von Rhönadler bursts in, crashes out a salute and cannot keep all emotion from his voice as he announces: "Heil Hitler! Vital information from our agent Hiscox, my Fliegerführer." The bald General Fliegerführer Poppenhausen adjusts his monocle, strokes his duelling scar and smiles faintly. "Officers below the rank of Colonel will withdraw." To the trusted few remaining, von Rhönadler gives the thrilling news.

"Arthur Sweet is the *Sekretär/Kassenwart* of the London Gliding Club," he begins. "Have you taken action on this?" raps out the General. "Yes, my Fliegerführer. The *Reichswehr, Flotte, Luftwaffe* and Lisbon Konsulat have been informed, and dispositions will be made accordingly by 08.00 hours. Item Two: The London Gliding Club has stored machines in the old brewery."

"What old brewery?" asks a keen-witted Admiral. "*Abteilung Ic* is listing all breweries within 50 kilometres of London," is the prompt reply. "Reichsmarschall

Goering promises to liquidate them all within three days. Item Three: John Furlong lives at Woolwich. How near to the Arsenal we do not yet know, but we have a significant clue. There is later mention of a Pop Furlong. This is evidently a code. In English, two furlongs equal a quarter of a mile. Also, a "pop" in English is a small explosion. We are working on this."

"Wunderbar!" murmurs the General, "Heil Hiscox!"

"And we have a splendid piece of information here. We now know what men the British, under General Fred Slingsby, are using as glider instructors." He pauses for effect. "... They are using glider pilots." There is a murmur of admiration for the low cunning of the British.

But I see it is not convincing. I have kept the best bit for the last. Dudley writes:—

"Well, I hope you are keeping fit, and wish you an early return to a new London Gliding Club where there is aero-towing on tap, plenty of high-efficiency sailplanes, and large well-equipped maintenance workshops; also, of course, a cosy bar, but better ventilated than our old one."

On this, Command Intelligence solemnly comments:

"This mentions facilities of the new London Gliding Club."

Well, nobody was shot, though "S/L Ops" may be if M.I.5 reads this. The funny thing is that we won the war.

Correspondence

DOWN TO EARTH

Dear Sir,

At the bottom of page 318 in your December issue are the words: "gliding is still a pre-eminently individual sport." In their context and read in conjunction with the last sentence of Mr. Wills's letter to *Aviasport*, the words are indeed "the answer we would have hoped for."

Yet it is opportune to remind those whom we wish to interest in gliding, and above all to remind ourselves, that paradoxically gliding is also a pre-eminently team sport. And it will only be worth doing as long as it remains so.

A sailplane pilot reaches the top of his thermal by dint of his own skill; he reaches the top of his launch by the toil and sweat of his fellow club members.

Those who glide have a rugged sense of independence; long may they keep it. The backbone of gliding is, and always will be, the good Club Member; be he (or she) a Golden Eagle, a Silver C-gle, an Aspiring A or a Perspiring Pupil. Gliding will remain a team sport as long as pilots have to be launched and retrieved, winches and aircraft maintained, meals cooked, dishes washed, elsans emptied, bars run and club houses to be de-squalorised. Once club members become content to spend money, money which would be better spent in the air, in order to avoid the chores and greasy domesticity inherent in gliding club life, something priceless in the spirit of gliding will have been lost.

The basis of gliding can be stated quite simply: "You will work long hours so that others may fly; others will do the same for you."

I like to think that historians of the future will write of the mid 20th century: In an age of international lunacy, crippling taxation and couldn't-care-less, a few stubborn, happy men and women remained free and sane because they persisted in messing about in boats and fumbling round in gliding clubs."

*c/o Lloyds Bank Ltd.,
6 Pall Mall, S.W.1.*

JOHN LATHBURY.

WET WINGS

Dear Sir,

I read with great interest, in your February 1957 issue, the letter from Scheibe Flugzeugbau regarding the effects of rainwater on the wings of airborne sailplanes, and wish to thank them for their kind response to my query. Much of my own soaring has been accomplished where conditions demanded fast approaches to obviate stalling in down-draughts or other disturbances on hilly sites. The landing speeds thus increased were seemingly adequate to counteract also the impaired performances of wet wings after flights in rain. No action, however, was taken to dry the wings before flying as this process was personally unthought of until my attention was drawn to it at Unterwössen.

Belfast.

CARL A. BECK.

A BIRD IN A CLOUD

Dear Sir,

We have all read in gliding literature that birds cannot fly blind and, when released blindfolded, will enter spiral dives or spin.

Today (9th February) I saw a large soaring bird, probably an eagle, circle under a medium-sized cumulus of about 1,000 ft. diameter base. As he was obviously close to cloudbase, I carefully followed him by eye, as I have been sucked into similar clouds in the T21 with brakes open.

True enough, after a few more circles he disappeared from sight and, as I observed him under an angle of roughly 60° with the horizon, I feel sure that he was inside the cloud. I watched, waiting for the bird to come out, out of control, but nothing happened. I had an unobstructed view of the whole cloud for about two minutes but I did not sight the bird again. Cloudbase was at an estimated 2,500 to 3,000 ft. and the bird was very clearly visible up to the time it went into cloud.

Fatigue and glare may have dulled my attention after a while, but I feel sure that the bird spent a considerable time in that cloud.

Are there any similar observations on record? Although I don't doubt the accuracy of observations on blindfolded birds, it could be possible that the unnatural conditions, e.g. covering the ears as well as the eyes, the unexpected release not of the bird's own volition, etc., affected the outcome of these experiments.

Nairobi.

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AUSTRALIAN GLIDING

Journal of the Gliding Federation of Australia

Editor: Allan Ash

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1956 Canadian National Soaring Championships

by Tim Beck

THE Canadian National Championships were held at Three Rivers last year from 22nd July to 4th August. Owing to the size of Canada and to the fact that soaring is rapidly becoming as popular in the West as it is in the East, it is becoming increasingly difficult to satisfy everyone's interests in the choice of a site. The disadvantages of decentralized contests are obvious, and instead there seems to be a sensible tendency not to try to please everyone, but to see that everyone is pleased once in a while when the "Meet" is held in their locality.

The Meet was organised by the St. Maurice Aero Club, who, though owning few gliders, more than make up for that by their enthusiasm, and it was generally agreed by veterans of Canadian Soaring Meets that there had never been a better one.

Three Rivers is on the left bank of the St. Lawrence, about ninety miles north-east of Montreal. Even at this distance from the sea the river is a considerable width, and as the town stands at one end of Lake St. Peter, this pilot, thinking perhaps of Friston or Lulsgate Bottom and the lack of thermals there under certain conditions, had doubts as to the quality of the soaring that might be available. However, my own fears largely disappeared on being aero-towed early one morning to Three Rivers. Arriving there at nine o'clock under a low ceiling of strato-cumulus, I found it possible to stay up quite easily. As a matter of fact, though, when the wind was blowing across the river from the town, it was often found by pilots setting off down-wind that a band of moist air existed inland from the leeward bank, which made soaring difficult for a time and which cut short several cross-countries.

West of a line through Three Rivers and Sherbrooke the country is thickly settled and farmed and there is no problem in finding suitable landing fields. East of such a line, the farming tends to be in belts along the river banks, while south-east of a line through Sherbrooke and Thetford Mines there is some very rough country indeed,

even by Derbyshire standards; but in spite of many flights ending in this area during the second week of the Meet, no damage was done to any of the competing sailplanes.

Launching during the Meet was entirely by aero-tow, the tow planes being provided by the clubs taking part. Thus St. Maurice Aero Club supplied a very potent Piper Super Cruiser which did the lion's share of the towing, and Buckingham Gliding Club, Gatineau Gliding Club and Montreal Soaring Council each contributed a venerable Tiger Moth.

Finally, before describing the flying itself, I will explain briefly the system of scoring used. Every day of the two weeks allotted was a Contest Day. Each pilot could compete on every day if he wished, though in practice few pilots were able to spend more than a week at the Meet. Points were awarded for distance only with bonuses of 25% for successful goal flights and of 50% for successful goal and return flights. Points were multiplied by a "factor of the day," which was 20 divided by the square root of the sum of the three highest scores.

Two days during the Meet were set aside for compulsory task flying, and on all other contest days pilots could declare their own goals. The Soaring Champion was the pilot



with the highest aggregate points in his three best contest flights.

SUNDAY, 22ND JULY.—This, the first contest day, was useless for soaring, with low cloud, occasional drizzle and absolutely no lift. However, the air display which was on the programme took place in spite of the weather and was attended by an enthusiastic crowd.

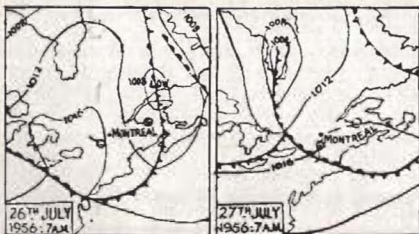
MONDAY, 23RD JULY.—Little better than the previous day, except that cloud base lifted high enough to allow the competing pilots to make a few circuits of the airfield.

TUESDAY, 24TH JULY.—After an unpromising start, the sun appeared briefly in the early afternoon for long enough to bring all the competitors out on the field to declare goals at Quebec City Airport. By the time the first launches took place the sky was completely overcast again, though there was some weak lift to be found near the airfield. Across the St. Lawrence there was a line of ragged, dirty-looking cumulus gradually drifting nearer the river. Steve Bennis, flying a Schweizer 1-23D, scraped up enough height to be able to cross the river and managed to get to the cumulus which he found to be active. He continued up the right bank of the river under not very easy conditions and finally crossed again to make his goal at Quebec City. This very creditable flight was the only one to score points that day, the handful of competitors which also got away having landed in a bunch inside the 15-mile minimum distance required to score points.

WEDNESDAY, 25TH JULY.—Once again there was no soaring.

THURSDAY, 26TH JULY.—This was the day of the first week. A heavy storm on the previous evening left a cold unstable north-westerly wind which brought excellent soaring, although cloud base was uncomfortably low for a considerable time. Steve Bennis declared an out-and-return to Quebec City, 62 miles away, and completed 43 miles of the return leg. Tim Beck, also flying a 1-23D, declared an out-and-return to Sherbrooke, 73 miles away, and completed 45 of the return miles. Wolf Mix reached his Quebec City goal in his single-seater LK Flattop. Charlie Bonds in the Toronto Schweizer 1-26 went 27 miles, Hiller Kurlents in the Montreal Soaring Council 1-26 made 25 miles, as did Albie Pow in his Baby Bowls.

FRIDAY, 27TH JULY.—The weather re-



26th July was the best day of the first week of the Canadian Championships, with a cold front retreating eastwards, leaving unstable air behind; but by the 27th it had returned in the form of a warm front with the usual "clump".

turned almost to normal, and so no contest flights were made, the only lift available being that provided by local factory chimneys.

SATURDAY, 28TH JULY.—This was the first of the contest days scheduled for compulsory tasks. By a happy coincidence there was a little lift around on the same day. The task was a race around a triangular course 56 miles in length, with turning points at Ste. Anne de la Perade and Grandmère. Though there was certainly some good lift about, it was very isolated, and by the time that anyone had managed to make the regulation dive over the airfield between 1,000 and 2,000 feet and return to a thermal, a very strong breeze had sprung up which would have made it virtually impossible to complete the course. Beck reached the turning point at Ste. Anne but found it impossible, on account of the wind, to reach the next likely-looking cloud and so was forced to land. Pow and Mix were the only others to make contest flights and both landed together after 16 miles, short of Ste. Anne.

At this point in the Championships, many of the competing sailplanes changed hands, owing to their pilots having to return to work.

SUNDAY, 29TH JULY.—There was little improvement in the weather. There was a cold, gusty wind in the morning which seemed to bring a little possible soaring with it, but for some reason few launches were made until it was almost too late. Only one pilot, Charlie Bonds, attempted the compulsory task for the day, which was a goal

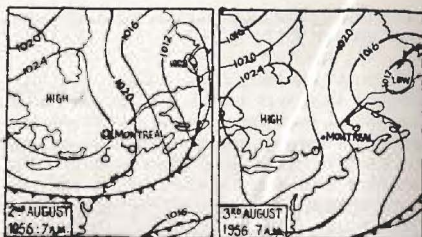
race to Windsor Mills airfield. He completed 20 miles.

MONDAY, 30TH JULY.—In spite of an entirely overcast sky near the airport, seven pilots managed to cross the St. Lawrence, and of the seven Frank Brame in a Schweizer 1-23D went 105 miles to Megantic near the U.S. border. The remaining pilots landed after distances ranging from 16 to 35 miles from Three Rivers.

TUESDAY, 31ST JULY.—The sky was again overcast at first, but as it cleared, Bonds, Brame, and Stan Rys, the latter in an Olympia, got away. All three had declared goals at Quebec City, and the trio kept together for some two hours of precarious soaring, during which their altitudes seldom exceeded two thousand feet. Eventually Rys landed nearest his goal, 45 miles from Three Rivers, while Bonds covered 28 miles and Brame 19 miles.

WEDNESDAY, 1ST AUGUST.—At last a good soaring day with a fresh westerly wind. Brame went furthest with 130 miles, and landed in such a remote part of Quebec Province that he reported that some of the sightseers who turned up at his landing field had driven 100 miles. Pow made a very fine flight of 116 miles in his Bowlus, Oscar Estebany in the Canadair Soaring Club 1-23D reached his goal of Coaticook, 92 miles from Three Rivers, and Rys landed at Magog after 78 miles. Bonds made 74 miles, and Witold Kasprzyk in the Montreal Soaring Council 1-26 had an interesting end to his flight, when he was obliged to ridge-soar along the bank of the St. Lawrence for some twenty miles until he reached Levis with too little height to be able to cross the river and arrive at his goal, which was Quebec City.

THURSDAY, 2ND AUGUST.—Conditions were good again, and those of the Canadair Soaring Club who had been obliged to return to work spent most of the day watching some tremendous cloud streets from their office windows. Brame landed near Valleyfield, 118 miles on his way towards his goal at Gananoque. Mix flew 100 miles and landed at the U.S. border, and thereby completed the duration leg of his Silver C. Estebany reached his goal at St. John's Airport, 83 miles away. Bob Mackenzie flew the Montreal Soaring Council's 1-26 51 miles to Upton and earned the distance leg of his Silver C, and Bonds also covered 51 miles.



2nd and 3rd August were both good soaring days at the Canadian National Championships, with unstable polar air following a cold front.

FRIDAY, 3RD AUGUST.—Soaring conditions remained good, and Pow made the longest flight of the day with 105 miles to the U.S. border. Estebany also landed at the border after 100 miles, and Bonds made the longest goal flight of the Meet with 95 miles to Megantic Airport. Kasprzyk flew 80 miles and landed near Magog, Mix made 68 miles, Bill Duench 66 miles in a 1-23, and Rys made a 64-mile goal flight to Windsor Mills. Frank Brame, having established a substantial lead, felt safe in taking a day off, and, as it turned out, remained in the lead.

SATURDAY, 4TH AUGUST.—The excellent soaring conditions of the past three days were not repeated on this day, although there was some good local soaring. As a result most of the competitors sat down to a waiting game to see if any of their close challengers decided to try to overtake them. Only the indefatigable Charlie Bonds went away and he made 17 miles.

* * * *

The results are tabulated below, the table showing only the points obtained by each of the pilots who scored, in their best three or less contest flights. It is generally agreed that the Championships were a great success, though, as ever, the weather might have been kinder. The twelve competing sailplanes flew a total of almost 2,500 miles in the hands of 19 pilots. Had the normal prevailing winds blown, many contest flights would have been longer owing to flights taking place along instead of across the St. Lawrence. In addition, contest rules awarded no points for crossing the U.S. border. Many flights could have ended deep in U.S. territory, but it was considered that repeated unscheduled border crossings would finally irritate the authorities on both

sides and possibly bring the Meet to an untimely end. In conclusion, I should like to thank Stan Rys for his help in preparing this account at short notice. I should also like to apologise to those who find their names omitted, misspelt or otherwise taken in vain, but with incomplete records available I have had to rely on my, and other people's, memories.

The following list shows the final placings of the thirteen pilots who scored points. The points listed are the sum of the points gained in the pilot's three (or less) best competition flights. Unfortunately, I have been unable to trace the points for the last four pilots on the list, but can vouch for the accuracy of their positions on the list.

Pilot	Sailplane	Points
F. Brame	Schweizer 1-23D	419
O. Estebany	Schweizer 1-23D	348
A. Pow	Bowlus Baby	284
W. Mix	L-K Flattop	274
C. Bond	Schweizer 1-26	269
S. Rys	Eon Olympia	264
S. Bennis	Schweizer 1-23D	223
W. Kasprzyk		
	Schweizer 1-26	188
T. Beck	Schweizer 1-23D	156
W. Duench	Schweizer 1-23	Not known
W. Mackenzie		
	Schweizer 1-26	Not known
G. Joyce	Schweizer 1-20	Not known
A. Bovenkirke		
	Schweizer 1-23D	Not known

THIS GLIDING

Nothing to Learn

"He is now a proficient glider pilot, and during the winter of 1954-55 gained his A and B certificate in gliding at Kirton Lindsey. This meant making twenty training flights and three solo trips, each lasting about three minutes. 'Gliding,' he told the *Standard*, 'is easier than driving a car—at least it is to me. Really, it's just a matter of making sure you're at the right height at certain points you have marked out on your course.'"—*Lincolnshire Standard*.

Gliders Help Cave-men

"The South Australian Cave Exploration Group hopes to obtain the use of a glider in a proposed early expedition to explore caves under the Nullabor Plain. The

entrances to the caves are often only small 'blow holes' in the limestone surface and the nature of the country makes it difficult to find them from the ground. The group first considered an aerial search, but the cost of chartering a light plane was prohibitive. A glider would be cheaper to operate and could land more safely on rough ground."—*Adelaide Advertiser*.

From Our Card Index

"Having got into the House [of Commons], he kept himself in the news by ski racing, mountain climbing, diving in a diver's suit and taking trips in gliders. Once a Card, always a Card."—*News Chronicle*.

Revised Version

"Mr. — said yesterday that the storm was so violent that he expected the plane to break up. He was prepared to use his parachute. He eventually managed to force-land the plane in the bush with little damage to himself or the glider."—*Bulawayo Chronicle*.

"The Kirby Kite sailplane, which made a forced landing in gusty conditions near Bulawayo eight days ago was entirely undamaged, according to Mr. J. D. Mason, chief flying instructor of Bulawayo Gliding Club. 'These sailplanes are capable of flying in conditions of extreme turbulence and there is no danger of them breaking up,' he said."—*Same paper, two days later*.

Thirsty Work

"A novel suggestion that the development of sport in the Lake District would bring additional financial benefit to members of the licensed Trade in that area was made by Mr. — when he presided at the Kendal, County of Westmorland and Hawkshead Licensed Victuallers' Associations' annual banquet at the Hydro, Bowness-on-Windermere . . . In particular he mentioned gliding . . ."—*Morning Advertiser*.

Home and Away

"Gliding clubs in general do not have programmes, but ours this year will no doubt include the usual crop of away fixtures against farmers, cattle, and small inquisitive boys, not to mention the conflicts which gliders have with terra-firma nearer home. Some better late-summer weather is also planned."—*Light Blue, the Magazine of Cambridge University Sport*.

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The F.A.I. Gliding Commission in Paris

by Philip Wills
(Vice-President)

A MOST interesting and constructive meeting of the Gliding Commission of the *Fédération Aéronautique Internationale* took place in Paris on 4th and 5th February. Thirteen countries sent delegates, including an unusually large contingent from Eastern Europe: Russia, Poland, Czechoslovakia, etc.

World Gliding Championships 1958.—Offers to hold these came from the U.S.A. (Harris Hill) and Poland (Leszno), and France let it be known that, whilst she considered these offers had priority, if the Committee found them unacceptable for any reasons, she would be prepared to stage the Championships again at St. Yan.

After discussion it became clear that both the cost of getting to Elmira and the time involved would have necessitated a much reduced entry from nearly every European country, so with much regret the American offer could not be accepted.

The Polish offer was backed by the full resources of the Polish Government, and was eventually accepted with acclamation.

The Championships will be held at Leszno in June 1958. Leszno is towards the Western boundary of Poland, and in prevailing winds from W.N.W. to S.W. flights of over 500 km. are possible to the Russian border. Thermal conditions are, of course, excellent—probably the best of any country in which World Championships have yet been held.

Up to 15 sailplanes, cars and trailers (including seven Jaskolkas) will be available on loan for competitors unable to bring their own equipment.

Teams will be lodged on the airfield, where there are also facilities for O.S.T.I.V. meetings.

Up to three entries per nation, with a maximum of 60 aircraft, will be accepted. A practice week will be held.

Charges will be roughly equivalent to those levied at St. Yan.

Standard Class of Sailplanes.—This is now the official title for the restricted class which has been under discussion.

The specification has now been finalised, and this class will compete for the first time in 1958.

This is exciting news indeed, and we hope the World's designers and manufacturers will get working urgently, so that we may see a goodly number of designs competing at Leszno.

The technical international jury to judge the winning design will be appointed by O.S.T.I.V.

A. REQUIREMENTS

1.—Span: the span shall not exceed 15 metres.

2.—Aids to flying: the wing shall be as simple as possible. Flaps and other mechanical devices for changing the wing camber are prohibited. Jettisonable ballast is prohibited. Ailerons should be simple and arrangements for drooping them to form a flap are prohibited. Tail parachutes prohibited.

3.—There are no restrictions on instrumentation, except radio, which is prohibited.

4.—Certificate of Airworthiness: the sailplane must have a certificate of airworthiness (or *navigabilité*) which permits cloud-flying. The dive brakes (of any type) must limit the speed to the maximum permitted by the certificate of airworthiness. The certificate of the country of origin will be accepted. If an airworthiness code does not exist, the code of Great Britain or Germany is recommended.

The above (1, 2, 3 and 4) are *compulsory* requirements.

B. The following RECOMMENDATIONS are offered as a guide to designers.

(a) The sailplane is intended to be cheap to construct and should therefore use cheap materials and methods of construction.

(b) The sailplane is intended to be *cheap to operate* and should therefore be easy to repair, quick and easy to rig and de-rig and easy to transport on a trailer. An adequate fixed wheel is recommended, and if fitted, a brake is compulsory.

Two-seaters: There shall be no two-seaters in the Standard Class.

News from Finland

by Jussi Soini

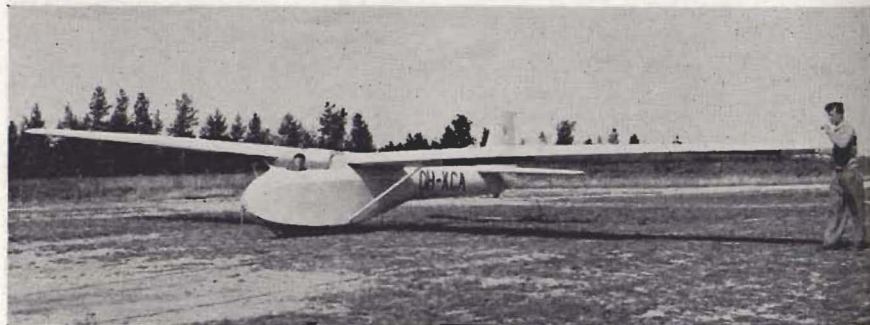
LAST summer was not a good one for soaring in Finland; we got too much water from the sky. In spite of that, we had one of our best soaring summers as regards results. I do not mean the results in the World Championships, where our pilots were not able to do their best because they were using poor planes. Unfortunately the Finnish PIK-13 sailplane crashed some weeks before the Championships. Have you heard about that dramatic incident? It was very uncommon history, so uncommon that it is worth relating.

Mr. Jorma Jalkanen (he flew in the Finnish team in the Championships) was towed up in the PIK-13 for a trial flight. At 450 metres he cast loose and put the plane into a gentle dive. His intention was to perform a loop. He pulled on the stick. The plane began to straighten and Mr. Jalkanen pulled more. It was enough! Just when the plane's nose was climbing over the horizon, the stick broke! It broke at the bottom, and there was Mr. Jalkanen sitting with the loose stick in his hand. The plane continued its climb and shot up vertically against the sky.

Mr. Jalkanen opened the canopy and it flew away, just as the plane came to a stop and stood against the sky like a cross. The

plane began to slide backwards, made a tail-slide and began to sink to a normal dive again. Mr. Jalkanen is not a big man and therefore the plane was tail-heavy; it began to straighten again, and when it was near the vertical position he jumped out. That happened at about 350 metres altitude (1,150 ft.) and this was Jalkanen's first parachute jump. After fifty metres fall the parachute opened correctly. All was O.K. But now comes the strangeness of this history.

The sailplane was without weight in its nose and it continued its flight. It began to climb again and made a new cross against the sky. This time the plane was not so upright as the first time; it began to fall over onto its left wing and the nose began to drop. Making a sliding turn, after a few seconds the plane was diving again at increasing speed. All was still O.K. But no longer! The plane was diving directly towards the pilot hanging in his parachute! As fate would have it, the plane increased speed and its right wing crashed against Mr. Jalkanen's trunk. The wing broke with a loud noise and a four-metres-long stump of wing was attached by tangled cables to the pilot, following him to the ground. The fuselage of the sailplane was spinning down to the airfield.



The PIK-12 two-seater, a new Finnish design built by students of the Technical University. It is of wooden construction and its performance resembles that of a two-seater Grunau.



Mr. Juhani Horma, Finland's third Gold C pilot, who also has one Diamond for goal flight.

In the crash Mr. Jalkanen lost consciousness and fell onto the concrete runway like an empty sack. Friends hurried him to hospital as soon as possible. The lucky part of this story is that Mr. Jalkanen suffered only one small surface wound on his head.

When I wrote my earlier articles in THE SAILPLANE we had only one Gold C in Finland. During last summer we got two more and a Diamond, too.

Mr. Lauri Liljamo took off in a Weihe from Jämijärvi on 3rd July and set course for his goal at Oulu. Over Alajärvi—about 120 km. from Jämijärvi—Liljamo took some photos of the ground because he saw that it was impossible to continue the flight towards the goal. After seven hours' flight he landed at Pyhäjärvi. The distance to Pyhäjärvi via Alajärvi—in two legs—was 317 km. (197 miles).

On the same day Mr. P. Kaukonen also tried to reach Oulu from Jämijärvi, but his Weihe could not carry him further than to Veteli, about 200 km.

4th July was a better day, and Mr. Juhani Horma noticed the fact at Parola airfield. He made some flights in the morning with a Bergfalke II, and at 10 o'clock he was winched up with the club's

Olympia. Mr. Horma had given Kärämäki as his goal. The flight was not easy to do; very often he was circling below 300 metres and trying to find lift. He succeeded and after eight hours' flight he circled over Kärämäki village at 1,200 metres. He had no camera with him and therefore he had to land. It would have been possible to continue the flight below a fine cloud street to Otanmäki, 100 kms. away.

With his flight Mr. Horma set up Finnish records for goal-flight and free distance, 335 kms. (208 miles). On 7th October he completed his Gold C, having reached 4,200 metres (13,780 ft.) in the club's Olympia.

During last summer we got some other results, too. Mr. Galkin flew a new Finnish record from Jämijärvi to a goal at Tampere and back, 128 kilometres. He flew a PIK-3c.

Captain Pentti Lehto, in an Olympia, beat Galkin with a flight from Parola to Vääksy and back, totalling 133 kilometres, but this cannot be recognised as a record because it did not exceed the last by 10 per cent.

The only 100-kilometre triangle flight was made by Mr. H. Orpana and the speed was 29 km. per hour.

During last summer for the first time, two-seaters were used for gliding instruction in Finland. The results of the dual-control method were good, and more two-seaters have been ordered.

All the best to British sailplane pilots!



Mr. Lauri Liljamo, second Gold C pilot in Finland.

Ten Kiwis and a Pommie Go Skylarking

by one of the Kiwis

(Reproduced with acknowledgments from "The New Zealand Gliding Bulletin")



A New Zealand occasion. Standing, L. to R.: Peter Cumyns, Keith Wakeman. Seated: Jim Ower, John Messenger (C.F.I.), Fred Dunn, R. Wylie, Chris Wills (6th from left), Rev. Evans, Peter Allport, V. R. Fenton, J. Best.

THE embryo was born in the mind of Dick Georgeson at the end of November, 1955, and in two days a syndicate of eleven Canterbury Gliding Club members was formed under the chairmanship of Neville Ackroyd, to buy a Skylark II. It fell upon Neville to extract, by fair means or foul, the sum of £150 from each of these keen types, and just before Christmas, Slingsby was called upon to produce the goods ex works, June 1956.

By January, however, the cost, landed complete at Harewood Airport, had taken on alarming proportions which left no

margin for trailer, barograph, parachute or oxygen. So, after sundry discussions, the writer suggested the purchasing of the fuselage in kit form and the rest completed, the idea being to save Slingsby's building costs on this item, crate size shipping freight (the biggest item) and sundries.

Many frantic cables flew to and fro to the U.K., and then in February we found we could land the Skylark II for approximately £1,100, and so the order was altered to this form and the money so saved was used to buy all the extras mentioned earlier, plus the latest in Normalair oxygen equipment,

In June, construction of the trailer commenced in premises at the rear of a suburban I.A.B. office in Christchurch. The frame is made of Dexion slotted steel Angle, and eight Southand Beech hoops, with longerons, support aluminium sheet covering. Added bracing in the arch was gained by fitting a cunning arrangement of piano wire bracing pulled up with turnbuckles à la aircraft practice. Les Chadderton takes great delight in walking up and down inside the trailer playing the tune to "God Save the Queen." Except for the floor, this job took some six weeks, by which time the case containing the fuselage kit had arrived off the *Corinthic*, aided by a bottle of whisky in the right quarter.

The jig for setting up the sixteen main frames was constructed of Dexion Angle and frames held in wooden cross-pieces. The fuselage was built in the inverted position and construction commenced on 26th August. Exactly five weeks and 171 hours of work later, the fuselage, stage 1, was finished and removed from the jig and turned over to commence stage 2. In the first stage the whole of the fuselage bottom half was covered with 2 mm. Gaboon ply (and some Birch ply), making it semi-rigid.

The second stage entailed fitting remainder of longerons, wings fairing and fin assembly, putting in cable runs and controls and covering with more Gaboon and Birch ply. This Gaboon is great material to work, cuts easily with a knife and is easy to splice. No water is required to bend over frame shapes, and three bods easily glued sheets 950 mm. long by 850 mm. wide in twenty minutes, using a staple gun and ply strip to give pressure while the glue set.

By Labour week-end we were ready to commence putting on ply skin, but the writer felt like a holiday and took same. With renewed vigour after the break, the ply went on at a fast rate and 22 sheets of various shapes and sizes were glued on in 33 hours. Eleven weeks from starting, the job reached the "elbow grease" stage of hours of rubbing down before attaching madapolin fabric over all the ply and fibreglass skin. The latter covers those portions of the fuselage with compound curves (nose area), and thereby hangs a long tale regarding the treatment of this vile material. Small wonder the boys have nicknamed me "Fibreglass".

By 9th November, showday holiday in the garden city, the fabric was doped on,

and two days later the first coat of undercoat was applied. From this point every free hour was spent on the job and a week later we celebrated suitably the spraying of the red finish. Meantime, some weeks previously, the wings and tail surfaces had been carefully unpacked from their case and the trailer was then completed, using the case timber for the floor.

After much burning of midnight oil the component parts were hung in the trailer, and at 2 a.m. Thursday, 22nd November, were carted by back roads to Harewood. By 10 a.m. the beautiful bird in bright red and white plumage was rigged and weighed for its C. of A. and awaited its test flight. But like all such days it dawned dull and threatening, and soon even the seagulls weren't flying around Harewood.

Nevertheless, the christening party scheduled for that evening at Neville Ackroyd's home went off without a hitch but with plenty of hiccoughs. Sunday, 26th, started wet and windy also, but by 9.30 a.m. ZK-GAS saw the light of day and was towed across the airfield in front of the Globemasters of the Deep Freeze unit. At 10.05 she was airborne and the embryo became a living being.

You ask, "Well how did it fly?" and I can only reply, "Magnificent." I know, because I test-flew it.

Total time of construction, 486 hours. Construction costs, including painting, £21. And so ten Kiwis and a Pom became the proud owners of a world-class sailplane which should bring many excellent flights in future months. As this is written, word comes that Keith Wakeman flew her today from Weka Pass to Parnassus, some thirty-five miles. And this, only 2½ hours flying time after it was test flown.

WESTERN AIRWAYS

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Dick Georgeson may well say that the Kiwi now has wings. We hear that on the 26th January, he attained the first New Zealand Gold C, by making an out-and-return flight (Christchurch—Lake Tekapo and return) in his Slingsby Skylark III—a distance of over 200 miles in 4½ hours, and very rarely below 20,000' the whole time!

Keith Wakeman, in a Slingsby Skylark II, after attaining his Silver C, went on to make an extraordinary flight of crossing the Southern Alps from East to West—the first time that this has ever been achieved.

Congratulations and happy landings, KIWI!



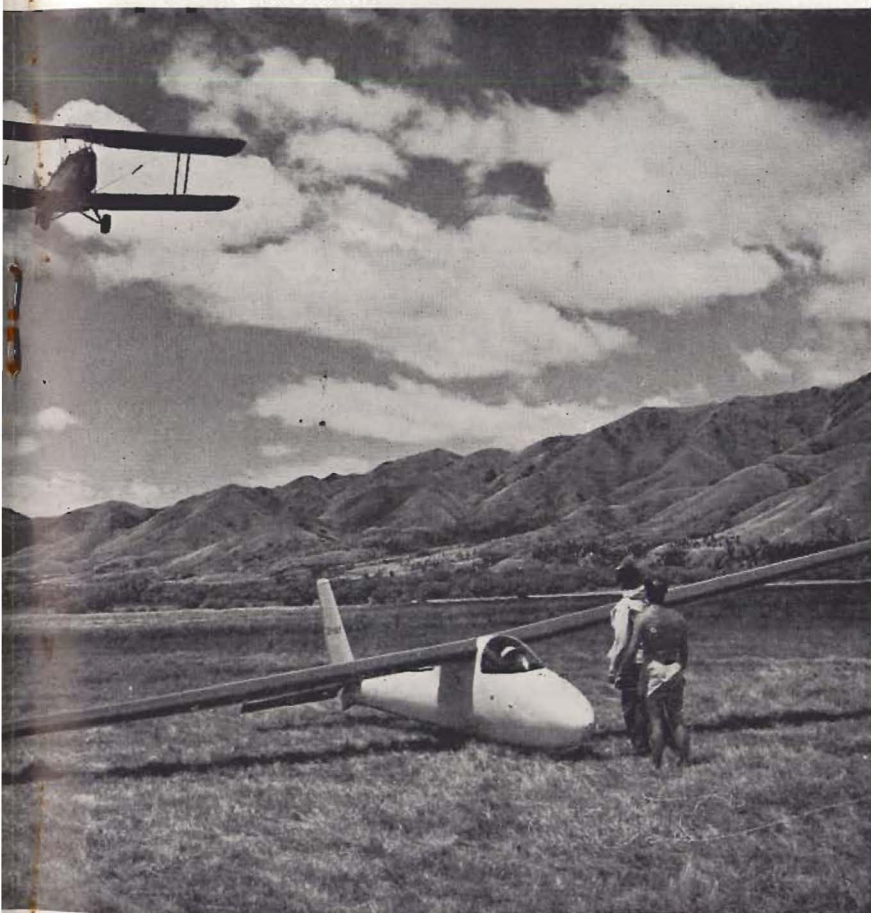
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Kiwi now has Wings!"

says Dick Georgeson



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Photo by Mannering & Donaldson.

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Accident Analysis for 1956

by F. Foster

Accidents Analysis Officer of the Instructors' Panel, British Gliding Association.

THE reported accident figures for 1956, as compared to 1955, are as follows:
1956—1 incident to every 277 hours and 1,571 launches;
1955—1 incident to every 212 hours and 1,262 launches.

These show an improvement of 30% in hours and 25% in launches.

In 1956 the reported accidents were grouped as follows:

Take-off	13
Landing	10
In flight	4
Approach	17
Pilot not in charge	3
Miscellaneous	2

Serial No.	Aircraft	Accident Category	Pilot Category	Cost £	Remarks
1	T31 solo	Take-off	C	nil	Weak link broke on launch, parachute fouled wing.
2	T31	Take-off	Qualified	200	Cable break at low height.
3	Tutor	Approach	First solo	7	Flew contrary to briefing; turned back on field during approach, undershot.
4	Olympia	Take-off	Silver C	3	Drop wheels, of centre-pin type, clogged by frozen mud and dropped prematurely, hitting fuselage during take-off.
5	Skylark 2	In flight	Qualified	—	Canopy came off in flight.
6	T21	In flight	Instructor	—	Collision. Fatal to pilot of Kite I.
7	Kite I	In flight	Qualified	—	
8	Tutor	Approach	Under 5 hrs.	250	Spun in off approach turn.
9	Skylark II	Landing	Silver C	10	Inability of pilot to cope with a new type. Failed to appreciate, or accept, briefing.
10	T21	Take-off	Over 5 hrs.	5	Climbed too steeply on launch and failed to make a safe recovery from a cable break.
11	Olympia	Landing	Over 5 hrs.	—	Heavy landing due to coarse use of airbrakes during "round-out."
12	Tutor	Approach	5 hrs.	100	Low approach, hit ground on final turn.
13	Tutor	Approach	Over 5 hrs.	10-75	Re-commenced circling after starting approach (flat-site pilot flying at hill site).
14	T21B	Pilot not i/c.	—	10	Hit ground prematurely during approach following poor launch.
15	Cadet	Approach	Under 5 hrs.	10-75	Glider caught by cable when retrieving too close to launch line.
16	G.B. IIB	Approach	Under 5 hrs.	10-75	Over-reliance on altimeter as approach aid; undershot.
17	Olympia	Landing	Over 5 hrs.	3	Gusty landing conditions beyond pilot's ability.
18	Olympia	Landing	Qualified	nil	Winch faltered; pilot put nose down and released; parachute caught round wheel-box.
19	T21B	Approach	Qualified	over 75	Insufficient speed margin to cope with variable wind-velocity gradient. Machine stalled.
20	Olympia	Landing	Over 5 hrs.	50	Heavy landing with drift.
21	T21B	Landing	Instructor	8	Pupil made sudden control movement during landing that instructor failed to check in time.
22	G.B. I	Take-off	Under 5 hrs.	under 10	Winch snatched at take-off; glider swung (take-off abandoned).
23	T21B	Approach	Instructor	300	Pupil made over-wide circuit. Instructor failed to correct or make an emergency landing on undershoot.
24	Cadet	Landing	Over 5 hrs.	5	Overshooting, ground-looped.
25	Skylark 2	Take-off	Qualified	over 75	Machine became airborne prematurely, when in position for bungy launch during high wind conditions.
26	Tutor	Approach	Under 5 hrs.	under 10	Glider drifted into parked aircraft during landing following flat turn, and poor approach.
27	T21B	Pilot not i/c.	—	over 75	Glider blew over during ground-handling.
28	T31	Approach	Over 5 hrs.	10-75	Elevator caught hedge.
29	T21B	Take-off	Silver C	37	Failure to cope with cable break shortly after take-off.

29	Sky	Approach	Silver C	75	Failed to use air-brakes correctly on new type; overshot into tall corn.
30	Skylark 2	Take-off	Silver C	10	Failure to cope with winch failure shortly after take-off.
31	T21	Landing	Instructor	5	Pilot failed to check heavy landing by pupil.
32	Olympia	Take-off	50 hrs.	10-75	Airbrakes applied before gaining speed after cable break (pilot recently converted from power).
33	Tutor	Take-off	Under 5 hrs.	100	Pilot mishandled launch, released and executed panic landing approach; misjudged "round-out."
34	—	—	—	—	See 31. Accident reported twice.
35	Skylark 3	In flight	Qualified	—	Canopy came off in flight.
36	Skylark 2	Take-off	Qualified	1	Canopy came off during take-off.
37	Skylark 2	Pilot not i/c.	—	—	Canopy opened with insufficient care whilst on ground.
38	None	—	—	—	Near injury to cable-mending crew due to cables in close proximity.
39	None	—	—	—	As 38, but with injury to member of cable repair party.
40	T21B	—	Over 5 hrs.	—	Lack of details.
41	G.B. 11B	Approach	Over 5 hrs.	over 75	Low approach, hit obstruction, cartwheeled.
42	Krajaneck	Approach	Over 5 hrs.	over 75	Spun in after opening brakes on final turn into strange field. Failed to observe briefing.
43	T21	Approach	65 hrs.	10	Stalled during down-wind landing following heavy sink in circuit. (Accident mitigated by hitting obstruction which absorbed initial impact).
44	T21B	Approach	Instructor	295	Difficult landing in emergency field, overshot. Aggravated by Instructor not being equally at home in either seat of T21.
45	Olympia	Take-off	108 hrs.	100	Spun in, following turning back after winch failure.
46	Skylark 3	Approach ⁴	Silver C	80	Pilot ground-looped to avoid obstruction. Landing path not checked clear.
47	Grunau By.	Approach	24 hrs.	112	Overshot on sloping field on first cross-country (no brakes).
48	Tutor	Landing	8 hrs.	10	Stalled after bounce, following round-out at excessive speed (minor injury to pilot).
49	Olympia	Landing	Over 5 hrs.	10	Bad landing, rough ground.
50	Gull 3	Take-off	Over 5 hrs.	65	Dropped wing in cross-wind take-off; swung.

Lessons to be drawn from 1956 accidents

By the Chairman, British Gliding Association

THIS article is based on the Accidents Analysis Officer's statistics for 1956, which very clearly underline the importance of Accident reporting and some of our present defects.

The object of all this work, which has demanded hard and careful thought in Frank Foster's spare time, and should not be lightly thrown away, is to assist in the avoidance of future accidents, or a *reduction in the accident rate*. Often the risk of a particular accident happening in the future can be reduced by reporting an accident *even if it didn't quite happen*. So, although it involves work to report an apparently trivial accident or even a near-miss, it is your duty to your fellow enthusiasts to do so.

An example during 1956 underlines this principle. A weakness in the locking arrangement of Skylark canopies resulted in a number blowing off and being destroyed. It was easy to think that this was just "cluelessness" on the part of the pilot, and some cases were not reported. Fortunately other clubs and owners carried out their duty and did report. The B.G.A. quickly reported the epidemic to Slingsby who then produced a simple modification which cured the trouble. If no one had troubled to report, some hundreds of pounds worth more of canopies might have been destroyed before Slingsby Sailplanes could have caught up with the situation and rectified the defect.

Everyone must realise the limitations within which the Accidents Analysis Officer works. Serious accidents have to be reported by law to the Accidents Investigation Branch of the M.T.C.A. and are fully investigated by them. In all other accidents, the Accident Analysis Officer is limited to the information in the report forms sent in by the club concerned. If a form is patently inadequate he may write for more information (though sometimes his request receives a dusty answer), but if no form comes at all, he is helpless. What is even worse, the statistics he produces and the lessons to be drawn from them may be distorted. So:—

(1) Report every accident and every near-miss which could conceivably be instructive.

(2) Consider and report all conceivable reasons which might have led to the accident or incident (there are, more often than not, two or more coincidental causes), so that the *primary* cause may be discovered.

(3) Follow the accident form *closely*, so that the accuracy and standard of reporting from all sources is a constant—otherwise lessons to be drawn from our statistics may be falsely based.

(4) Err on the side of reporting *too often* and *too fully*. If everyone will do this, we shall quite certainly save money, we may save lives. Our serious accident record is not high, so that people are apt to take it for granted. *Don't*.

Club bank-balances are not high either, and people are apt to think this is inevitable, and take it for granted also. *Don't*. Look at your club's last year's balance-sheet and see what accidents cost you. One or more of those accidents might not have happened if someone, somewhere else, had previously reported a similar accident or near-miss.

* * * *

The reported accident figures for 1956 compared with 1955 indicate an improvement of the order of 25%—a very satisfactory trend—but we must make the assumption that the standard of reporting was constant over each year.

The improvement was particularly marked for pilots under training; at a later stage it would appear that pilots tend to feel that their experience is sufficient to ignore Newton's Laws.

Accidents due to cable-breaks have increased. These are due either to plain

incompetence, to gross over-competence, or to a flash of panic momentarily destroying judgment. These are probably the three most lethal passengers which can be carried in any cockpit.

Approach accidents are still the largest group, undershoots outnumbering overshoots by two to one. Probably the biggest single reason for this is that launching is frequently carried out too close to the lee boundary, so pilots tend to land short to save pushing back. The pupil during his formative instructional period sees so much of this that he thinks it normal and attempts it himself before he has developed sufficient judgment. A lot of people save themselves a few minutes a year, but a few spend several hundreds of hours in repair workshops as a result.

Several approach accidents emphasize the need for brakes and their correct use when fitted. For cross-country flying their need is paramount.

Two accidents involving cable parachutes show the need for particular care as to the position of the cable on the parachute and in signalling. The Technical Committee has produced recommendations on this point, but they are not always followed.

Accidents resulting from spins are still with us. Thorough initial training should be given, followed by refresher exercises from time to time until the pilot can be classed as thoroughly experienced.

One very satisfactory feature of the 1956 reports is that, other than one accident on a first cross-country flight, no intentional field landings caused damage. This would seem to indicate that the recent years of two-seater training, and the continuance of training to a later stage, is showing valuable results.

However, on recognised sites there were 17 accidents involving negligence or gross incompetence suffered by pilots whose experience should have been sufficient to ensure that they should not have occurred.

Two accidents were caused by insufficient precautions being taken when operating more than one cable. Now that the use of multi-drum winches, or simultaneous winch and car launches is increasing, there is a grave risk of such accidents increasing unless operating discipline is kept at a high level.

PHILIP WILLS.

B.G.A. NEWS

Annual Awards for 1956.

DE HAVILLAND CUP for greatest gain in height: 14,200 ft. by D. M. Kaye (Derbyshire & Lancashire Gliding Club) in an Olympia during flight from Camphill to Newcastle on 21st October (described in *SAILPLANE & GLIDING*, February 1957).

MANIO CUP for best goal flight: 196 miles (315.4 km.) by Sgt. J. S. Williamson, R.A.F. (Army Gliding Club) in a Weihe from near Farnborough to St. Davids, Pembroke, on 22nd May (described in *SAILPLANE & GLIDING*, February 1957).

Honourable Mention: 193.5 miles by P. L. Bisgood (Empire Test Pilots' School) in a Sky from Long Mynd to Great Yarmouth on 23rd May.

WAKEFIELD TROPHY for longest distance: 199 miles by Sgt. A. Gough, R.A.F. (R.A.F.G.S.A. Wessex Gliding Club) in an Olympia from near Andover to near Grassington, Yorkshire, on 21st May (described in *SAILPLANE & GLIDING*, October 1956, p. 296).

Honourable Mentions: 193.5 miles by P. L. Bisgood and 196 miles by Sgt. J. S. Williamson, as above.

VOLK CUP for best out-and-return: 132 miles by D. H. G. Ince in Olympia IV on triangular course Lasham—Stanton Harcourt—Dunstable—Lasham on 20th May.

SEAGER CUP for best two-seater performance: 84 miles by D. Goddard and E. Hargreaves (Surrey Gliding Club) in a Gull II on out-and-return course Petersfield-Lewes-Petersfield on 28th April; U.K. Local two-seater goal-and-return record.

Honourable Mentions: 100 miles by A. D. Piggott and V. J. Alexander in Eagle, on out-and-return course Lasham-Dunstable-Lasham on 20th May; and 11,400 ft. gain of height by Dr. D. B. James and Jill Walker, Gull II, 18th July.

CALIFORNIA IN ENGLAND TROPHY for longest distance by a woman pilot: 98 miles by M. Gilbert (Imperial College Gliding Club) from Lasham to Castle Bromwich on 11th July.

DOUGLAS TROPHY to the Club putting forward three flights by different members in club aircraft, aggregating the largest cross-country mileage: Surrey Gliding Club: D. Kerridge, 173 miles; D. Goddard, 155 miles; and J. K. Mackenzie 165 miles; aggregate 493 miles.

National Gliding Championships, 1957

The Council has agreed that, provided we can obtain a special allocation of petrol for contestants retrieving, these National Championships shall be held at Lasham as previously arranged, between the 27th July and the 5th August.

Due to the petrol situation, there is some doubt as to whether the public will attend in sufficient numbers to bring in enough money to cover expenses. The organisers feel that, in view of this, expenditure must be kept to a minimum and they are therefore preparing to hold the Competitions on the following lines:

1. Launching will be by winch and auto-tow (heights of 800-1,200 ft. and a launching rate of 1 per 3 mins).
2. Competitors will be allowed up to 5 contest launches each day.
3. Tasks will be set to cut petrol usage and retrieving costs to a minimum.
4. There will be no limitation on the number of entries.
5. The entry fee will be £10 per glider, which will include 30 launches.

Should it prove possible at a later stage to provide an aero-towing contest, this will be arranged, but the entry fee would have to be increased.

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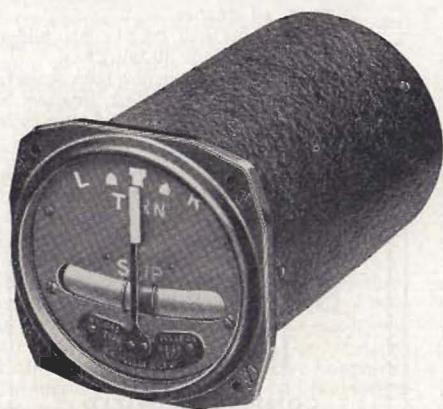
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A ROCKET VIEW OF CUMULUS

by A. E. Slater

WHEN artificial satellites are designed to take continuous photographs of the earth's weather, sailplane pilots are going to learn a lot more than they knew before about the distribution and life-histories of the clouds they use for soaring. Meanwhile, the next best thing is a collection of "still" photographs taken automatically from high-altitude rockets, such as the two reproduced here, by courtesy of the United States Naval Research Lab. and the British Interplanetary Society. They were taken from a "Viking" rocket sent up from White Sands Proving Ground, New Mexico, on 24th May, 1954, which reached a height of 158 miles—a record for a single-stage rocket. It carried half a ton of scientific instruments including, fortunately, an aerial camera.

The first photograph is taken from 146 miles altitude, looking north-west. As the Meteorological Office's weather chart shows an easterly wind on that day, the cumulus

cloud streets are travelling from the right bottom towards the left top corner, and are melting away as they reach lower ground—there are mountains rising to 10,000 ft. somewhere near the right bottom corner and here the cumulus dots have apparently grown into cumulo-nimbus blobs. Roosevelt Lake, actually 325 miles away, is seen as a small black object near the left edge. The isobars were actually curved, as are the cloud streets.

The second photograph is compounded of two taken at 155 miles (left) and 138 miles (right). The direction of view in the centre is S.S.E. This time we have a greater variety of cloud, and the cumulus lines run N.N.E./S.S.W., which is across the isobars, and suggests that the lines of cumulus near the middle of the picture are secondary cold fronts, especially as the individual lumps are rather large and are joined up, in contrast to most of those in the first picture.

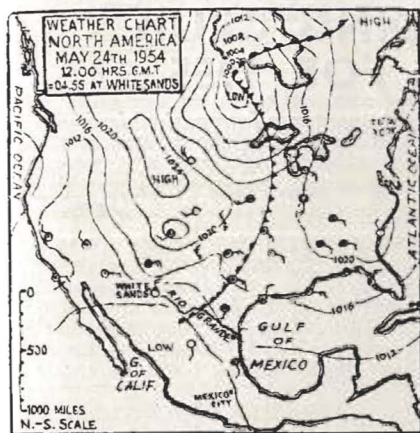
According to the description sent with



Fig. 1.—Cumulus clouds photographed from 146 miles over New Mexico.



Fig. 2.—A composite photograph, taken from 155 miles (left half) and 138 miles (right half) of clouds over Texas and Mexico.



this photo, the horizon is 1,100 miles away and of about that length; the view is taken across Texas into Mexico, with the Gulf of Mexico on the left (covered by cloud) and the Pacific Ocean on the right. It is also stated that "a well-defined cold front extends from the left-hand corner and runs parallel to the curvature of the earth." It cannot be followed far, as it seems to get lost in a larger sheet of cloud and then to peter out. The weather chart, however, shows it to be a slow-moving warm front

approaching the camera, petering out in the place where it does so in the photo. Further to the left, out of the picture, it becomes a cold front receding from the camera, according to the weather chart, and the secondary cold fronts would properly follow behind it.

Mexico City is stated to be "just on the horizon in the middle of the photograph."

Will such views ever be seen from a glider? They will, if space ships of the future have wings for returning to earth in a prolonged glide, to save all the rocket fuel which would otherwise be needed for braking a vertical fall. In the design of such wings, good gliding angles or minimum sink are not what matters, but the reduction of aerodynamic heating when the ship enters the upper atmosphere going at several miles a second.

Mr. T. R. Nonweiler, of the College of Aeronautics, Cranfield (who is at present working on a project for a muscle-power flying machine) tackled this question at the International Astronautical Congress in Rome last September, and decided that the temperature at the leading edge could be kept down to 1,000°C. if the forward part of the wing section had the shape of a thick wedge, with the upper surface parallel to the flight path and the lower surface at a very high angle of incidence. He did not discuss landing technique with a wing of this sort.

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WORLD GLIDING CLUB STATISTICS FOR 1955

As Reported to the Fédération Aéronautique Internationale

Country	Flying Hours	Club Gliders	Private Gliders	Certificates				Gliding Clubs
				C	Silver	Gold	Diamond	
AUSTRIA	4,500	340	—	350	23	—	—	133
BELGIUM	1,307	34	2	17	4	1	—	10
BULGARIA	793	43	—	47	7	—	—	4
CANADA	1,500	50	—	—	7	2	—	18
CHILE	150	15	1	—	—	—	—	5
CUBA	—	—	—	—	—	—	—	—
DENMARK	1,247	69	—	30	7	—	—	26
EGYPT	1,704	15	—	21	—	6	—	—
FINLAND	1,927	105	—	52	8	—	—	43
FRANCE	90,700	1,200	—	1,033	282	43	3	375
GERMANY	48,910	1,191	—	1,339	190	2	—	822
GREAT BRITAIN	14,770	145	41	348	74	4	1	29
GREECE	75	10	2	16	4	—	—	1
HOLLAND	7,237	94	1	119	24	3	—	33
HUNGARY	—	—	—	—	—	—	—	—
ICELAND	—	10	1	70	6	—	—	2
INDIA	476	14	—	—	—	—	—	2
ISRAEL	—	—	—	—	6	—	—	—
ITALY	3,980	59	2	124	8	—	—	20
LUXEMBURG	—	—	—	—	—	—	—	—
MEXICO	—	—	—	—	—	—	—	—
PORTUGAL	124	—	15	7	—	—	—	—
SARRE	270	14	1	10	—	—	—	9
SOUTH AFRICA	—	41	11	162	22	4	—	10
SPAIN	3,631	165	—	195	11	—	—	4
SWEDEN	6,568	261	5	374	25	5	—	40
SWITZERLAND	6,573	169	—	112	23	4	6	37
TURKEY	4,800	97	—	108	—	—	—	3
U.S.A.	6,360	76	175	39	19	5	—	63
YUGOSLAVIA	8,085	264	—	234	42	—	1	*

* No separate clubs.

GLIDING SUBSIDIES

THE following list of what different national Governments are doing to assist their sporting gliding movements is taken from the September issue of the *Bulletin of the Fédération Aéronautique Internationale*.

GERMANY.—12,500 DM. (approx. £1,000) for the National Championships.

SOUTH AFRICA.—£1,000.

AUSTRIA.—2 million schillings (approx. £26,000) for powered and gliding clubs.

BELGIUM.—1,650,000 francs (approx. £12,000) for central gliding schools and clubs.

BULGARIA.—40,000 Leva (£2,100).

CANADA.—None.

CHILE.—\$500,000.

DENMARK.—A lottery giving income of 25,000 kr. (approx. £1,250) for power and gliding clubs.

EGYPT.—£E9,500.

SPAIN.—4 million pesetas (approx. £130,000) for power, gliding and model clubs.

U.S.A.—None.

FINLAND.—None.

FRANCE.—Unstated, but possibly the largest subsidy of all (outside Russia and possibly Poland).

UNITED KINGDOM.—Relief petrol tax 1s. 9d. per gallon.

GREECE.—600,000 drachmas (approx. £6,000) for power, gliding and model clubs.

INDIA.—8,000 Rs. (approx. £600) to Delhi Gliding Club, and entire cost of National Centre at Poona.

ICELAND.—None.

ITALY.—A certain number of aircraft, and "substantial" subsidy.

LUXEMBOURG.—50,000 frs. (approx. £300).

PORTUGAL.—Entire cost of central gliding school.

SARRE.—980,000 frs. (£1,000).

SWEDEN.—330,000 crowns (approx. £22,000).

SWITZERLAND.—100,000 frs. (approx. £8,000) for powered and gliding instruction.

TURKEY.—£T2,000,000 for power and gliding clubs.

YUGOSLAVIA.—486 million dinars (approx. £600,000) for power, gliding parachute and model clubs.

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GLIDING TO A GOAL

by A. J. Deane-Drummond

PETROL shortage and high price are bound to set a premium on out-and-return or flights round a triangle. If the National Championships are held as planned, there is little doubt that the ability to glide to a given aerodrome will pay a handsome dividend. For old hands there is nothing particularly new in what I have to say, but I will be putting a different emphasis on the separate parts of the problem.

There are three main factors to be considered. The first is the ability to select the strongest thermal and make the best use of its rate of climb. The second is selecting the right speed to fly between thermals, and last but not least is the glide to the goal. The relative importance of these three will depend on the weather and the task which has been set.

It is my experience that the strengths of thermals vary very widely on any one day, although usually there is a top limit to the rate of climb which it is possible to achieve. It is obviously important only to make use of the strongest ones, and it is here that experience plays so big a part. If the task is a short one it is quite vital that the release is made in a strong thermal. Sometimes this is impossible and then the pilot may have to land and chance his arm again if weather conditions are likely to remain good. To reduce the luck element of the first thermal, tasks should be set which involve climbing in at least seven or eight thermals.

Much has been written about the best speed to fly between thermals. The better your glider, the more you are likely to gain from flying at its best speed, which is quite easy to calculate from the performance curve. It is also possible to work out the correct speeds when flying through up or down currents. The exact speed you select is not very critical as long as it is within about five knots. It is far more important that you fly towards a strong thermal and make the best use of it.

The final glide in has been rather neglected in the past because it was thought to be so easy. But it may make all the difference, and a little thought beforehand and

practice may halve the time taken for a short task of a 30-mile out-and-return. Such a task only involves using about three thermals on the way out, followed by a straight glide back from the turning point if cloud base is reasonably high. The speed to fly during the glide back will be determined by the rate of climb achieved in the last thermal. The airspeed controls the gliding angle and hence the break-off point at which you leave the thermal. Three years ago I made a small device to solve these problems without head-scratching and it has since proved quite invaluable. For a Skylark III the figures are as shown in Fig. 1.

Mine has a $\frac{1}{4}$ -inch square for each figure for readability but only requires a space 3 by $1\frac{1}{2}$ in., and can be mounted on the instrument panel. Thermal strengths and sink are in feet per second and airspeed in knots. The airspeed indicator is connected

T H E R M A L	S P E E D	S I N K	GLIDING ANGLE							
			TAIL WIND			HEAD WIND				
			30	20	10	0	10	20	30	
1	44	2.4	49	43	37	31	24	18	12	
2	50	2.9	44	39	34	29	24	18	14	
3	53	3.3	40	36	32	27	23	18	14	
5	58	3.9	36	32	29	25	21	17	13	
7	64	4.9	31	28	26	22	19	16	13	
10	68	5.9	27	24	22	19	17	14	12	
BEST G/A			54	47	40	31	25	18	14	
SPEED			36	37	38	38	42	48	54	
SINK			2.0	2.1	2.1	2.1	2.3	2.8	3.4	

Fig. 1. This diagram may be mounted on a large hexagonal pencil.

to a pot pitot and "nostril" statics, which is found to give negligible error over the whole speed-range in a Skylark. The figures relate to Slingsby's original estimate of performance and for practical purposes could also be used for a Sky or a Skylark II, with a small adjustment for the rate of sink and speeds below 50 knots. Above 55 knots or so, the performance of the two Skylarks are theoretically similar.

The device is used by setting the pencil (or reading from that line) to the achieved rate of climb, and reading off the airspeed, the correct sink for that speed, and the gliding angle under the appropriate wind speed (all on the same line). The only thing the device does not tell you is the increase or decrease in airspeed necessary when flying through down or up currents. Provided the pilot knows the sort of increase or decrease necessary, this airspeed can be guessed at with sufficient accuracy.

Having read off the gliding angle, this can be converted into the height required from a graph as in Fig. 2. The scale of miles on the graph should be the same as the map for convenience. A $\frac{1}{2}$ -in. scale can be on one side and a $1/500,000$ on the other. It is also convenient to mark off points on the map every five miles to the goal.

The amount of spare height to allow is a personal problem, but I do not allow less than 100 ft. extra for each five miles of glide. During the glide back it is essential to check that all is going according to plan at the five-mile points. If it is not, then the pilot can slow down to the best gliding angle also

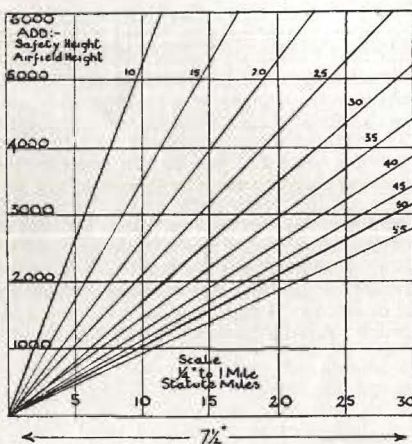


Fig. 2

indicated on the lowest three lines of the device. If a slow-down becomes necessary it is essential to start it early enough, because not much can be saved over the last five miles. In my opinion, the final glide is quite the most exciting part of soaring. Until you are practised, it takes quite a lot of nerve to start a glide in at, say, 4,000 ft. to an aerodrome 25 miles away and expect to arrive 500 ft. up. If you do not believe the performance curve, try it out and see. Only then do we realise quite how far a modern glider will go—or so we hope.

BOOK REVIEW

Further Outlook : by W. GREY WALTER. Published by Gerald Duckworth & Co., London, 1956. Price 12s. 6d.

THOSE gliding folk who are susceptible to science fiction will be interested in "Further Outlook." Its real time period extends only into the next decade or so, but there is an enigmatical treatment of a period covering the next century. Windsock watchers are kept on familiar ground by the style of titling of each of the five parts: Part One is "A Depression is Passing (1940-1958)", while Part Four is "Occluded Front (2056-1964)" (*sic*).

The story concerns a space-flight project as well as a time-machine based on—snow-flake crystallography! Pre-war readers of THE SAILPLANE may remember a monograph by C. H. Latimer-Needham upon the locomotion of flying fish; they will be interested in a novel application of those principles. But of especial interest is the addiction of the leading character, Simon Gloster, to the sport of sailflying, upon which many interesting comments are made. Sundry novelties are suggested to which in the future, indeed, we may well become accustomed. One of these, belonging to the period of 2056 A.D., describes how—

"... the Chinese mainland is the only region where there is serious betting on sailplane

aces. Their long history as kitefliers, with all its delicate conventions, has been grafted on to the art of soaring. They have male and female sailplanes—gentleman-bird-boats and lady-bird-boats—embellished with appropriately coloured symbols and excrescences, the latter decorously faired and streamlined. These perform incredibly intricate and risky sky dances, as duets or in coveys of half a dozen or more, the object being for a male bird to rub some of the colouring matter off his skid on to the canopy of a chosen female bird. The skill required is fantastic and the sight at night especially is indescribable, for the Chinese were the first to use great bonfires to provide a steady up-current for their soaring ceremonies. The spectators are all betting madly . . .”

As the author is Dr. Grey Walter of the Bristol Gliding Club, it is most refreshing to find also the true soaring pilot's attitude faithfully revealed. Thus a more conventional portrayal of our sport has a harassed Simon Gloster going off on a sailflying week-end, to seek relaxation among the Scottish hills. Even so, he there encounters the most remarkable travelling device that has yet been thought up, to this writer's knowledge, in the realms of fact or fiction. Here is science fiction from the upper flights of fancy. The reader is recommended to check his de-icing equipment—and take oxygen aboard. It's worth it!

GEOFFREY BELL.

BEATING THE BIRDS

by Mike Russell

(By courtesy of the "London Gliding Club Gazette")

BIRDS are better pilots than ourselves, and yet they have not mastered the art of "flying without visual reference to the horizon." Man, being intelligent (?) has got around this by producing instruments which indicate the antics of an aircraft in which they are fitted, relative to the horizon; in one case the instrument provides a pictorial presentation of "what is going on."

The purpose of this article is to discuss the need for, and application of, instrument flying, and to describe the instruments used and their interpretation. The need is obvious: to gain height in cloud, thus escaping from the usual limited height band, in which many cross-countries and, indeed, most of our flying is confined.

It must be stressed, firstly, that cloud flying *must not* be indulged in inside *airways*, *control areas*, and *control zones*. It also follows that one should also avoid *aerodrome circuits*, and *danger areas*, etc., and any other area where a lot of other aeroplanes may be doing the same thing, at the same time, such as the British Isles . . .

Maps of the Airways System (which is at present being revised) are on view at all gliding clubs, in the operations, or flight,

office, and should be studied by all who intend to cloud-fly. Remember *you must carry a map showing these airways* on any cross-country flight. Anyone who breaks these rules renders useless these control areas and airways as safe routes for commercial and other powered aircraft. He endangers not only his own life, but those of maybe ten crew, and up to a hundred passengers, to say nothing of half a million pounds worth of airliner. No words on this matter can be too strong . . . a crash of this kind must never happen.

Having said that much, let us now find out how to fly "on instruments." In most sailplanes one single instrument is fitted, combining the indicators of slip and turn. The "slip needle" indicates the amount of sideslip which the aircraft is carrying, and is based on a pendulum action incorporated in its mechanism. If left rudder is applied the aircraft will slip to starboard, and the needle will point to the right. Primitive variations are the ball in a "U" tube, or bubble in an inverted "U." In both cases with the application of left rudder, the ball, or the bubble, will be displaced right, to indicate starboard sideslip. The turn

indicator works using a gyro driven by a (flat!) flashlight battery usually hidden in the nose of the sailplane. It is appreciated that when a mass, or flywheel, is rotated, it acquires a tendency to continue to rotate on the same axis (the property of a gyroscope) and considerable force is required to displace this axis. However, it can be displaced, and, in the turn indicator, a spring is attached to the mounting (in effect, to the aircraft) and to the gyro, to do this, so that when the aircraft is turned this spring drags the gyro round with a lag. The faster the aircraft is turned, the more the load on the spring becomes, increasing the displacement of the gyro from its original axis. The reading on the face of the instrument indicates by how much the gyro is resisting these efforts to displace it. The instrument is marked in rates of turn, one to four, rate one being 3 deg./sec., and rate four being 15 deg./sec.

The Artificial Horizon is the second instrument found in some gliders, and, after

consideration, it is thought that, by and large, this instrument is essential to accurate instrument flying. The instrument consists of a gyro rotating in the horizontal plane. This gyro is stabilised in the vertical position by various means, so that its axis will always remain vertical. It is appreciated that if, at the front of the instrument, a bar is coupled to the gyro, this bar will remain horizontal while the instrument case (attached to the glider) is banked. Superimposed, therefore, is a cross-sectional model of an aircraft, and as this is fixed to the gyro case, it can be seen that the model will always be relative to the horizon bar, as the glider is to the horizon. A further linkage incorporated causes the bar to rise when the glider nose is depressed, and vice-versa, this making the model appear below, or above, the horizon bar. The in-flight interpretation of this instrument is simple and logical, and nothing special need be said about its use, except that small variations in attitude become apparent in clear air before they

IRVIN GLIDER-CHUTES HAVE BEEN SUPPLIED TO MOST GLIDING CLUBS

INCLUDING Newcastle Gliding Club; Yorkshire Gliding Club; London Gliding Club; Surrey Gliding Club; Derbyshire & Lancashire Gliding Club; Cambridge University Gliding Club; Midland Gliding Club; Southdown Gliding Club; Furness Gliding Club; Leicestershire Gliding Club; Bristol Gliding Club; Portsmouth Gliding Club; Scottish Gliding Union; Cambridge Aero Club; West London Aero Club; Derby Aero Club; West Suffolk Aero Club; Lancashire Aero Club; Redhill Flying Club; Wolverhampton Flying Club; Midland Bank Flying Club; Hampshire School of Flying; Yorkshire Aeroplane Club; Cardiff Aeroplane Club.



IRVIN *Glider* CHUTES

ICKNIELD WAY • LETCHWORTH • HERTS

show on the instrument, and therefore, until some practice has been obtained, coarser flying may result.

We now come to the much more difficult question of "I.F." on the primary instrument. It is obvious that the information that can be obtained from the "Turn and Slip" is limited, and therefore quick interpretation is essential. No indication is given of pitch; for this, reference must constantly be made to the Air Speed Indicator, and attempts must be made to keep the speed constant, or else a loss in performance will occur. Before attempting cloud flying, decide on a safe speed range, say forty-five to fifty knots, and practise keeping the speed within this band. Do not attempt cloud-flying until you can do this for periods of up to thirty minutes at a time in normal flying, etc.; it is surprising to note the wide variations of speed normally tolerated.

Switch on the Turn and Bank, and while climbing in the next thermal, settle down to a rather more gentle turn, about a half to two-thirds of your normal amount of bank, and note carefully the reading on the turn needle. The holding, constantly, of this reading should be practised, as also the smooth correction for sideslip, the correction for which is to apply a little rudder on the same side as the needle displacement. Try to establish a mental picture of what the instrument readings should look like in various attitudes, and learn to correct naturally to obtain these readings.

For the first essay in cloud flying, choose a mild looking cumulus, of about 1,500 to 2,000 ft. vertical development. This should occupy one for about ten minutes, which will be quite sufficient for a first time. Making sure that no other machines are inside, or about to go inside; settle down in a steady turn a few hundred feet below cloud; fly half on instruments, half visually, keeping the usual watchful eye for other machines. Cloud will be entered quite suddenly, and from then on concentrate on the instruments only. Scan the panel systematically; Slip needle, Turn needle, A.S.I., Variometer. Do not worry about "centring" during the first few cloud flights; an overall gain in height is good enough until the general flying becomes more polished.

A word on speed-keeping. Many noises

become apparent due to sideslipping, and will give the impression that the speed is haywire. Most sailplanes are quite quiet with no slip, but make a considerable noise in even a slight slip. Shut the window, so that a slip one way will not give the impression of an enormous build up in speed. If the speed should build up, however, ease the stick back a little, and note very carefully when the A.S.I. reading stops increasing. At that moment you will be flying level—maintain this attitude by centralising the stick, and then the speed will slowly fall to the normal 45 to 50 knots.

Avoid sudden or large application of controls. Remember that a large application of rudder will not only centralize the slip needle, but momentarily also the turn needle, so do not be misled into thinking that more bank is required. This could lead to overbanking which produces a high-speed spiral—unpleasant even in clear air, and positively terrifying in cloud. This will happen, though, sooner or later, and there are a variety of recovery actions, of which only one is not drastic—that is to interpret the instruments properly, and recover normally. This usually needs more than the immediately prevailing skill and cool-headedness. Another remedy is to open the airbrakes, and centre all controls. If control is lost while the speed is low, such as in an inadvertent stall, normal recovery should be tried, or as a last resort the aircraft can be deliberately spun. Ease the stick right back, and apply full rudder. Await the bottom of cloud. Heaven help anyone in cloud below!


Let us assume, however, that all this misery has not occurred, and the first thing to give out is the lift. When this happens, it is usually near the top of cloud, so that during the last few circles a bright patch will "go past" each time round. When the climb is over, straighten up on the bright patch; it is usually the quickest way out. If the cloud is large, simply straighten up and fly level to let the compass settle. The into-wind (or down-wind, if desired), course should have been noted before going on instruments, and this should be compared with the course being steered, and a carefully estimated or timed (rate 1 equals 3 deg./sec.) turn can be made onto the desired heading. This heading can then be flown using the turn needle and compass to fly straight.

Incidentally, care must be exercised on coming out of a turn. Over-correcting will immediately produce a turn in the opposite direction. It is significant that control is usually lost at this point, because mind triumphs over instruments, and one relies on one's "feelings" as to how to react. This is due to the tubes in the inner ear (which, after all, were not designed to get airborne!) giving incorrect messages to the brain, due to various movements of the liquid contained in the tubes. Resist these feelings: they are incorrect, the instruments are not. A common "sensation" felt on coming out of a turn is that one is entering a turn the other way. If one obeys this sensation, one immediately goes back to the original turn to the accompaniment of growing confusion.

Concentration is essential at all times, and one must not let one's reactions, and therefore one's corrections get behind. It is unfortunate that little opportunity occurs for practice. At risk of crossing those keen exponents of the Link Trainer, I would say that, though this machine has much to commend itself, it is not the be-all and end-all of "I.F." There is no substitute for the real thing. A very good idea would be to equip a two-seater (T21 type) with a low hood and a lowered seat on one side, and to incorporate instrument-flying into the training syllabus. The Eagle and Kranich in-line two-seaters also could easily be fitted with amber screens and blue goggles in the rear seat, for simulated instrument-flying practice. Here an exact copy of the appropriate instrument panel (from the single-seater which the pupil will later fly) should be used, so as to reduce the change between aircraft when the pupil flies solo on instruments.

To have struggled darkly up inside an angry cumulo-nimbus, with all its cold and rain, turbulence and hail, to emerge triumphant at, or near, the top, with blue sky all around, and the bright green of the country below, and the always pleasurable sight from a glider of clouds beneath oneself, is to enjoy gliding to the full. Many of us only achieve this happy moment once in years, and while the memory of it is sufficient until the next time, the thoughts it provokes must surely include surprise at the lack of attention given to one of the most difficult and yet most necessary aspects of gliding.

May your airbrakes never jam in!



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It is with great pleasure that I am able to report success in the World Gliding Championship due in no small measure to your Venner cells.

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While, no doubt, we would have had equally trouble-free results from lead acid cells, the weight would have affected our performance adversely, and might well have made a big difference in the results.

Yours faithfully,

H. C. N. Goodhart (Cdr. R.N.)

Venner lightweight silver-zinc accumulators are installed in leading sailplanes for driving the horizon and directional gyro and for radio transmission. They have proved their worth in International Gliding Championships.



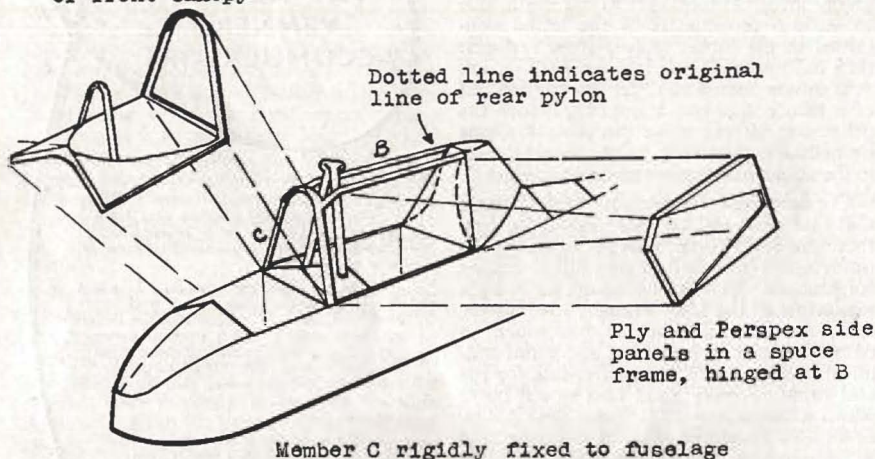
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AN IMPROVED T-31

by D. R. Lane and R. L. Mitchell, B.Sc., A.M.I.C.E., M.Rhod.I.E.
(Recently C.F.I., and Hon. Ground Engineer, Salisbury Gliding Club)

Detachable "Dog Collar" of front canopy



Most members 10 x 10 mm spuce or 1.5 mm ply.
Total weight penalty about 40 lb.

THE Salisbury Gliding Club has operated a Slingsby T-31b of standard type since 1951. Two years ago, however, a decision was made to discard winch-launching in favour of aero-towing, the winch having proved to be sub-economic. The club site being flat and 5,000 ft. a.m.s.l., a normal launch with 900 yards of cable gave only 600 ft. and the high rate of sink of the T-31 resulted in very poor flying figures, even in the strong thermal activity of the normal Rhodesian sky.

The advent of aero-towing immediately increased the amount of soaring done, and since our height gain was often between 5,000 ft. and 6,000 ft. a canopy became essential—not only to keep out the cold but also to make it possible to chatter whilst on tow. At the same time, the wings in use on the T-31 had come from a pre-war Tutor which had seen several years of sub-

tropical service. Laboratory tests showed that the wood had dried to about 5% moisture, and the casein glue had become brittle. A major renovation was therefore decided upon.

New wings were obtained from Messrs. Slingsby, these being of "Super Tutor" type with upper surface ply extending almost to the maximum camber position, spoilers being fitted. Minor modifications were necessary to both aileron and spoiler control cables which were run through the wings to align them with fittings on the fuselage, and a considerable amount of thought and work was needed to produce a satisfactory canopy.

The pylon immediately behind the instructor's seat was modified slightly to full fuselage width of the rear cockpit. This was achieved by tapering the neck from the top

fuselage longerons in a straight line to the original position at the mainplane under-surface. A canopy hoop of similar shape was made and fixed to the fuselage at the rear of the front cockpit. Between these two uprights, perspex and ply panels were made on each side, hinging upwards, to allow access to the rear cockpit.

The front cockpit was an easier proposition, merely requiring a canopy of straight-forward dog-collar type. Owing to the shortness of the opening for the front cockpit, this brings the windscreen part of the canopy very close to the pupil's eyes, but in practice this had not proved a snag, no-one having criticised it as being unpleasant.

Provision has been made for ventilation and the whole assembly has proved a great success in action. The aircraft is quiet, even on tow at 45 to 50 knots—and much warmer!

Visibility from the rear cockpit is slightly restricted, though for approach and landing the hinged portions can be raised. We in Rhodesia are fortunate in that our skies are not yet crowded, though we can imagine that on an over-populated ridge the

lack of view from the rear cockpit of the T-31 could occasion some misgivings on part of the instructor.

With regard to handling, no appreciable difference can be noted. It appears that the increased side areas are grouped too close to the centre to affect directional stability. The aileron control is still too heavy and sluggish for comfort, and, as before, with any weight of over 140 lbs. in the front seat, nose-heaviness becomes noticeable, and with over 180 lbs. is excessive. It has been found that during the course of training, *ab-initio* pupils progress more easily on a well-trimmed glider, especially in thermal turns, and with this in mind we hope to instal a simple type of spring trimmer.

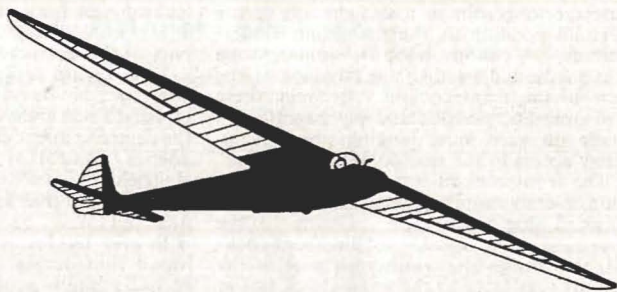
Performance has certainly been improved, which has resulted in greater utilisation and increased club activity, and though we charge 15s. for a tow of 1,500 ft. and 30s. per hour for soaring, members are getting more for their money and the cost per hour in the air is far less than it was with the winch. The aircraft now averages about 3 hours per flying day, and is even making a small profit!



Club



Association News



CONTRIBUTED articles are the fodder on which a magazine lives, even though at times they may seem a trifle indigestible to some of its readers. Correspondence, however, is the very life-blood which pulses through and energises the whole; and it is for this reason that every Editor welcomes readers' letters, whether full of praise or loaded with pellets of adverse criticism.

It is encouraging, therefore, to hear from a reader that he dislikes the Club News heading, because it proves his keenness and his desire to improve the magazine. He has, in fact, been enterprising enough to submit an alternative design, and for this constructive criticism we thank him. It is reproduced above.

For every reader who expresses an opinion in writing there are others who are of the same mind but do not trouble to write. Conversely, there are generally others who hold a different opinion; and in this case we must bear in mind the length of time during which the present heading has been in use without any expression of disfavour until now.

As we cannot believe that only one of our numerous readers has ideas on this subject, we have decided to invite the gliding fraternity to compete for a small prize for the best design for a new heading for the future.

Entries must be suitable for reproduction as a line block not exceeding $1\frac{3}{4}$ ins. in depth, and must be drawn in black ink on white paper or lightweight card. They will be published for comparison and judged by assessing the letters of praise or condemnation which are received from readers. If, however, too many entries are submitted to permit publication they will be judged by a neutral panel.

For the June issue, will Club Press Secretaries please note that contributions, typed double-spaced, should be sent in so as to arrive at 33B Eccleston Square, London, S.W.1, by 24th April.

GODFREY HARWOOD,

Club and Association News Editor.

AUSTRALIAN NAVY

IN mid-December the naval team, chosen to compete in the first ever centralised Australian National Championships, went to R.A.A.F. Uranquinty for a week's practice. The weather, however, was rather stable, so that no flights of any particular merit were made. Our new Schneider ES56, which we had only recently repaired after damage by hail, was badly wrecked as the result of a nose first vertical landing after a stall off a low, slow, steep turn. The pilot, however, is making a good recovery. In order still to enter two aircraft in the Championships, we hastily designed and built a modification onto our T31, thus converting it to a single-seater with canopy.

The Championships were very successful and enjoyed by all. Our L.O.150 was flown by Tony Goodhart and won the Aggregate Trophy with a total of 610 points out of 800, and also three cigarette lighters as daily prizes. He also came 3rd in the Individual Championship.

The flying of our T31 was shared between Bill Catchpole, Geoff Stickland, Max Kokegai, Charlie Grose and Tex Toohey, who between them managed to bring it into 5th place out of eight in the Team Championship. The outstanding flight was by Charlie Grose who on his first cross-country covered 58 miles to his goal.

Our Chairman - Manager - Secretary - Treasurer - Chief Instructor - Ground Engineer - Etcetera, Tony Goodhart, has just returned to the U.K., and it rather remains to be seen how active we shall be without his guidance and drive.

We are planning to sell the L.O.150 to a syndicate in Victoria as we feel it is an aircraft with too high a performance for even the above-average club member, particularly in a Service club where nobody stays very long.

G.A.J.G.

BLACKPOOL AND FYLDE

OUR "maid of work" at Squires Gate Airport is an early 1928 Austin 16 h.p. "Burnham" saloon converted into what is now known as a "pick-up". This has now been in use since 1951, first being employed as a motor-tow launching vehicle. In 1954 we acquired an ex-W.D. barrage balloon winch, which was eventually fitted up with two drums. The Austin now does the cable-retrieving; and as on the longest runway the distance is just under 2,000

yards, tremendous distances have to be covered in 2nd gear.

The two-drum winch conversion has aroused a lot of interest, and we have had no trouble with it at all. It has now been in operation for just a year.

J.S.A.

BOY SCOUTS

FOR the third year special gliding courses have been arranged for Scouts at Lasham. Far more Scouts apply to attend than can be accepted. They camp on the airfield and are responsible for their own cooking and tentage. A local Air Scout Troop is now affiliated to the Surrey Gliding Club. Six boys from this Troop, the 8th Basingstoke, are the first to obtain the new badge for those under 15 recently introduced by the Boy Scouts Association to encourage an early interest in gliding.

To win this, the "Apprentice Glider," badge a Scout has to demonstrate the knots, hitches and splices used in launching equipment, the launching signals, and the handling and parking of gliders. He must also have had at least two instructional flights. There is also a badge for Senior Scouts, to gain which a Scout of over 15 years of age must be able to take off, fly and land a two-seater glider to the satisfaction of an Instructor accompanying him, and be able to carry out a Daily Inspection.

The Boy Scouts Association this year celebrates its Golden Jubilee and the Centenary of the birth of the Founder, Lord Robert Baden-Powell. Among the special events arranged for the Jubilee Jamboree is a display of gliding activities in the presence of H.M. The Queen and H.R.H. the Duke of Edinburgh, who will be present at Sutton Park, near Birmingham on Saturday, 3rd August. 35,000 Scouts from over 80 countries will attend.

L.J.B.

BRISTOL

STATISTICS for 1956 show that we completed 4,761 launches and 619 flying hours, which is encouraging when it is considered that we also moved from Lulsgate to Nympsfield, and changed from auto-towing to winching. In addition, there were 14 first solos, 12 C's, and 13 Silver C legs. Club cross-country mileage however, was a mere 254 miles.

At the beginning of last year Nympsfield consisted of a large recently sown field, with

a long open-sided barn which still showed obvious traces of its previous inhabitants. Today the barn has become a very solidly constructed club house containing dormitories, kitchen, clubroom and lounge bar, the two latter not yet fully complete. To the East is a brand new hangar, which will just take eight aircraft without too much juggling, and an attached workshop.

The first six weeks of this year produced enough soaring to justify our choice of site: there were over 50 hours in January alone, rather more than our previous best of 24 hours which were completed during a Christmas camp at Roundway in 1950. 13th January was the best day when, in a N.N.E. wind, 23 hours were flown. There was almost complete cloud cover at about 3,000 ft. for most of the day, and the average hill lift extended to about 1,400 ft. During the afternoon the lift improved to cloud base, and Tom Parkes in the Olympia managed to climb through a gap in the cloud to 6,000 ft., about 1,500 ft. above the cloud layer. Thermals, too, have been in evidence, and on 10th February they provided an interesting variation from the hill lift; whilst on the 17th, in a very light N.W. wind, Tom Parkes managed to scrape up to cloud base at 2,000 ft. plus a further 1,600 ft. in cloud. He reported weak lift up to 5 green below cloud, but inside, there were local areas of over 20 green.

This year we plan to start our summer gliding courses in April and to continue them until September—a longer season than we have attempted so far. There will be no breaks for club camps, as we have found that both can run concurrently with mutual benefit. The address for enquiries is:—Bristol Gliding Club, 40 Broadfield Road, Knowle, Bristol, 4. M.G.

CAMBRIDGE

THE first few months of this year have seen feverish activity in the Club. Flying has been taking place on most week days and certainly every week-end and everybody is making up for lost time after the poor spell at the end of 1956.

On a number of days in January the wind was strong enough for kiting and only relatively low cloud bases limited us. Ted Warner has had a busy period and has C. of A.'d all the aircraft except Bluebell during the spell of bad weather. Prefect has now turned bright red in company with

Skylark and Olympia, so C.U.G.C. should be easily seen in the sky in the future.

Pat Harris, our new Chairman of the Mechanical Sub-Committee, has also had a hectic time buying our new tractor for aerodrome work, looking for a suitable road retrieving vehicle with the conflicting requirements of economy, high power, versatility and Club foolproofness, and at the same time thinking out designs for new winches.

Latest reports from our Clubhouse suggest that it is now possible to purchase hot pies, cups of tea and all sorts of delicacies supplied by Frank Lindsell, and to sit in warmth while partaking of refreshments. Work is now in progress on a further extension to the hangar by Maurice Pleasance and Bryce Smith in which it is intended to house all the aircraft fully rigged and all the vehicles. We hope thereby to save on vehicle maintenance, and at the same time make a drier and lockable hangar when the end wall is bricked in and sliding doors built.

The cable laying section, led by our C.F.I. Ken Machin, has laid most of the telephone cable round the airfield, and we will shortly be connected to Flying Control in order that contact may be maintained with us at all times.

At the time of writing, with the Club dinner very imminent, we are pleased that Dr. R. S. Scorer has accepted an invitation to attend, and that a contingent from the Surrey and Imperial College Gliding Clubs is coming. We are very disappointed that for business reasons, Mr. and Mrs. Philip Wills were unable to accept.

Our next camp is due to start at the beginning of April at the Long Mynd, when all the aircraft will be taken, although how, we are not quite sure at the moment. However, Anthony Edwards has volunteered to drive the tractor with a trailer up there—and the best of luck to him on his 16 hours journey!

C.U.G.C. is very pleased to welcome a fellow glider pilot from Hungary who has two Silver C legs and is now flying regularly with us. B.H.S.

CORNISH

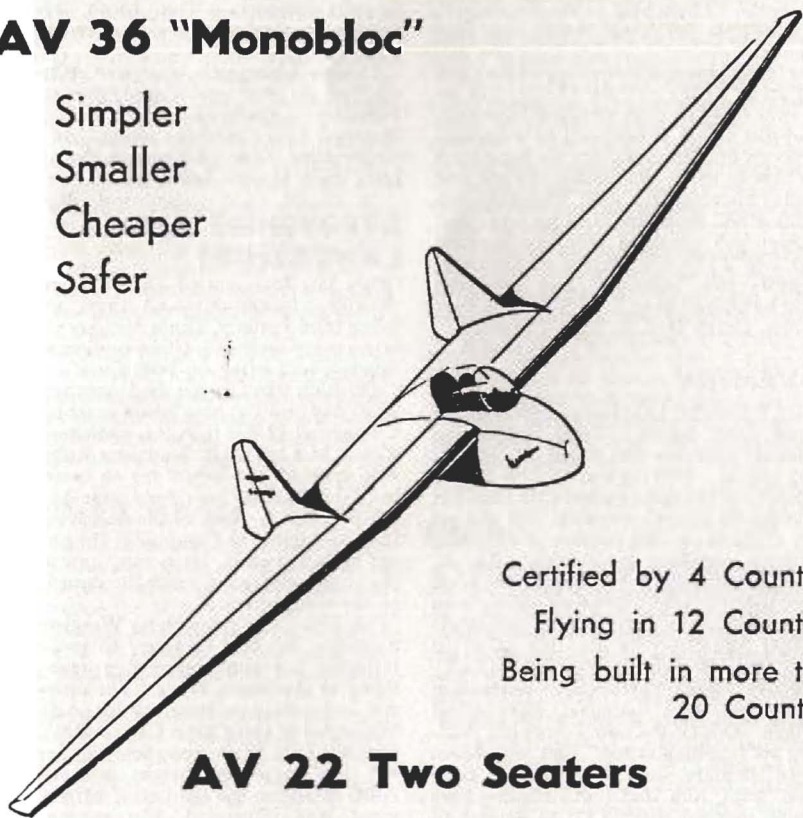
WE have recently secured a lease of Perranporth Aerodrome with its three runways, situated seven miles S.S.W. of Newquay, and a suitable hangar building

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which, however, requires some rather expensive alterations. We have also acquired a Tutor from the Air Ministry. Perranporth offers a good soaring ridge of cliffs some 300 ft. high, with a beat of about three miles, workable in winds from North East to West. Good thermals appear to be available over some deep coombe valleys on the other three sides. Launching is by motor-tow, but aero-tows by Tiger Moth are also available.

The formal inaugural meeting of the Club was held in Truro on 20th March, and we have now enrolled over 50 active members. At present flying is confined to Thursday afternoons and Sundays, but we hope soon to be able to fly on Wednesday, Friday and Saturday afternoons as well. Depending on recruiting and flying progress we hope that our fleet will ere long comprise another Tutor, two T31's, a T21b and an Olympia.

Visitors are welcome, and enquiries should be addressed to J. W. E. Berry, Parc Sparbles, Carbis Bay, St. Ives, Cornwall.

J.W.E.B.

COVENTRY

FINAL figures for 1956 were 6,740 launches and 1,008 hours. Total number of certificates remains the same as in last issue's report. 1957 figures to date exceed last year's for the same period with launches at 545 for 65 hours. Norman Bell did his Silver C duration, hill soaring at Edgehill, and three members have gone solo—R. Preston, J. Neill and Terry Smith. The Club has arranged to take a series of cadets from the local A.T.C. squad up to B certificate standard and Terry is the first cadet to achieve this. Preston has also gained his C.

January gave generally unpleasant weather but high launches were often obtained. One of the new Tutors has completed its "civilianisation" and was flown late in January, and has already been soared. 10th, 16th, and 17th February gave us some thermal soaring up to heights of 2,500 ft. This is unusually early, but it has been of the "hold your height" variety.

John Colvin's New Year resolution was to enlist hands for waterproofing the workshop. In this he succeeded and the job is now finished. Gerry Harrison has recently spent a week at Slingsby's and hopes that he may now be considered by the B.G.A. for an Approved Inspector's Certificate. This would prove a great asset to the Club, although Gerry would be working for us

only in his spare time, of which he has already given a great deal.

From 20th July to 18th August the Club Summer Camp will be held at Edgehill. We are not running a course this year but private owners who would like to fly with us will be very welcome.

Mike Stather-Hunt, our Secretary, has recently soloed in a Tiger Moth. He flew two hours dual spread out over about a year.

George Thompson, our ex-C.F.I., was married to Barbara Cartwright on 9th February. Cathy Liquorish and Gerry Harrison also "take the plunge" in a few weeks' time. The Club wishes them Good Luck and Happy Landings.

B.H.T.

DERBYSHIRE AND LANCASHIRE

THE last fortnight of December fulfilled our expectations and there was no flying until January. Since January we have flown every weekend, either on Saturday or Sunday, and often on both days.

On 20th January we had another good wave day and Graham Elson reached Gold C height at 12,700 ft. A.S.L. Michael Kaye topped him by 500 ft. Laurence Robertson, who requires the height leg to qualify for his Gold Badge, was only able to reach 9,200 ft. A.S.L. One of the decisive factors in wave soaring at Camphill is the ability to get launched early. It is most unusual for the later machines to reach the same heights as the earlier ones.

We had a visit from Betsy Woodward on Saturday, the 9th February to give us an informal but most interesting account of flying in the Sierra Wave. The attendance was larger than we have had for some time. We hoped to show her a Camphill Wave on Sunday. The Wave was there right enough but the maximum height attained was 2,400 ft. above the hill and if Miss Woodward was impressed, she managed to conceal it.

The extensive, or should we say expensive, ditch in front of the launching point on the eastern side of the site has been filled in and seeded. This has made a vast improvement to the field and would have been appreciated by some of the competitors in the International Competitions. Further projects include improvements to the field drainage and the provision of facilities for keeping blankets dry.

Gliding is full of surprises. We have been approached by British Ropes Ltd. who have asked if we will be good enough to allow them to supply us with two winch wires for testing purposes. These have been fitted on the diesel winch and cable breaks have become so rare that we are getting out of practice.

After rendering good service, Brian McGraw has retired and Rita Rowlands has taken over the task of Members' Secretary. This is an arduous and thankless job and the Committee is grateful to Rita for stepping into the breach. We hope she will find it has its compensations.

The Annual General Meeting was held on Saturday the 23rd March. The Chairman's Prize for the best Silver C goes to Roy Illidge. The Mensforth Trophy has been awarded to L. R. Robertson for his magnificent goal flight to Exeter. The Jubilee Cup for height has been awarded to D. M. Kaye who seems to spend a large part of his time over 10,000 ft. His qualifying flight was to 17,300 ft, A.S.L.

The Dickson Tankard has been awarded to Dennis Ward for meritorious services on the ground, or failing to avoid Cyril Kaye. Wilfred Heginbotham ran Ward close enough to obtain a special award of a chromium plated club car badge.

B.T.

HANDLEY PAGE

LAST year was a record one, barring the cross country flying! It is hoped to remedy it this year. Cambridge appears to be the choice for Silver C distance; also a 50 km. triangle has been planned based on our airfield at Radlett. We hope the Rhönbussard will come up to this in good weather.

Several Rhönbussard pilots have been seen creeping about with armfuls of maps, bearing arcs of varying radii and course lines, not to mention control zones. It looks as if much premeditation is going on!

The lack of a real high-performance machine is being felt now, as those who have tried to battle upwind in the Rhönbussard know all too well! In addition, a few miles to the north-east, one is out of the control zone, but without a cloud flying machine, one is still restricted fairly severely.

We have "won" Peter Nielson from the Cambridge Club, but the transfer fee cannot be disclosed! We hope to benefit from his cross-country experience.

Several of our members visited Lasham last year and had their first taste of flying the Olympia, Skylark and the Eagle. This gave a much needed incentive to the Club and modified several pilots' ideas on soaring.

The Club's T31 is first to complete its C. of A. The whole fuselage has been recovered this year and a brighter colour scheme will be incorporated. A new Tutor has been purchased which will be modified with T31 type jury struts.

We have twenty full members plus the usual "part timers." The number could no doubt be increased considerably, but it is doubtful if the training rate could be increased much more. The load of tuition will be better spread in future as we have two categorised Instructors and seven more under training.

A number of members have booked up for courses at the Long Mynd this year, where one hopes the petrol and a west wind will manifest themselves.

Airfield restrictions being what they are, severely limit the social side of the Club, and confine it to modest proportions.

By the time these notes appear, all the C.'s of A. should be completed, flying well under way again and petrol restrictions less, one hopes.

M.W.

KENYA

As the result of a ban last year on the use of Nairobi West aerodrome for gliding, the Nairobi Gliding Club had to move the T21B to Nakuru airfield. The first instructing course was held there in September and there were many soaring flights and joyrides.

Conditions at Nakuru are quite violent at times; thermals of 30-40 f.p.s. have been found, also down draughts of over 20 f.p.s. On one occasion the T21B was diving at 60 knots with spoilers fully open but still rising at 3 f.p.s. In its better moods, however, Nakuru is a soaring pilot's dream of paradise. We have stopped trying to set up duration records because once above 2,000 ft. it is harder to get down than to stay up. The first wave flight in East Africa was made at the end of last year, beating to and fro between Nakuru and the Rift Valley escarpment to the East in lift as smooth as silk.

We operate on Nakuru every Saturday

afternoon and all day Sunday, and the first C gained in East Africa was won by Mike Wilson in the Cadet. Up to February five other pilots had gone solo, amongst whom Johnny Womack gained the second East African C.

Our only real worry is that there is so much keenness in and around Nakuru that we now have more members from there than from Nairobi! We badly need a safe flat training and thermal soaring site within 15 miles of the city centre, Nairobi being, after all, the main centre of population.

P.B.T.

KENT

POOING of resources has helped to overcome the petrol rationing and quite a number of members with cars have got together and arranged combined transport which has meant attendance has continued fairly steady.

On 27th January Ted Day in his Sky became the first member of the Club since its formation to accomplish a five-hour duration flight. This is also his second leg towards a Silver C. Taking off into a steady S.W. wind he soared over the ridge for most of the time between Detling Village and Bluebell Hill. The last quarter of an hour was almost his undoing as the wind veered 90° and with heavy rain approaching, he soared at 700 feet on a half-mile stretch of ridge at Bluebell Hill. He landed safely at the bottom and received willing help from a group of small boys to park the Sky until a retrieving party arrived.

17th February was a good day for thermal conditions and three aircraft attained 3,000 feet. The T21 was soared by Ken O'Riley for nearly an hour, his passenger being a new member having his first flight in a glider. Ted Day set off in the Olympia to do his cross-country, but was forced to land near Herne Bay when only five miles short of his Silver C distance. Ken O'Riley on landing set off in the Sky to do a cross-country but after 10 miles found the weather was deteriorating and returned to the field.

With the Prefect out of action for its C. of A. the T21 and T31 are being flown solo. It is hoped that the Prefect will soon be fitted with an enclosed canopy for more advanced pilots.

Appropriately named "Bluebottle" and "Eccles," the two winches have received a considerable amount of servicing recently

by Frank Tilley, and are now giving of their best.

On the social side of Club activities the New Year's Dance held in January, was well attended by approximately 150 dancers. Attendance was helped by running two coaches from London via various points to the Tudor House, Bearsted, and back again. Some 50 members and guests used the coaches. Among the guests we were glad to welcome members of the Surrey and Southdown Clubs. Margaret Crabtree and Dennis Monckton did much in organising the dance and coaches.

On Saturday 27th April, the club will have been formed one year and we are celebrating with a party in the Clubhouse. We shall be glad to see any members of other clubs to help join in our celebrations.

Membership is steadily increasing, but we are still wanting new members. Two summer courses are planned, mainly for non-member *ab initio*s, and it is hoped that experience gained from these will enable us to prepare a more ambitious programme next year.

C.M.

KRONFELD

WITH the start of the Club's second year, we have purchased a 60mm. Sound Projector, partly out of the capital equipment fund, and this was used for the first time on the 30th January and has proved to be an exceptionally good buy. We are most grateful to John Furlong, who in the past has brought his equipment along for the use of the Club.

The Library continues to expand and we now have about sixty books, and as the cabinet has been completed books can now be borrowed at the rate of a penny a week on Wednesday evenings from Gaynor Rees.

The Instructors' meeting of the B.G.A. was held at the Club on the 16th March, as also happened last year, and we hope this will become a regular occurrence.

A most successful Fancy Dress Party was held on the 15th February, the theme being song titles. The two main prizes were won by Margaret Lowe as "Sheik, Rattle and Roll", and David Scallon as "Oh, What a Beautiful Morning".

Members are reminded that as members of the Club they can play tennis in Eccleston Square, and if they want further details they should contact the Secretary.

Finally, all subscriptions became due on the 1st January, and members are asked to

renew as soon as possible. Cheques should be made payable to "The Kronfeld Club Ltd." and sent to the Treasurer, The Kronfeld Club, Basement 74 Eccleston Square, S.W.1.

LASHAM

THE old year left us just short of our aim of 21,000 launches, this being due entirely to poor weather conditions during the summer and autumn. The New Year brought forth our Perkins-engined Diesel Jeep, which should considerably increase our launches per gallon. Thanks are due to the M.T. Committee for this gain in economy and efficiency.

During January and February we were restricted to launching and landing almost always on the runways, as the grass has been waterlogged, thus preventing the hoped-for increase in winch-launching. Our first cross-country flight in 1957 was made along the North Downs from Petersfield to Steyning by D. Darbishire, but was unfortunately cut short by change of wind direction plus low cloud.

An expedition to Inkpen was made on 20th February, when seven hardy course members had each about half an hour's flying in a T21B. Launching was by motor-tow from the top, but after 4½ hours' flying the wind dropped and all aircraft sank peacefully to the bottom.

Up to the time of writing we have completed over 1,500 launches this year, with quite an appreciable amount of thermal soaring, the best flight being 56 minutes on 16th February. The latest group to be embodied in the congeries of Clubs and syndicates at Lasham is the Glider Experimental Group No. 1.

The Chinese Canoe Club's annual dinner was held on 8th February, when Alan Cronin, one of our hard-working instructors, was guest of the evening prior to his joining the recent flow of gliding types to Canada. We wish to express appreciation of his efforts and the best of luck in the future.

We are again this year running gliding instruction courses for instructors from other clubs. These courses, which are becoming increasingly popular, have given the C.F.I., Derek Piggott, the opportunity to put into practice an idea he has had for some time for improving instructional methods. All the important briefing which an instructor must give to a pupil is tape recorded, and can be played back as many times as necessary. Tape recordings have also been made on other aspects of gliding, such as hill soaring, thermal soaring and cloud flying, and a library of gliding lectures is thus being built up.

Regardless of a certain "eastern gentleman's" actions, our activities so far have not been curtailed, and a full programme of flying for members and *ab-initio* training has been planned. At the end of July the National Championships will be held at Lasham, probably employing winching and motor-towing for launching.

D.G.G.

LONDON

THE New Year started well with excellent westerly winds every weekend, so that in spite of petrol rationing, which limited the number of members who might have visited the Club, our total hours for January were 170 for 370 launches. Although on several days the wind was too



"The Three Bills", Bill Wills, Bill Gotch and Bill Longley, performed at the Lasham Christmas Party, and won much applause. (Lack of space caused this photo to be held over from the February issue.)

turbulent to allow training flights both Westhorpe and Parrett got their C certificates.

By mid-February Angela Moss and F. A. Cooper had gained their C Certificates.

17th February was our first real thermal soaring day with Geoffrey Stephenson getting the best altitude with 3,000 ft., while several others exceeded 2,000 ft. Thermals were for the most part smooth and plentiful though weak.

Ray Stafford Allen and his staff have increased the workshop to twice its previous size, so now there is plenty of room to take on C. of A. work for privately owned machines. Most of the Club machines have been through their C. of A. and are ready for what we hope will be a record season.

Emigration is much in the air these days; three more of our members are leaving us to cross the Atlantic. Bill Noon is taking his family to the U.S.A.; George Scarborough and Bill Dunne are going to Canada. George, who is leaving in March, may be seen every weekend building up the maximum flying time possible before his departure. We are sorry to see these useful members leaving us, but wish them every success in the New World.

A.F.W.

MIDLAND

As regards the weather, 1957 has started well for us. We have done 130 hours from 192 launches, with a large expenditure of energy on the bungy rope—which has helped our petrol situation.

The turn out of club members at weekends has been much better than we dared hope when the crisis developed in November, even though people coming by train are faced with a 5-mile walk to complete their journey.

January was outstanding for its "Waves"—not in spectacular heights gained, but for quantity—we literally had them on every flying day. It is very possible that this is the normal state of affairs for us in west winds and has only become more obvious since the Skylarks came along. This aircraft's much extended "operational range", compared to other types flying from the site, probably provides the answer.

At the time of writing February has proved entirely unseasonable with its west winds and sun instead of the usual northerly's and snow. On the 10th for

instance, thermals were quite strong under summer-like cumulus, with small waves thrown in for good measure.

The Club fleet for the coming year will be the same as last year, i.e. Skylark II, two Olympias, two Prefects, two 2-seaters with a Tutor in reserve. We hope to add a third Olympia towards the end of this year or the beginning of 1958. This addition will complete a well balanced operational fleet except for the very great need of a high-performance 2-seater for advanced training, the prospect of which seems to get very little nearer.

On the ground our launching facilities have taken a bound forward with the great success of the Snipe-Roder winch, which quite apart from its launching efficiency, is also proving very economical in fuel.

Several entries have been received for the Easter Rally 19th-23rd April, and it is hoped that more pilots will be able to come over now that petrol is available for retrieving.

J.H.

NEWCASTLE

VOLTAIRE said that England had no climate, only weather! In December we did 131 launches in seven flying days, and in January only 86 launches, also in seven flying days. Advantage has, however, been taken of the bad weather to give the winch a new coat of paint, and to remove it from its axle onto a Bedford lorry chassis.

Notwithstanding weather, our 1956 figures show an increase. Number of launches 3,055; flying days 116; flying time 305 hours; Certificates gained 31.

The Tutor belonging to Eric Vissenga and Hetty White has been painted black with yellow wings. The Olympia is being re-sprayed red with yellow wing tips and tail.

Can anyone tell me anything about a house called "The Gliderdrome" in Sutton, Surrey? It is now a local office of the Ministry of Pensions and National Insurance, but surely its former owner must have been a keen gliding type!

L.A.C.

NORTHAMPTON

AN intensive drive for new members was made during the Winter, and as a result the membership now stands at 62. Our new two-drum winch is nearing completion, and

with the approach of drier weather we hope to make up for time lost during the past few weeks. Thanks are due to T. Phillips, D. Walker and T. Walker for their sterling efforts over the winch.

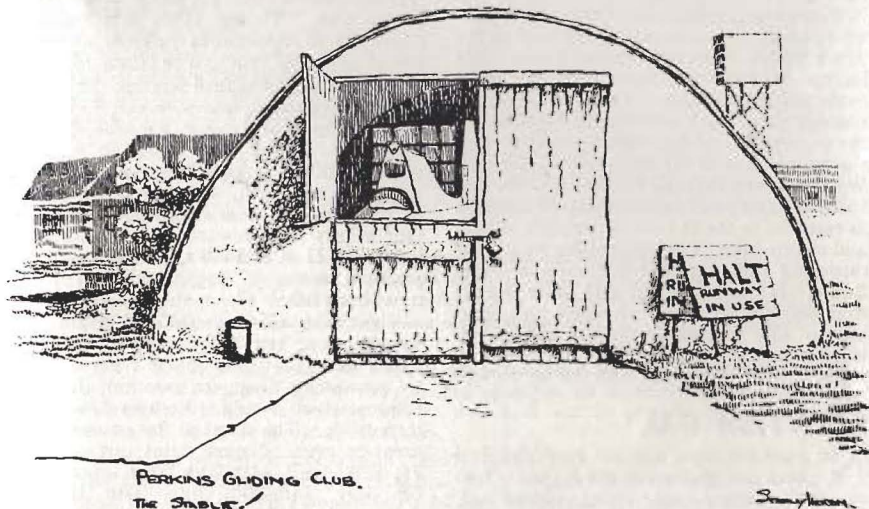
Internal alterations to the Club-house are proceeding under the watchful eye of Mr. A. Wilson, A.R.I.B.A., and include the installation of a Bar. The vigour with which members are co-operating seems to suggest an ulterior motive. Further improvements include a kitchen, installation of electricity and provision for a future central heating system. The workshop is also being re-arranged to provide more space for repairs and storage.

A.G.C.

soaring flight of the year. On the 17th February Chris Hurst took the same machine up to 2,400 ft. and remained air-borne for half an hour, whilst Alan Mann and John Ellis soared the Olympia. John Smoker narrowly missed qualifying for his C certificate in the Club G.B.

The white G.B.'s trailer is at last taking shape and may well have completed taxiing trails by the time these notes are published.

Like everyone else in the gliding fraternity we are hoping that we shall soon see the end of petrol rationing. If this restriction is removed we feel that we have greater opportunities at Weston to expand our activities and increase our launching rate



At Peterborough the Perkins Gliding Club used this "stable" as a hangar, but they now have more suitable quarters.

OXFORD

THE first two months of 1957 at Weston ended on a more cheerful note despite the prodigious weight of water deposited on the 'drome, coupled with some decidedly gusty weekends. On 3rd February, Anita Schmidt managed to keep the white G.B. up for eighteen minutes, this being the first

compared with those of the previous years when we were based at Kidlington.

D.W.H.R.

PERKINS

THE pre-Christmas period saw the arrival of our new T21B, a new cable, and a move from our old stable to a fenced-off

portion of a large well-lighted hangar. The new hangar space gives us another hour of morning flying, and cuts out that horrid toil of derigging in the dark.

The 2-seater is a delight. After the first trial flights we put away from us for ever the windy balancings, and the ancient ritual of ground-slides, and were given what our Instructors log, we think somewhat disdainfully, as "Air Experience." Our Instructors are John Hulme and Gordon Cornell, both of Cambridge. Both are experts in the art of putting the tyro at ease, and, later in his training, in bringing him down to earth in more than one way.

The new cable was an experiment. We launch from runways with a Wild Winch V8 with a single 14 in. dia. drum and a paying-on device; and for economy we bought a reel of solid cable. Light-heartedly we laid half of it out and wound it on to the winch drum, thinking little of kinks. We learned the hard way that a kink in a solid cable means a break. We profited from reading in the back numbers of "Sailplane" the experiences of the Newcastle Club, and started again with the other half of the reel. We know now that the first hour of the day spent in laying out and re-tying all knots is as essential as the D.I. of the aircraft, winch, and motor-bike. The motor-bike we use for retrieving cable—an old 600 c.c. side valve B.S.A.—is much speedier and more flexible than any car or truck. A weak link, of a loop of thin wire and a piece of soft wood, is an assurance against the rider involuntarily leaving the bike, and cable, behind him. P.H.

SCOTTISH G.U.

No final decision has yet been reached about a new site for the S.G.U. Two at the moment are being considered, Portmoak, one mile South of Bishop Hill, a good position apart from difficulties about rent; and a very large moor in the Fintry Hills near Stirling. The latter would require some expensive development, but the rent would be low. Portmoak offers hill soaring in any wind direction between north and south-west. The Fintry Hill site has the disadvantage that the nearest slope (1000' -west-facing) is barely within circuit distance for the better machines, and out of the question for Cadets and Tutors. On the other hand, the area is very good for thermals, and waves have also been found over the site. Discussion and negotiation

continue, and in the meantime we press on blissfully at Balado.

Bill Lawson performed the Club's first-ever winter cross-country on 4th November, when, after a climb to 12,500 ft. in wave, he glided 49 miles, mostly above cloud, to complete his Silver C. En route he flew through another wave system in the lee of the Pentlands, but could not use it because of the gathering gloom. Those who went to collect him experienced all the miseries of winter retrieving, and after many strange adventures, eventually found him at 11 p.m., established in great comfort in a farm house.

On the same day Bill Adamson reached 9,000 ft., and the previous week Jimmy Rae climbed to 11,200 ft. All these climbs were from aero-tows. Several shorter flights have been made recently from motor-tows, but it seems that on days when the wave is operating to worthwhile heights, an aero-tow is generally required to contact it.

Despite some frightful weather during, or rather throughout, the summer, 1956 was another successful year for the S.G.U. Though launches were down to 4,149—nearly 1,000 less than last year's record total—we managed, with 345 hours flown, to beat our last year's total by six hours. Our efforts were rewarded by the accumulation of 23 A's, 24 B's, six C's and 11 assorted Silver C legs, including three completed Silver C's.

The 1956 courses suffered from the weather, and the T21 canopy once again saved more than one course from disaster by permitting flying to continue in conditions which would otherwise have been impossible. The demand for courses is as great as ever. Course dates this year are 7th-13th April, 14th-20th April, 30th June-6th July, 14th-20th July, 28th July-3rd August, 11th-17th August, 25th-31st August, 8th-14th September.

By previous standards, our Xmas Party this year was a quiet affair, but most enjoyable nonetheless. The pottery was distributed as follows:—The Boyle Altitude Trophy—W. Lawson (12,500 ft.); The Parker Cross-Country Cup—J. Rae (63 miles).

We have learned with deep regret of the death on 31st December of an old member, Alex Fyfe, who for a long time held the Club height record with a climb to 10,100 ft., one of the first wave flights to be made from Balado. D.B.



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WESSEX R.A.F.

WE have not been slow to take advantage of the good weather, and good work has been done by beginners and the older hands. The strong winds at the turn of the year led to several expeditions to Inkpen with three five-hour flights to show for them. (Joe Croshaw, Jim Corrigan and "Topsy" Turner). The cold was enough to make your heart sink but it didn't bring our friends down till the due time.

The membership roll continues to grow but we are coping well, thanks largely to our two cable-retrieving tractors. These tractors have one draw-back, namely the waste of time involved in taking people to the sick bay who have started the machine at the expense of a crack on the head from the starting handle.

We have at last got our T21 back from repair; it is welcomed by all and not least by "Tiny" Lawson, whose relationship to the front seat in the T31 is the proverbial one of the quart to the pint pot.

F.W.A.

WEST AFRICA

AS mentioned in the October 1956 issue, the Accra Gliding Club was formed last August. The financial situation was investigated—several times over—and the painful conclusion reached that people who give away or lend money don't glide. September and October were frittered away in discovering this, and then November and half of December were used to persuade, without actually resorting to blackmail, thirty founder members to involve themselves in the Club to the extent of £30 each (£5 entrance, £5 annual subscription and £20 loan in the form of advance flying fees).

The result is we now have an almost new T31b on the way, and only the problem of providing a tow car and hangar out of £150 remains . . . The use of the launching site has been obtained at the expense of a mere two bottles of gin (presented to the local Chief who controls the area). A few bushes will have to be cleared from the site and numerous small ant-hills levelled, but otherwise the expenses in this connection should be small.

In the next issue we hope to report that somebody in the Accra Gliding Club has actually flown.

P.G.B.

YORKSHIRE

THE South-Westerlies in January and February were put to good use at Sutton Bank, and Henry was kept very busy with the two-seater, despite the petrol shortage. The Kite and the Tutors were also flying at most week-ends.

We are going ahead with holiday courses, and the dates are fixed as follows: 30th June-6th July, 14th July-20th July, 28th July-3rd August, 11th August-17th August, 25th August-31st August, 8th September-14th September. We are more than grateful to Ron Hellewell and Pam Wright, who have volunteered to be Course Secretaries, and congratulate them on their recent engagement. For bookings apply to Ron Hellewell, National House, 36 St. Annes Street, Manchester. We all need winch drivers—reward 10/- per day and keep.

Flying at Sherburn-in-Elmet is going well. The T21B, the Cadet and one Tutor are there and kept busy every week-end. The Cadet and Tutor have both been fitted with windscreens, and look quite smart. Saturday afternoons have been reserved for "Invitation Flying", three or four pupils only being flown for several circuits in the hope of getting them off solo more quickly. Albert Pritchard has already gone solo under this scheme, and by the time these notes appear four or five more should be solo and leave the T21B clear for the next batch of *ab-initios*.

Dick Evans, a power pilot of some experience, went solo a few weeks ago in short order and has now taken up winch driving. In this he is aided by Harry Sowden, thus relieving the load on the writer and enabling him to fly now!

E.H.

The C. of A.

Our Glider is a loathsome thing—That's
Wot!

Paint pot!

Tool Kit!

The lot

They make us spit!

And yet, don't think, Nit-Wit

Our Glider is no fun!

No fun! Our Glider! Hey, now wait a bit!

After the C. of A.

Farewell workshop and back to play!

E.A.L.

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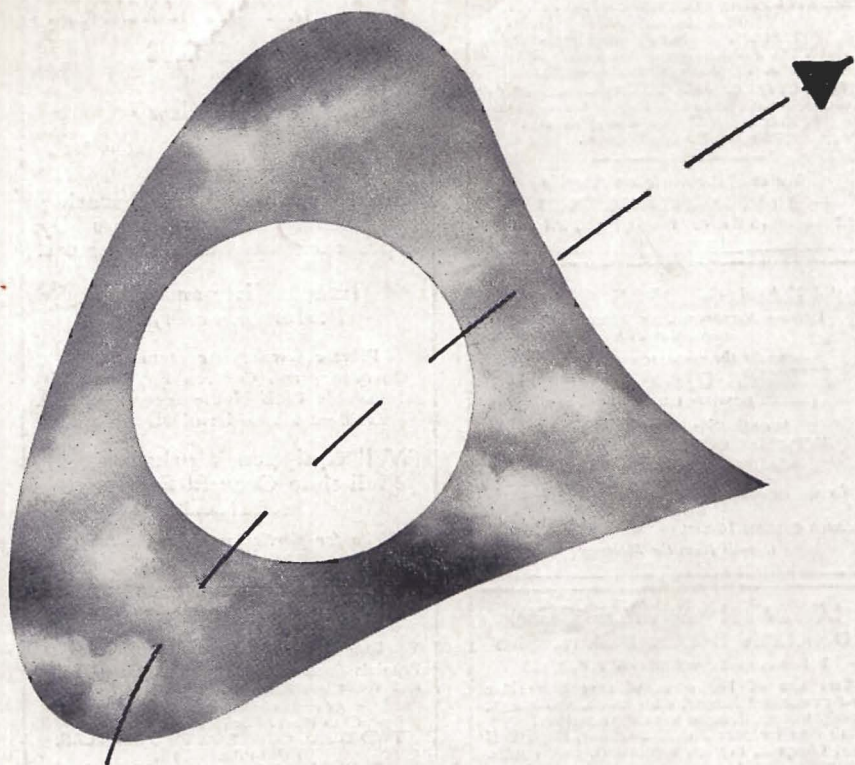
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