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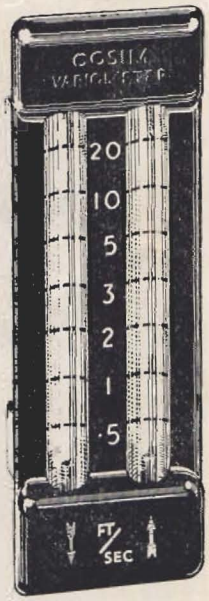
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THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

APRIL 1949 ★ Vol XVII No 4

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COVER PHOTO:
Jock Forbes in "Horten IV" at Oerlinghausen. Photo by Dr. Walter Horten. Camera unknown.

EDITORIAL

AS reported on another page, the Annual General Meeting of the British Gliding Association was sparsely attended, about one fourth of the Clubs were represented, and some of those by proxies. In the election for the Council, Charles Wingfield stated that he did not offer himself for re-election, and his Club—the Midland—had not nominated anyone else. They felt that someone who lives nearer ought to do the jobs that have to be done by a governing body. In so doing he put his finger on the fatal weakness of the B.G.A., which is an Association of Clubs, and which exists because of the charity of the Royal Aero Club, of whose members less than 2½ per cent are interested in gliding. A year ago it faced liquidation and was saved by the Royal Aero Club, who also put up £500 towards the International Team expenses. Nor must it be forgotten that the Society of British Aero Constructors also found £400 and De Havillands £100. As a whole the Movement did very little for its team, most of whom contributed their own expenses, if not all.

If the Association were an Association of individuals, not only would this provide more money, but there would be a wider choice of people to do the many jobs which have to be done, the whole affair would be more democratic, and more alert to the needs of the Movement If Gliding is to go ahead as some of us wish it to do, the B.G.A. will have to be more dynamic, less snobbish, and less under the control of a few people. It may well be that the few have no option in the matter. The Constitution lays down a certain form of organization and certain rules of procedure. The few who are elected to fill these posts find there are not enough bodies for the jobs. Consequently, as our next issue will show, some of the Committees have only met twice in the year, and this no doubt with the best of intentions.

We beg no pardons therefore for returning to this subject again, and we warn anyone interested, that we shall continue to do so until the situation is altered and a representative body more in keeping with the aims of the Movement and more worthy of it, is elected to do the job the B.G.A. is falling down on.

In our view, it was a bad thing that the Royal Aero Club stepped in a year ago to save the B.G.A., and we hope they will refuse to do so next time. A fresh start would be a good thing for all concerned and we hope it will not be long before the Movement insists on it.

Someone remarked at the Meeting that the B.G.A. ought to "stick its chin out at the M.C.A. and the A.R.B." though less at the latter which is after all beneficently inclined and is bound by the M.C.A. It is true that the M.C.A. were persuaded to withdraw their proposed regulations for Gliding, but with all respect to the negotiating Committee, it was not until the M.C.A. had been made aware in no uncertain fashion, that it would be forcing itself on an unwilling body and by so doing creating more harm than good in the very things it wished to avoid, that it saw the unwisdom of its proposals and they were withdrawn. This is the independent spirit we wish to encourage, and one which is the very essence of Gliding and Soaring. If Sailflyers were not the type of people they are, they would go in their hundreds of thousands to Saturday football matches, shepherded like foolish sheep with the difference that sheep don't have to pay for their fun. It is this sort of psychology that the Totalitarian State wishes to encourage, because people in the mass are so much easier to manage and control. Even their thinking can be controlled if you got the right way about it. Thank Heaven they can't control the wind or the sea. If they could all that is best in the Human Race would disappear in a generation. But whilst there is something to conquer by the application of the individual spirit and will, humanity will progress, possibly more in material than in moral control, although in the long run, even though it should mean the devastation of the earth, moral values will prevail and endure. As The Man Who Won The War remarked at Boston, you cannot subdue Mankinds Love of and Aspiration to Freedom. Like Nature, it always will out no matter how the tyrants may try to kill it. Some very unpretty things are happening in the world in the name of England to-day, but if England and all her sons do rest but true to her, we shall regain so much of our Freedom as we have lost, and still show the world that men and women of spirit cannot be defeated nor their name taken in vain.

In the last war the British Gliding Movement played a great part in the development of our Gliderborne Forces. It is now very clear that the next war will be one in which whole armies will go by glider, and even the biggest tanks and transport be similarly carried. The Russians are making great preparations in this direction. In view of this fact, we shall shortly be requiring again a vast number of Glider Pilots, whether we use them in war or not. Let our overseas friends use this argument therefore when the powers that be ask why gliding should be encouraged.

13,500 FEET IN THE LONG MYND STANDING WAVE

16.3.49

THAT something good in the nature of a standing wave was taking place over the Mynd was evident by the way in which the Cambridge Club "Olympia" slowly disappeared into a cloudless sky, but to me—flying the "2-seater"—there was no thought of doing likewise for the wind was going round to the north and freshening and we were hard put to reach the landing ground. However, an hour and a half later the wind had dropped to about 25 m.p.h., although still very north on the hill, and conditions were thought just about soarable for the "Olympia." I was accordingly "Bunjied" off at 15.50 hours and for 40 minutes worked hard in poor hill lift over the Gully south of the Club House at heights varying between 300 and 700 feet, and had almost decided to come in when I struck the characteristic smooth lift of 3-5 feet per second, while north of the hamlet of Myndtown at 1,000 feet (N.B. All height figures quoted, unless otherwise stated, are above the launching point which is 1,500 feet above sea level).

Yes, all the symptoms were definitely there and by keeping "Olympia" flying up wind at an I.A.S of 40 m.p.h., just sufficient to maintain our position in relation to the ground, the hunt was on. Soon 3,500 feet were on the altimeter, and, flying on a course which kept the Club House to starboard, the prospect of going considerably higher than I had done previously seemed more than a possibility. At between 4/5,000 feet I began to take notice of a ridge of cloud about 4 miles to windward and above me, into which it seemed inevitable that I should fly and, while testing the turn and bank indicator and checking my compass course (330 degrees approx.), I wondered what I should actually do when the moment arrived and tried to estimate the thickness of the roll and my chances of flying through it without getting lost or into other difficulties. I have had no power experience and any previous contacts with cloud have only been of comparatively brief duration.

It was then, I think, with 6,000 feet on the clock, that I began to appreciate the wonder of what I was experiencing. The aircraft whispered upwards into a clear sky at a steady 3-5 f.p.s. in apparent immobility, the pitot head remaining stationary on the horizon and beyond a slight backwards pressure on the stick between two fingers which I could have trimmed out but preferred to feel, absolutely no movement of the controls was necessary. What then appeared even more amazing and to me eminently satisfactory was the fact that the bank of cloud ahead, which I had viewed with so much distrust, did not seem to be getting any nearer, and as the Club House was still in the same position to starboard, the nature of the standing wave was revealed to me.

Soon at 7,000 feet the whole dazzling layer of stratus cloud was below us and appeared unbroken to the east with occasional cumulus poking through. Visibility to the west was poor in haze and glare from the setting sun on the cockpit cover made me very glad I was flying on a northerly course. All this time I was just south of the village of Wentnor and it did not seem to matter where I flew between there and the soaring ridge which was at all times clearly visible. In fact, throughout the climb I could always see Church Stretton and the ground below me, and no matter how the cloud configuration changed this area of clear air remained in the same position, growing apparently smaller as I rose higher—a most interesting and instructive phenomena.

In this way I had no navigational worries but on two or possibly three occasions I did find lift decreasing from the customary 3-5 f.p.s. and noticed that I had progressed slightly northwards or a mile up wind, certainly no further than Pole Cottage. A couple of circles then brought me back level with the Club House and the lift conditions were restored. By this time, 17.15 hours approx. 9,000 feet were on and any regrets that I may have had at not having a Baragraph aboard were quickly dispelled by the thought that those belonging to the Club only registered up to 8,000 feet and nobody would really believe anything higher than that anyway!

At 10,000 feet above the Mynd, i.e. 11,500 feet above sea level, the sun set behind a bank of clouds to the west and I made a resolution that I would go on until 17.30 hours as I had no idea how long would be required to get down, and it seemed to be getting dark down there. I could, of course, have gone away earlier with a good chance to complete the 3rd leg of my Silver "C" badge, but the lateness of the hour—the fact that there was a Camp on—shortage of retrieving petrol—and having not said anything to the ground staff about this possibility made me feel that I should get more marks by returning to the Club House, and my course of action was tempered by these considerations, and I have no regrets, apart that is from the Barograph.

So in steady and perfectly uneventful lift we climbed on until 17.30 hours and 12,000 feet appeared on their respective dials at much the same time when, with brakes out to hasten our return, I called it a day. The view of the Mynd was fantastic in that it appeared as flat as the surrounding country; in fact one was much more conscious of its shadow sprawling like a snake to the east than of the hill itself, while the Club House pinpointed itself in the setting sun below the stratus, for all the world as though a white pebble at the bottom of a deep pool.

Beyond breathing more deeply and occasionally feeling, perhaps due to the extremely smooth ride and the subdued hum of the aircraft, that I was having gas at the dentists, I was not unduly troubled by the lack of oxygen, but I can well imagine that things might have been different at this height if conditions had been rougher and more mental concentration called for.

It did not take as long to get down as I had imagined and it was great fun to see thousands of feet being reeled off backwards. At 3,000 feet I was over the Stiperstones, 5 miles to the north west of the Club House leaving more than enough height for the return flight and a landing at 17.45 hours.

The Cambridge boys received my story with more credence than I expected until they informed me that their pilot had reached 9,500 feet in the same wave an hour or two previously and had then gone on to Newbury, 100 miles away. GOOD SHOW.

R. L. NEILL,
Midland Gliding Club.
23.3.49.

REPORT OF B.G.A. ANNUAL GENERAL MEETING

HELD at Londonderry House on Friday, March 25th at 6 p.m. A sparsely attended meeting of the above was largely formal (the Chairman's report was taken as read as was the Budget). Philip Wills, C.B.E., was elected Chairman in place of Dudley Hiscox, who did not offer himself for re-election. S/L. F. Furlong was proposed but not seconded for Chairman. C. Wingfield retired from the Council because it was too far, too expensive and too much bother, and there was no nomination to represent the Midland Club. A resolution that the Club subscription to the B.G.A. be 15 gns. for full members and £7. 10s. 0d. for associate members was carried by 5 votes to 2 from the full members (whose votes alone counted) and 3 to 2 from the associates (Old rate £2 for full members and £5 for associates).

The London Club also proposed that in view of the dependence of Gliding on new members the B.G.A. should originate publicity was carried, after Col. Preston had reminded the meeting that its tiny staff of 3 was overworked already (and under paid) and that the Association could not afford to pay any more nor engage in fancy experiments. The meeting agreed to leave the matter to the Council who will no doubt appoint a sub-committee.

Addition to Chairman's Report made to the B.G.A. Annual General Meeting on Friday, March 25th, 1949 :—

" Before asking you to give my report your approval I would like to state that since it was made I have been given details of the very considerable assistance by the Kemsley Flying Trust to gliding by way of loans to member Clubs at low rates of interest. My information is that loans totalling £6,550 have been granted to six Clubs and that twelve other Gliding Clubs have applications for loans in negotiation estimated to total £13,500, and in addition that loans to five other Clubs totalling £4,550 have been approved in principle.

" This substantial financial help is in addition to the £100 given to the International Competitions Fund and the 100 guineas Prize Money for winter cross country flights previously referred to. It has been such a substantial factor in the re-establishment of the Clubs concerned that I feel sure you will wish the facts to be known and recorded in the annual report.

" In submitting the report to you for approval therefore I suggested there be added an acknowledgment of this financial help given to member Clubs by the Lord Kemsley Aviation Trust Fund."

"WEATHER FORECASTING"

by Instructor Commander S. W. PACK, R.N. Longmans, Green & Co., 25 shillings.

THE soaring pilot who really means to make a serious effort to learn something about the theory of the weather in which he disports himself will find this book very good for the purpose. Without going as far as to say that it completely fills our rather specialised and long standing need, I think that it is the best book of its kind available.

Its virtues lie not only in its lucid and sensible presentation of the subject matter, such as only a writer who has been trying for some years to teach this matter can produce, but in the profusion of original and most helpful diagrams, born, no doubt, on the blackboard, which, together with the photographs and other excellent reproductions, make it by far the best illustrated manual on the weather. Let not the gliding public be deceived by the title: this book on weather forecasting will tell him all he needs to know about the nature of the elements which concur to make the weather; and the fact that it is written from the forecasting angle is a happy one, as our need to understand the forecaster and his ways, is at least as great as that for an understanding of the phenomena whose unfolding it is his duty to follow and interpret.

The serious student of this book will therefore gain a useful insight of forecasting methods now in common use, and of the direction of the further development of the technique no longer cramped by a scarcity of weather reports. He will also learn all ne needs to know about the weather elements and the causes and effects of vertical motion of air. The book is well up to date in matters which have only recently found their place in routine forecasting technique, often as a result of the war effort. The chapter on icing is not, I fear, very up to date: but the temptation for the author of a scientific manual to accept and propagate what has been said with considerable authority by others is very great, even though proof is lacking. It is in this way that hypothesis manage to squat in the house of confirmed theory.

" Weather Forecasting " should be found in the libraries of gliding clubs and in the hands of sailplane owners. I recommend it to those people who do not intend that their discussions about the soaring weather should for ever remain interminable and sterile.

JACQUES COCHEMÉ.

PUBLICITY

WHILST the B.G.A. were pontificating about Publicity at the Annual General Meeting in London, others were doing something about it. Andrew Thorburn of the Scottish Club broadcast in the Home Service at 7.20 on March 30th about Gliding in general and Scottish Gliding in particular. He made several good points, especially the one about an hour's Gliding costing about half the average youth's weekly expenditure on cigarettes.

On April 19th at 6.30 p.m. in the Home Service, Terence Horsley is broadcasting about Gliding. All gliding fans will listen—but it's the others we want.

SUMMARY OF XMAS 1948-49 TOUR

OF THE SYDNEY SOARING CLUB WITH SLINGSBY "GULL," CAR WITH GULL TRAILER, AND TIGER MOTH

ALL launches were made by aero-tow; only one "Gull" flight ended in a field unsuitable for towing off with the "Moth"; when the "Gull" was taken by aero-tow from the field in which it had landed to another field or aerodrome for its next free flight, this proceeding was due to consideration of wind direction and geography.

1948.

Dec. 24 "Gull" taken in trailer from Sydney to PARKES.

" 25 Martin Warner out and return PARKES—YARRABANDAI, 39 miles each way (Australian record) climbed 7,000 feet above release. Duration 5 hours 3 minutes.

" 26 S. Owen, PARKES to YOUNG, 81 miles.

" 27 After aero-tow to TEMORA flight thence by L. Schultz to JUNEE, about 30 miles. "Gull" then aero-towed to NARRANDERA.

" 28 K. Colyer, NARRANDERA to WALBUNDRIE, 71 miles.

" 29 "Gull" aero-towed to JERILDERIE.

" 30 F. Hoinville, JERILDERIE to HILLSTON, 128 miles.

" 31 M. Warner, 22 miles.

1949.

Jan. 1 S. Owen, HILLSTON to near PARKES, 140 miles.

" 2 K. Colyer, PARKES to near GULARGAMBONE, 126 miles.

" 4 After aero-tow to NARROMINE, an out and return flight by L. Schultz, was made NARROMINE—TRANGIE, 23 miles each way.

Jan. 5 F. Hoinville, NARROMINE to near GULARGAMBONE, 67 miles. "Gull" then aero-towed to near NARROMINE.

" 6 M. Warner from near NARROMINE to TOORAWEENA, 57 miles. "Gull" then aero-towed to NARROMINE.

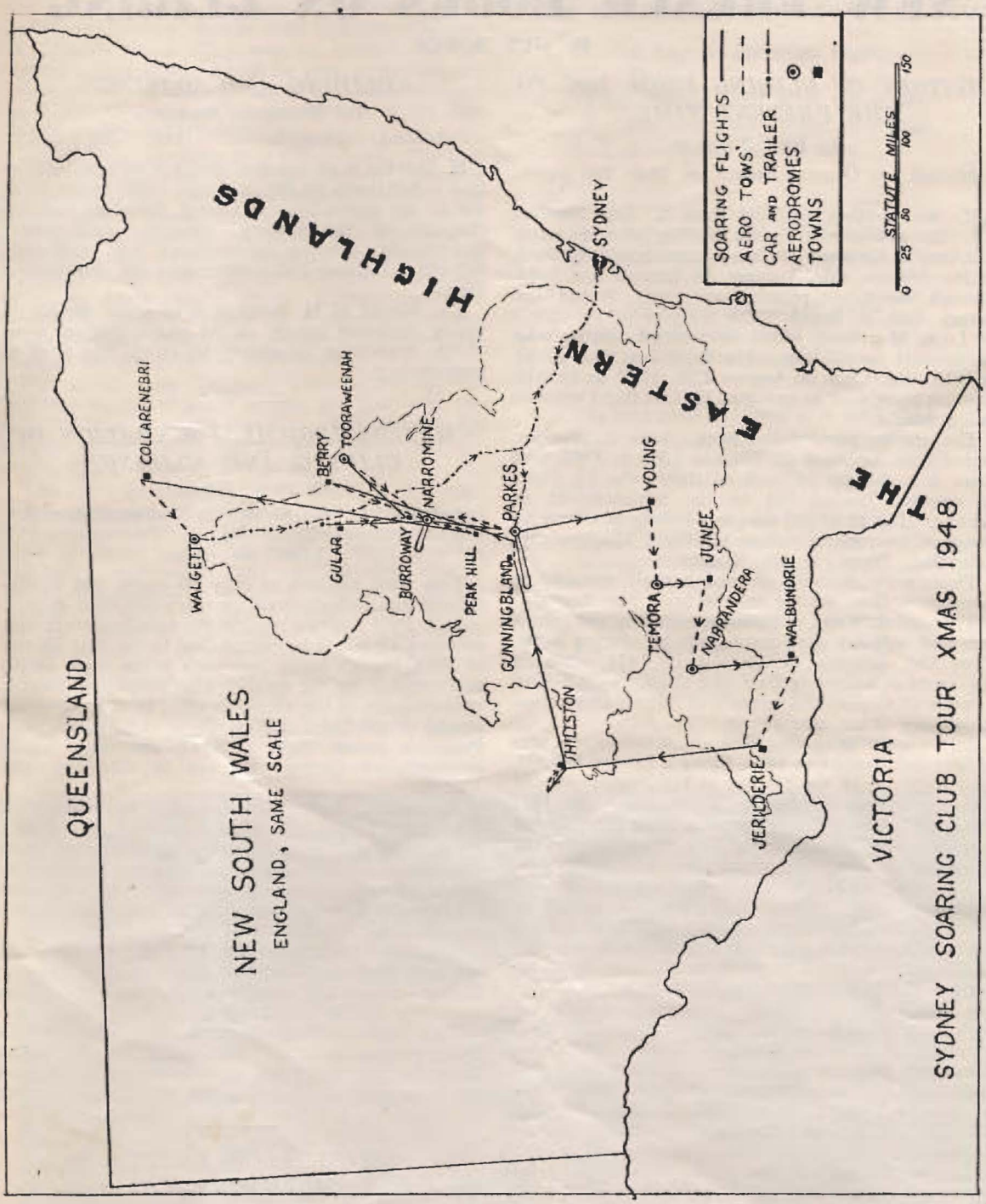
" 7 G. A. M. Heydon, NARROMINE to near PARKES, 52 miles. "Gull" then aero-towed to NARROMINE.

" 9 G. A. M. Heydon, 10 miles; climbed 10,700 feet above height of release.

" 11 F. Hoinville, after aero-tow to near PEAK HILL, released and landed near COLLARENEBRI, 221 miles. Australian distance record. Duration 7 hours 15 minutes.

" 12—14. After aero-tow to WALGETT, "Gull" was packed in trailer and taken back to CAMDEN (near Sydney) and the trip ended.

"For Hoinville's flight of 11th January it was decided to aero-tow some miles south from Narromine in order to get room for a long flight north before reaching too sparsely inhabited country. I was the tug pilot and I took Hoinville to 6,300 feet near the level at which cumulus clouds showed signs of forming; he released at this height a couple of miles north of Peak Hill and flew to four miles north of Collarenebri, a distance of at least 221 miles. He would thereby have earned the first Australian Gold "C" but for the fact that besides the rule that height of release must not be more than 1 per cent of the distance (which we both knew) there is another rule (which I had inexcusably for-



gotten) that aero-tow releases must be below 1,500 metres (for Silver and Gold distance flights).

"The exact distance of this flight is being further investigated. The British Empire record of Wingfield is 216 miles; to beat this (with a margin of ten kilometres) needs a flight of more than 222.2 miles."

NEW FRENCH BOOKS ON GLIDING

By GUY BORGÉ

"*HISTORY OF GLIDING FROM 1506 TO THE PRESENT TIME.*"

By ERIC NESSLER.

Published Les Oeuvres Francaises, 1949, 280 pages.

NO one is more qualified than M. Eric Nessler, the well-known French Gliding pilot, to write a history of Gliding. He has always been interested in the historic side, because he himself has lived through the recent principal episodes. It was at a lecture that he heard "The Empire of the Air" by Louis Mouillard, which determined him to take an interest in Gliding. He built his first glider in 1915, and it was on August 27th, 1922, as he tells us in his book, that he executed his first flight without losing height.

The greater part of the book traces the historic period from Leonard da Vinci in 1506 to 1923, and there is a chapter on each of those who by flight or research contributed to the advancement of Gliding. The principal chapters belong of course to the great forerunners such as Mouillard, Montgomery, Lilienthal, Weiss, Orville Wright.

These early students showed a truly remarkable prescience, thus we see in the book the drawings of Leonard da Vinci in 1490, representing the spirals executed without wing movement by soaring birds. Then the sketches of Penaud in 1871, showing the course of ascending air over a slope, waves behind a series of slopes, and hence the thermo-convection circulation of air near clouds.

So we learn from this book about the experiences of Sergeant Grasset in 1914, flying a Dorion aircraft, used the slope on the plateau of Villacoublay, whilst reducing the motor revs. to a minimum. In 1914 the same Sergeant Grasset made a flight from Buc to Issy les Moulineaux in a Voisin airplane using ascending currents under cumulus.

According to M. Nessler it was a power aircraft piloted by Lt. Bulgare Milkov which made the first flight in a standing wave over the Votisa chain.

There is a photograph taken in 1932, showing M. Thoret teaching a pupil to use the revolving up-current along the slope of the Third Sector of Challes Les Eaux.

From this book we see how the period 1922-23 was the most fertile in Meetings. The author devotes a chapter to each of these—the Wasserkuppe in 1920/21/22; Combergrasse (1922) in which M. Nessler took part; Itford (1922); Biskra (1923); Vauville (1923); and the meeting at Feodosia in Russia.

The second part of the book, from 1924 to the present, is much less detailed, because M. Nessler believes that the greatest progress in Gliding and Soaring was made before that date.

This is a most remarkable book. It fills a gap, because no one in France has so far written the History of Gliding. But M. Nessler has done it with talent.

"*GLIDING AND SOARING*"

By RAYMOND SIRRETTA.

Published, Dlammarion. 1948. 210 pages.

M. Sirretta is an amateur glider pilot who believes that a handbook on his favourite sport would be of use to his comrades. His book therefore includes chapters on the history, records, aerodynamics instruments, piloting meteorology and materials. Schooling, training and maintenance are also touched upon.

The labour of M. Sirretta is of great service to young Sailplane pilots, as its pages contain some of the knowledge necessary to attain the level of performance.

"*METEOROLOGICAL FOUNDATION OF GLIDING AND SOARING.*"

By PROF. GEORGII.

Published by the Service de Documentation et d'Information Technique de l'Aeronautique, 1948. 80 pages.

This work consists of only 80 pages, but it constitutes the bedside book of every sailplane pilot.

In it Prof. Georgii repeats the excellent statement on rising air which he contributed to the 1942 edition of Wolf Hirth's book, but with much more detail, and enriched by the results of his researches and the performances of the recent years. Thus he cites the results of the German Expedition to Libya in 1939, Persson's record flight of 1947, and wave flights accomplished during the war in Germany and Austria.

As always, Prof. Georgii treats successfully of slope lift, thermal flying, and wave flight. It is a joy to read and re-read it since he makes the most difficult aerial phenomenon appear so simple. No mathematical calculations are employed and even pilots without special scientific knowledge can easily understand it.

Excellent photos illustrate the book; the diagrams are well presented and one must congratulate the Editor—who is the French Minister for Air, and the translator is Henry Mangeot.

This book renders the greatest service to Sail-flying pilots who cannot but benefit from the better knowledge of air movements which a reading of the book give, thus resulting in better performances.

"*MANUAL OF SAILPLANE METEOROLOGY.*"

By BESSEMOULIN and VIAUT.

Edited, Blondel la Rougery. 210 pages.

For some years the French Meteorological Service, of which Messrs. Bessemoulin and Viaut are eminent members, have shown much interest in Gliding. An

excellent collaboration, absolutely necessary for each of the parties, began between the Met. Stations and Gliding Centres. But in order that this collaboration should be as efficacious as possible, it was necessary that pilots should be able to explain the sort of weather they wanted, and that the forecasters could give the most exact descriptions of the conditions on which lift could exist.

In this sense the book is of great value. The first part records the elements of temperature, pressure and humidity and meteorological instruments. The second part is devoted to stability and instability and leads the reader to Emagrams and Tephigrams. The third part treats of thermal convection, the formation and evolution of cumulus, illustrated by radio sonde charts of the atmosphere. An interesting practical application is the determination of the base and summit of cumulus, and the acceleration of vertical speed in the cumulus.

The fourth part treats of Thermal Flying, the fifth the action of relief on the air flow, and the sixth Gliding in relief rising air, the seventh the general circulation of the air and fronts, and the eighth flying in before a cold front.

The ninth part is called " Sailflying in France " and is extremely interesting, because it recalls the leading flights in France of recent years, and explains them by the aid of met. charts of the days on which the flights took place. No one has done this in France before, and it makes it possible to foresee the days on which one might expect certain performances, related to the type ot weather on which similar performances were previously achieved.

Some knowledge of mathematics and physics is indispensable to the reader of this book, but then this knowledge is also necessary to the proper liaison between Gliding and Meteorology.

THE BROKEN-DOWN TOWING CAR

(A Saga of Motorless Flight)

THE soaring wind is on the slope
And round the hangar gaily sings,
But all we pilots have is hope.

Club members in the bonnet grope,
And hammer on the piston rings
The soaring wind is on the slope.

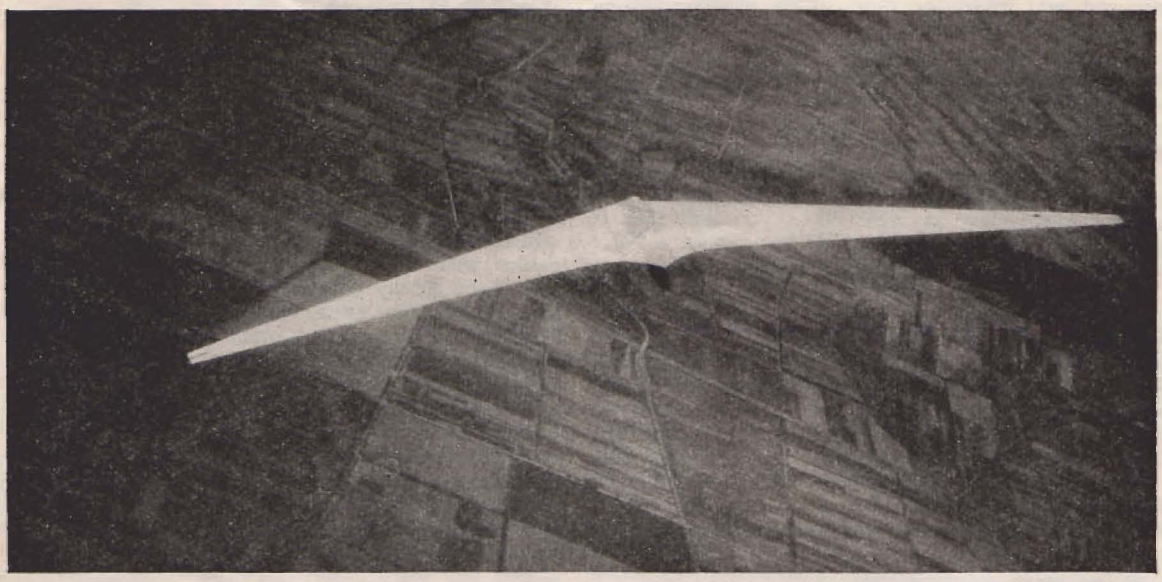
How long shall we sit and mope
Before we feel the lift of wings ?
But all we pilots have is hope.

Oh, give them time and give them dope
And hurry up, you foolish things,
The soaring wind is on the slope.

We push behind and try to cope,
Until exhausted vapour clings,
But all we pilots have is hope.

We hand out towels and lots of soap
And let them scour until it stings.
The soaring wind is on the slope,
But all we pilots have is hope.

MICHAEL ERDMAN.



" Horten IV " flown by Jock Forbes, Gold " C " No. 3 at Oerlinghausen, 1948. *Photo by Dr. Walter Horten.*

WINCH LAUNCHING

By PETER FLETCHER

THE importance of good winch driving is unchallenged at any gliding organization, but it is the exception rather than the rule, to have a surplus of really reliable winch drivers. Next to actual flying, winch driving should take first place, since whilst a bad pilot only scares his instructor and himself, an incompetent winch driver frightens every pilot he launches either by giving him supersonic speed, or by letting him wallow up half stalled.

A few words on this subject may be of help to prospective drivers, but let me here make quite clear the fact that you cannot learn to drive a winch by reading about it, you must have plenty of practice and you should be considered inexperienced until you have done at least 500 launches. To start with you should concentrate on giving really good circuit launches as these are the easiest to give, and then work backwards through high hops to low hops and slides which call for a much higher degree of skill and experience, since during these low hops and airborne slides, you, the winch driver, are actually flying the aircraft by varying the speed, and you must always be ready to help a pupil in difficulties by pulling a little faster or slower as the case may be. As this all requires experience let us take a simple launch first.

On taking over a winch, first see that you have sufficient oil, water and petrol, and if the winch is not fitted with an automatic guillotine to sever the cable, you must have a reliable stand-by man—armed with a good sharp axe, and you should firmly refuse to launch anyone, even a Gold " C ", unless you have an axeman with you.

After these preliminaries you heave yourself into the winch and start up. If the winch has not run before that day you must warm it up well as a cold winch motor fades out at most awkward moments, usually just after you have got the glider into the air and you leave the pilot firmly stalled—feeling as though he is hanging between this world and the next—and unless he is quick to get the stick forward he is forced to curtail his expenditure for quite a while, when, in point of fact, it is your fault. However, let us get on with the launch. When you get the " take up slack " signal, you put out the clutch and " select " (beautiful word) third gear—on most ex-balloon winches this requires two hands and much energy, but at most clubs you will find it quite easy. You then speed up your revs. a little and slip your clutch just enough to start the cable drum rotating. Keep this up until the cable is taut between the glider and the winch. At this point the signaller at the glider end gives " all out," and usually the glider **" nods "** as it starts to roll forward. This is very noticeable if it has a wheel fitted, and at **this** moment—and not before, you build up your revs. smoothly and reasonably fast, at the same time letting in the clutch very slowly so that you get a smooth, firm pull-off with no jerking, or the cable will break.

You now have the glider moving fast in the first third of its climb. As soon as it reaches about 100 feet start reducing speed very slightly, for two reasons, one because the revs. needed to get the glider off and overcome ground friction are too high for a safe launch and, two, because every time the cable drum revolves, it takes on cable and **increases its diameter thus,** although the revolutions remain the same, the speed increases throughout the launch—unless you ease back the throttle, so remember—golden rule number one in winch driving is to bring the throttle very slowly back from about 100 feet glider height until by the time the glider is almost over the winch your motor should be just ticking over. All the way up, you must watch the glider **nothing else.** If the speed is too great the aircraft will " hunt " fore and aft—then the pilot should put the nose down—unless he is a very brave man and not very clever. So when you see this fore and aft pitching, the launch is too fast—just ease down. If, however, the launch is too slow the pilot will rock his wings to signal this. Give him more speed, but a word of warning—**ease** the throttle forward, don't shove it or the glider gets a hefty jerk, which does not make flying any nicer.

Summing up, a circuit launch consists of a smooth take up of cable slack, a rather rapid take-off and then slowly throttling back all the way to the top. The cable **" arc "** is the very best guide to the speed, but you need experience to use it with success, as it varies with the different types of aircraft, and different release hook positions.

As I have said, by the time the glider is almost overhead, your engine is just ticking over, and if the cable is not dropped by then, the stand-by must cut it. It is better to repair a cable by cutting too early, than risk a pilot, who after all, may have that million to one " hang up," and be very inexperienced, and in a bit of a panic—so don't delay cutting. If you have any doubts—**cut.**

A final word about wind and wind-gradient. If the wind is 10 m.p.h. at face level; i.e. about five feet it is at least 18, possibly more, at 1,000 feet. So bear in mind that the glider is climbing up through an increasing airstream. So on windy days, make a special allowance for it otherwise you will be told by pilots that the launch was much too fast on top. If a pilot, trying to get the last 10 feet releases under load, i.e. he kites up at the last moment, and then pulls the release under cable tension, then as soon as the cable is clear of the machine use your brake to stop the drum revolving—or the tangle of cable will take half an hour to unravel. They also break cables with this trick. Pilots who do this often, should be firmly dealt with, because they hold up flying for half an hour, while the tangle is sorted out. It is a good tip at tea, to seek out your victims, and get their comments on your driving. The less they compliment you, the more you will learn. Glider pilots are usually most outspoken toward bad winch drivers, and leave you in no doubts as to your shortcomings. However, don't pay too much attention to inexperienced pilots, because they don't always make the best use of a launch. If, however the fellow who complains is an experienced pilot, then pay rapt attention to his words of wisdom—you will learn a lot. The person who says that he can winch drive after about 10 launches is an absolute menace to any site.

With Acknowledgments to London Gliding Club Gazette.

THE ELEMENTARY GLIDING SCHOOL AND THE SLOPE SOARING CLUB

By a Civilian Instructor-Member

IT is generally appreciated that the attitude of Air Ministry towards Soaring differs somewhat from that of the Slope Soaring Clubs. Whereas the object of Air Ministry in allowing Reserve Command to run and maintain Elementary Gliding Schools is largely to provide pilots for the Royal Air Force of the future and the Instructors capable of teaching them the gliding which forms a part of their initial training, the object of Slope Soaring Clubs is largely to enable men and women to learn to soar at moderate rates and to foster a spirit of competition between the nations.

It is now a policy of Reserve Command, that the Air Training Corps Officer/Civilian Instructors who make up the personnel of the Elementary Gliding School should eventually pass their F.A.I. Silver "C" Tests.

Considering the large, flat aerodromes and consequently the high winch-launches available to most E.G.S., there seems little doubt that, in course of time, the Altitude and Distance Legs of the Silver "C" could be completed at and from E.G.S. sites. It is, however, the Duration Leg which presents a problem, for it requires not a little skill and a fair amount of luck to pass this test on thermals alone in this country and the average Instructor cannot always hope to hold such fortunate qualifications.

That more Instructors are not members of their local Slope Soaring Clubs may well be due to the fact that :—

(a) The initial cost of joining a club, learning to soar and keeping up with payments for "incidents," from some points of view, is high.

(b) Part or all of an Instructor's week-end is absorbed with maintenance of equipment (the E.G.S. usually have no additional Ground Engineers to make the ground work easy) or School Duties, but although this is right and proper and although the week-ends do not, by any means, have the monopoly of winds favourable for Slope Soaring, these are the times when an Instructor is lawfully free from his Gainful Employment.

(c) There seems to be no way, even with the most modern meteorological reporting, of prophesying a wind favourable at one particular site for soaring on any day or week in the future, so that a slope soaring Camp chosen in advance may well turn out to be rather less than a success.

(d) If a stay is made, in bull-dog fashion, at a slope soaring site, on week-days for several weeks in succession, the burden of a double loss may have to be borne—that of loss of pay and holiday time with the family together with the extra cost of flying, billeting, meals and travelling which may often be above the limit of the average pocket.

(e) There is a difference between the type of practical knowledge and experience required for all-weather soaring at a large, flat aerodrome and that required for soaring at a fairly small, often rough, field which may be cramped on one side by a ridge.

Although the Altitude and Distance Legs of the Silver "C" could be completed, if necessary, at the E.G.S., it is probable that with the extra soaring hours available and the possibility of picking the best thermal when thoroughly settled on a flight, the slope soaring site has considerable advantages on the plain thermal site. This would lead to some valuable time-saving on the course to the Silver "C" and might even off-set the extra crash-risk due to congestion and the other difficulties of the slope soaring site.

There are at least four solutions which might solve the problem, apart from the usual method of letting time show the way :—

(1) Air Ministry could be granted leave by the Treasury to subsidise Soaring Clubs in respect of a reduction of costs for Air Training Corps Officer/Civilian Gliding Instructors who are regarded as suitable.

(2) The Government could subsidise Gliding by means of a Capital Grant with, as it were, a bonus for each F.A.I. "A," "B" and "C" Test completed.
This ought to lead to a reduction in fees, or to an improvement in air and/or ground equipment and thus be beneficial to both A.T.C. Officer/Civilian Gliding Instructors and Club Members.

(3) The B.G.A. could sponsor a scheme of Artisan Membership of Soaring Clubs similar to that used by Golf Clubs, with restraint on week-end and Bank Holiday soaring by participants.

(4) Permanent A.T.C. Soaring Training Schools could be established at all the best slopes for all-weather (within reason) soaring, in co-operation with local Gliding Clubs, using the latest sailplanes available under the latest policy (2-seaters and "Prefects").

A question burns upon the lips of every elderly member of every well-established Club. Why bother about this insignificant matter ? Who started soaring in the first place and who paid for it in the past, pays in the present and will pay in the future ? The Club Member. Finally, who helped to build the Elementary Gliding Schools ? The Club Member.

However, the sloping hills of England belong as much to those who serve their country as to those who pay for their soaring and if these Instructors are welcomed rather than tolerated upon their ridges, it is certain that their added strength will be for the greater good of the Soaring Community.

GLIDING CLUB OF VICTORIA.—cont.

SILVER "C" DISTANCE— BENALLA TO BARANDUDO

58 miles

By Rob Dowling

ON *5th January*, 1949, the day was warm with 7-10 fair weather cumulus and a 10 to 15 m.p.h. west wind. Both the Grey and the Blue "Grunau" had done a few circuits but there did not seem to be very much lift. It was suggested I should try my luck, so I strapped myself in the Blue "Grunau" dressed only in overalls, shirt and sandals and no socks, little dreaming that I would do any good. Some wellwisher dropped a tattered map into the cockpit and added a few encouraging remarks.

It was understood by members of the Blue "Grunau" Syndicate that we should attempt a cross country flight if conditions permitted. I took off by winch launch at 2.30 p.m. expecting only a circuit. Reaching 850 feet on the tow. I felt a good thermal which sent the green ball to the top of the tube. I *released the towline at* 1,000 *feet*, and turned downwind, connecting with the lift which was about 5 f.p.s. in a fairly small area necessitating about rate 2 turns, this took me to 2,700 feet where I lost it and decided to return to the field as I had drifted about 2 miles east of the drome. On the way back I found lift, weak at first, but strengthening to 10 f.p.s. and at times 15 f.p.s. in which I circled to cloud base at 6,300 feet where it petered out.

By this time I had drifted about 8 or 9 miles east of the drome and with a head wind, which seemed to be stronger higher up I knew I could not get back to Benalla, so I set out to get my Silver "C" distance qualification, the first climb to 6,300 feet being sufficient for my Silver "C" height. Above 5,000 feet I felt very cold and wished I had worn more clothes.

I flew north east and passed over the Glen Rowan Gap circling at times and gaining a little in small patches of lift. 3 miles north of Glen Rowan at 2,500 feet I again entered steady lift and climbed to 5,300 feet. I then headed north owing to the extremely rough country to the east, keeping Wangaratta in sight all the time.

I found no more lift and sighted a town which I identified as Eldorado and with about 2,000 feet altitude prepared to land.

I would like to add that I was cornered, to go south I would not gain anything as Benalla was south west, to fly north was over timbered country and was mountainous. I decided on a large flat looking field close to the town near a very prosperous looking homestead, and decided to fly over the town before landing. I estimated that I had covered about 35 miles so gaining my Silver "C" distance. Suddenly I hit rough air and began to circle, and, after adjusting and moving the circles I got into constant 15-20 f.p.s. lift which carried me to 6,900 feet in a few minutes, where it again ceased at cloud base.

By this time I had drifted east over rough timbered slightly mountainous country but was still within easy reach of Eldorado and in sight of Beechworth. Allowing for the tail wind I knew I could make Beechworth easily where I could see a few cleared fields. I did not fly straight to Beechworth as I hoped to go further. On reaching a point 4 miles north of Beechworth losing only 1,000 feet, I set out for Yackandandah which is another 9 or 10 miles downwind. I could not see it at first as it is down in a valley and is not very big. Near Yack I again struck lift and climbed to 4,600 feet. At this point I was of two minds, first, I could see a town to the north east which was crosswind, over rough country, but I could see a few cleared patches where a landing would have been possible. I was sorry later that I did not attempt this course as I would have flown along the sunny side of the range which runs east north-east, and probably get further thermals. Instead I flew on the opposite side of the range, which had more cleared areas and a good road in the valley. The map I had was torn in two and the tattered edge finished 5 miles north ot Yack, so you can imagine my disgust when I landed to find, that the town I could see was Wodonga which, from memory, I thought was many miles north west of Yack.

I landed at Barandudo at 4.50 p.m., beside the main Yack-Wodonga road, near a farmhouse. The field looked very smooth from 600 feet, but as I came down to make my approach I could see it was undulating. I had decided during the flight I would land uphill to avoid any danger of overshooting, so I made my approach towards the range and picked a slight valley in the field to land along.

With the assistance of some local residents I tied the machine to a fence and phoned Benalla from the Farmhouse.

I was given every assistance by the farmers and made welcome by the people of the house, who gave me afternoon tea and insisted that I return for tea after I had checked everything. At about 8.30 p.m. I was getting ready to sit by the roadside and wait for an hour or so in the cold until the retrieving car came, when, to my surprise they arrived. They had had everything ready and as soon as they received word, set out. This is a practice I would recommend on all such occasions.

A few points I will watch in future and may also be of assistance to other members are as follows:

Always be dressed fit for high altitudes. (In spite of all my vows I was caught again 2 days later).

It is hard to make headway crosswind in "Grunau" sailplanes. Fly on the sunny side of mountains or hills. Good maps should be standard equipment, housed in a convenient pocket in the cockpit. Tying down ropes are very handy and should always be carried. Give clear directions to retrieving crew. When flying over rough country do not take any risks, always have sufficient height before leaving a landing area for the next hop.

FIRE ON BENALLA AERODROME

Specially contributed by "Smokey Stover"

At about 6.30 p.m. one Saturday night Mr. Ramage, the Civil Aviation bod announced that he wanted 6 characters to help him " burn off ' his aerodrome, as it was covered with very high grass which was extremely dry.

As all flying had ceased owing to this announcement most members had decided to get away early and go to a dance or the pictures, so, about 6 or 7 of the boys after a bit of haggling decided to help him for about a half an hour.

Helping Ramage was the local fire authority officer, who had a country fire truck which consists of a truck with a large water tank on the back and a stationary two-stroke engine driving a pump which can pump at a considerable pressure. Ramage a 100 gallon tank with hand pump on the back of his truck.

Four members climbed on the fire truck and 3 on Ramages' and after lighting a flame thrower off they went. On reaching the spot where the first break was to be burnt, the truck stopped and the fire officer jumped out and picked up the flame thrower, then called for a volunteer. Ken Davies was just about to back away when 3 bods all but lifted him down from the truck and before he knew where he was the flame thrower was strapped on his back, so, with a few words revealing his disgust for his comrades, he marched off mumbling and muttering about " so and so's " and the hardness of life in general, and leaving a trail of fire behind him.

As Ken did not seem to be having much success with the flame thrower, Ramage suggested that we tow a burning tractor tyre behind the tow car, so immediately Rob Dowling and Dave Darbyshire volunteered for this job, as both had the same idea— that it was easier to sit in a car at back of the fire than to stand in a truck in dense smoke.

After dragging out a tractor tyre and pumping 2 gallons of petrol into the tow car, Ramage produced 4 gallons of kerosene to light the tyre with, and a chain to tie the tyre to the back of the truck.

When they returned to the site of the fire, they were amazed to see a great pall of smoke coming off the fire which had managed to get away. The bods on the fire truck watched it in awe and then in horror when they saw the fire officer put on a pair of gas goggles, tie a handkerchief around his face, and drive right into the smoke with them on the back. ! They had no goggles ! !

After a short struggle they managed to get the fire under control, then the drivers of both trucks made a mistake, they drove alongside one another and the bods in both trucks, their enthusiasm sharpened by previous short brushes really went at it. Of course those on the fire truck, hopelessly outpumped those on Ramages, with the result, those 2 bods were completely drenched.

Meanwhile, Rob and Dave after a long struggle, had managed to get the tyre burning well and were happily driving around spreading fire wherever they went, when, to their amazement and annoyance, both trucks drove past close by and as they did so, both sets of hoses were played on the burning tyre which immediately ceased to burn.

It took Ken's flame thrower to light the tyre again. Ken by the way, had been wandering around in the fire quite unknowingly spilling dieseline and kero mixture down his back and could have gone up in a puff of smoke at any time.

Most members were relieved when Uwe Radok came over on his push bike and told Ramage that a change of wind was coming, so it was decided to call a halt. Some proclaimed 3 cheers for Uwe who had spent an hour working out the weather report, but all bar Ken, who is still lamenting the ruination of a good pair of shorts, voted it the best bit of fun for some time.

"7,000 feet" IN GREY "GRUNAU."

By Reg Pollard

On the afternoon of *January 4th*, 1949, I was winch launched into a force 3, west wind to 1,200 feet in the Grey " Grunau." On releasing from the tow, I turned downwind along the south boundary towards the east end of the field, where Dave Darbyshire had previously reported lift. About half way along the south fence I found variable lift of from no-sink to 10 f.p.s., although rarely over 7 f.p.s.

Using this thermal I climbed to 6,000 feet where the lift petered out. At this stage I was feeling quite pleased with myself as this was my first real thermal flight.

From 6,000 feet, I steadily lost height until I reached 4,000 feet, where I again encountered lift of the same nature as the previous thermal and using this I climbed to 7,000 feet. I did not reach cloud base which I estimated to be about 8,000 feet.

After some time at 7,000 feet I began to feel very cold owing to the fact that I was clad only in shorts and shirt, which is not to be recommended for flights of this nature.

After gradually losing height I reached 3,000 feet where I tried several loops over Benalla then some more over the drome.

Once again I connected with that same variable lift and flying in it I reached 4,000 feet, but by now I was extremely miserable and even flew through 10 f.p.s. lift in an effort to reach the ground, which I was very glad to do after being in the air for 1 hour 28 minutes.

BENALLA TO TUNGAMAN—28 miles

1st January, 1949

By Frank Dowling

My chance of a thermal flight on New Year's Day seemed remote when at 2.6 p.m., I released from a winch tow in the Blue " Grunau " at 900 feet, and watched the variometer persistently recording 8-10 f.p.s. sink, while Dave Darbyshire spiralled upwards just north of me in the Grey " Grunau."

However at 700 feet, I flew into a thermal in slightly rough 5 f.p.s. lift. I reached cloud base at 5,200 feet by which time, I had drifted about 5 miles north of the drome, and so I flew back towards Benalla. I found no difficulty in locating lift, and after flying over Benalla for about 30 minutes, I thought of trying a cross-country.

As I was unprepared for such a flight and had no map with me, I decided to attempt to reach Yarrawonga on the river Murray, for I knew the country in between. It was just 2.50 p.m., so without further ado I set out northwards.

I flew through " lift " quite frequently but circled in it only twice when I thought I needed more height, and reached Goorambat at 3.5 p.m. About this time, I found the lift becoming much weaker, and harder to find, whilst the clouds were becoming few and far between, so that a few miles south of Devenish I thought I would be lucky if I reached that town, as I was down to 1,600 feet.

I found and circled in a 3 f.p.s. thermal reaching 2,500 feet. I flew on, circling in weak lift, several times until I was near St. James at 1,000 feet, with one eye fixed on the Murray, which was my goal, and the other on a large field beside a farm house.

By circling in patchy lift under a cloud I gained height and was soon able to take my eye off the field in which I thought I would have to land. I circled over a collection of cars in a field near St. James township, and could only think of one sport that the owners could be engaged in, " Two-Up," but I later found that they were members of a " Gun Club " and apologised accordingly.

As I passed over St. James, at about 3.30 p,m., the sky ahead was clear, the few remaining clouds were dissolving, and the thermals I encountered after this were very weak, so that I flew the 8 miles between St. James and Tungamah at between 1,200 and 2,000 feet. When nearing Tungamah, I could find no further lift, and after circling over a large field north of the railway station, I landed in it at 3.50 p.m. The distance was 28 miles in a straight line from Benalla. The duration of the flight was 1 hour 44 minutes.

Within a few minutes, people from nearby houses were questioning me, and small boys were jumping over the wing tip and doing all the things they should not do to a sailplane. The Benalla drome was telephoned, and before long my disappointment in not completing my " Silver C " distance, was forgotten in the attempt to keep the Tiger Moth on the horizon during the rough aero-tow home.

"SILVER C" DURATION THERMAL FLIGHT AT BENALLA

By Rob Dowling

In my account of the flight from Benalla to Barandudo I recommended that sailplane pilots should always be sufficiently clad to keep them warm in altitude thermal flights. I must stress this point again for on my very next flight I was caught again.

On *7th January*, 1949, I decided to have an aero-tow as there were no other members of the " Blue Grunau Syndicate " around I decided to stay up for an hour or so if conditions were as good as the previous day. I took off at 1.40 p.m. in the Blue " Grunau " and released at 2,000 feet, when the Tiger Moth entered lift. Turning, I immediately started to climb in good steady 10 f.p.s. lift. At 4,500 feet the lift ceased and I flew around until down to 3,000 feet, and entered more lift and again reached 4,500 feet. This cycle continued and after 1 hour I decided to do a bit more, and just kept going up and down, sometimes as low as 2,000, sometimes only up to 4,000 feet.

This gets very boring after an hour or so, so to break the monotony, I practised steep turns and tried to spin, but could only make it drop a wing and stall turn.

When 2 hours were done, although very stiff from the hard seat and feeling very cold at times, I made up my mind to attempt to beat the best time for the camp—3 hours 5 minutes made by my brother Frank Dowling, the day before. I continued to practice tight turns at intervals—one time after circling as tight as I could for a couple of minutes found that I had gained 500 feet not knowing that I was even near a thermal. At one stage I thought I would try and trace where the thermals were coming from and found the hangars a regular source of supply, but thermals seemed to be coming from almost everywhere.

Once after 3½ hours were completed, I decided to land and flying through thermals on the way down that seemed like temptations.

I did not think it possible to do 5 hours for my Silver " C," as I started late and expected the lift to die out about 6 p.m. However at 900 feet I felt small lift and for a bit of sport, I circled tightly in it—the lift was only 2 f.p.s., a change from the conditions above 2,000 feet. So I persevered again and reached, 4,500 feet. It was then I made up my mind to attempt the 5 hours. I again set the old routine, circle up to 4,000 feet or so—fly around until down to about 2,500 feet and circle up again. About 6.30 p.m. the air began to get smooth and I began to worry, giving up hope of the 5 hours, when at 2,000 feet I encountered the best thermal of the day, possibly an evening thermal, in which I climbed to 5,300 feet. I knew I had little hope of getting another thermal so I circled in the " no lift " until I completely lost it. I then flew at about 30 m.p.h. the red ball showing at times only 2 f.p.s. sink.

Earlier during my flight my watch had stopped for 15 minutes or so and I did not know exactly how long I had been up. I flew over a wooded area then over the town, the railway yards, the local parks and gardens and over the hangars hoping for another evening thermal, but all in vain, the best being 1½ f.p.s. sink. I landed close to the hangars and to my surprise, a couple of members ran across to congratulate me on completing my Silver " C " duration, which I thought I had missed by about 5 minutes. Duration was 5 *hours* 11 *minutes*.

ULTRA LIGHT AIRCRAFT ASSOCIATION BULLETIN

Volume 2, No. 10. January—February, 1949.

LESS POWER FOR PILOTS

AS the New Year emerges from the depths of winter, man begins to cast off his seasonal lethargy and faces up to the problems of the coming year. In the places where those who fly are wont to gather, whispers are heard and plots are being hatched in an effort to attract new blood to the sport of flying. Efforts are being made to add attraction by cheapening the really quite prohibitive costs that those who wish to indulge in the sport are called upon to face. Some of these plans appear promising, while others, the word subsidy is whispered as if it were the ultimate panacea.

Our view on subsidies for Private flying are well known, and we do not propose to repeat them here. There does seem, however, one aspect of this business of reducing flying costs that does not appear to be receiving the attention that it merits, and we think our suggestions in this direction are worthy of serious consideration by all concerned.

Since the advent of the "Gypsy Moth," which is generally acknowledged to have been the first really practical light aeroplane, we have seen a steady, if unspectacular growth in the weight and horsepower of light aircraft. From a modest 60 b.h.p., and 1,400 lb. all-up-weight, the light aircraft has, in the case of the Moth "grown up" to an aircraft of 130 b.h.p., and 1,770 lb., with corresponding increases in first cost, fuel consumption, complication and a host of extras, without which the young pilots of two decades ago flew just as well.

Aviators, young men in the late 1920's, have grown up along with their aircraft, and to offer the average Private Flyer of that generation anything very much smaller than, say, an "Auster," would be to him unthinkable. What he, and for that matter, most of his generation who form the market for the light aeroplane Industry to-day, tend to forget, is that the new generation of pilots who must come along if Private Flying is to continue to exist, must serve their time on the metaphorically "old" aircraft of this former generation. We claim, without fear of contradiction, that, like their fathers before them, the new generation will be more than content to learn their flying on smaller and more economical aircraft than those, excellent and proven though they may be, in service with the Clubs to-day.

If Private Flying is really to flourish, many established ideas must be eliminated. One of the most obvious is that it is impossible to fly a two-seat aircraft on anything much less than about 70 b.h.p. with success. The little "Aeronca" is, even to-day, giving a lie to that statement, and, what is more, with only 37 b.h.p. It is not a question of arguing the merits of the "Aeronca" or "Auster." To thousands of would-be pilots, it must be an economical 50 b.h.p. or nothing. It is just as simple as that. Private Flying cannot indulge in Rolls-Royce tastes with a Ford income.

We suggest that all the responsible bodies in Private Flying and the light aircraft Industry should put their heads together and produce a National Basic trainer, suitable for the needs and economics of the *rising* generation of amateur pilots. What is needed is a two-seat dual control aircraft of about 50 b.h.p., simple to build and maintain. Far more complicated specifications have been met with complete equinamity by the finest aircraft Industry in the World.

Finally if the Government is really looking for a way to subsidise Private Flying, no finer way than the active sponsorship of such an aircraft and engine could be found. It would truly be an investment for the future.

We put out this suggestion and are prepared to back our case with all the arguments and drive we can muster, because we really believe that in this way lies the future well being of Private Flying.

Mr. John Fricker

We are pleased to welcome Mr. John Fricker to the Executive Committee of the Association. Mr. Fricker will take over the Chairmanship of the Public Relations Sub-Committee in succession to Mr. Courtenay Edwards, who has had to offer his resignation due to pressure of business. Among other activities, Mr. Fricker will take over the compiling of the "Bulletin," which due to administrative and technical difficulties is published as a combined January—February issue for this edition. We offer our apologies to members for any inconvenience caused hereby.

GROUP NEWS

Brookside Flying Club

It is with deep regret that we have to announce the loss of the Group's "Magister," which crashed into the sea off Shoreham on January 29, with the loss of the lives of Mr. Denton, the Group treasurer, and Mr. Pitcher. We offer our sincere sympathies to the relatives of the deceased. At the time of going to press, the cause of the accident is not known.

The Group intend to continue, and hope to acquire a replacement for their lost aircraft.

South Hants U.L. Air Club

We have received some very interesting photographs of the Club's "Heath Parasol," first test flights of which were made in early January. Unfortunately the aircraft proved to be underpowered, and the Group is now going ahead with a scheme to replace the present engine with a 37 b.h.p. JAP.

Flintshire Aviation Group

Some reorganization is going on in this Group, which is unfortunately still handicapped by the lack of a suitable landing ground. The Group has a nucleus of really keen members, but there is plenty of room for more enthusiasts in the district. If sufficient support is forthcoming, the Group intends to design and build an Ultra-Light trainer aircraft.

DESIGN SUPPLEMENT

Contributed by G/C. E. L. Mole, Chairman, Design Sub-Committee.

A New Look for Ultra Lights

An interesting article by Mr. P. D. Banbury appeared under the above heading in the February issue of " Aeronautics " in which the design of pre-war and present ultra-lights was described as disappointing. They scarcely exhibit one modern feature, let alone point the way to the future. The author compared the sport of yachting where, he stated, new ideas are tried out on the smallest and cheapest classes, so that the 12- and 14-foot dinghies are the most advanced sailing boats afloat. By a process of deduction from the merits and failings of a number of well known U.L.A. designs, he arrived at a specification based on the efficient " Wren " of 1923, but incorporating many of the latest ideas on aeronautical design.

Mr. Banbury's " New Look " U.L.A. consisted of a sailplane wing and fuselage, with an enclosed single seat cockpit. The engine was buried in the fuselage, driving by shaft a small propeller of three, four or five blades mounted behind the tail surfaces. The undercarriage consisted of buried wheels in tandem, but it was not stated how lateral stability on the ground was to be obtained for taxying and take-off. In order to obtain maximum lift for landing in the absence of " stilty " undercarriage legs, Mr. Banbury proposed the use of a variable incidence wing !

A motorcycle engine of 400-500 c.c. was recommended, there being a number of excellent examples in production. For reliability this was to be de-tuned to give 12 b.h.p. for take-off. With an all-up weight of 550 lb. as quoted, this would give a high power loading of 46 lb./b.h.p. which Mr. Banbury considered would be adequate when coupled with a low wing loading of 4½ lb./sq. ft. Indeed, he thought that the performance of his " New Look " U.L.A. of 12 b.h.p. would not be so far behind that of the " Old Look " with 35 b.h.p. !

Now, whilst admiring the ingenuity of Mr. Banbury's argument in favour of his " New Look," we must disagree with a number of his points. First, his analogy of the small boats breaks down with aircraft because the designs of such boats do not have to be approved for Certificate of Airworthiness. The Air Registration Board have met us all the way in granting concessions on design stressing cases for the new U.L.A. category C. of A., but we dread to imagine their reactions if confronted with the " New Look's " high aspect ratio, variable incidence wing, with its obvious possibilities of flutter. This, and the shaft drive feature, would lead to considerable mechanical complexity that would involve lengthy and expensive development trials to ensure reliability and to obtain design approval.

In our opinion, the " New Look " would be grossly underpowered for general use of 12 b.h.p., and its take-off and climb performance would be dangerous for inexperienced pilots. We consider that a take-off power of 45/50 b.h.p. is advisable for aircraft of about 700 lb. all-up weight to allow adequate reserve for safe operation from small fields. An engine of such power could be cruised well below its maximum output, and so gain reliability and long life.

The " New Look " falls closely into U.L.A.A.'s auxiliary-powered sailplane class, which does not have a large following amongst our members—though we know of two sailplanes being so modified. Such aircraft, being most efficient aerodynamically, provide the means of flying with the minimum of power. They offer advantages over the sailplane of being able to take-off and climb to soaring height independantly of launching assistance, and of landing where desired instead of suffering the inconvenience of forced landing away from base. Their serious disadvantage, however, lies in the cost and complexity of their construction, which must at least be that of a sailplane plus the installation of a power unit. The " New Look " with its shaft drive and other novelties could hardly be produced to-day under £1,000, at which price it would appeal to an extremely limited market ; and it certainly would be quite unsuitable for amateur construction.

The majority of our members, being keen to fly as cheaply as possible, are prepared to sacrifice aerodynamic refinement to some extent in favour of simplicity of construction and ease of maintenance. On this consideration I suggest the Slingsby " Motor Tutor " as an example of a strong, robust motor-glider, offering safe flying practice for inexperienced pilots at low cost. It is suitable also for the conversion of glider pilots to power flying without the expense of dual instruction. The Fairey " Junior " and Dart " Kitten " are good examples of the more orthodox general purpose type, with superior performance to the motor-glider but still of simple, robust construction, and cheap and easy to operate. All these types could probably be put into production at £600 or less, and they are suitable for home construction from kits of parts if these can be supplied.

We are, in addition, interested in a high performance class of aircraft for more experienced pilots, which would be suitable for competitions, record breaking, pylon races, etc. As an example we would quote the highly successful " Chilton," which can do 135 m.p.h. with an engine of only 44 b.h.p., and it is fully aerobatic. This, indeed, is a miniature Spitfire and quite as delightful to fly ! We are most anxious to see the " Chilton " in production again, but unfortunately details of its design calculations have been lost and a complete re-design from the original structure is necessary before a C. of A. can be obtained. We would be pleased to hear from any designer so interested.

Summing up our views on Mr. Banbury's " New Look " specification, we consider that it would be difficult to obtain design approval for such unorthodox features, its construction and development trials would be extremely expensive and, finally, it would appeal only to a limited market. In spite of our criticisms we are, however, technically interested in the concept of the highly efficient, very low-powered aircraft, and we would like to see an international competition arranged for ultra light aircraft based on minimum fuel consumption over a closed 100 kms. circuit. This, we feel, would arouse considerable interest and give rise to some novel design features. Let us hope that some public

spirited patron may be found who would be prepared to put up a substantial cash prize to promote such an event !

Two-Seater U.L.A.'s

Early in the history of U.L.A.A. we issued a questionaire to our members to ascertain their requirements for a design specification. Over 75 per cent of the replies called for a single seat U.L.A., and consequently we have sponsored that conception. The result has been that two post-war designs of single seat aircraft (the Fairey " Junior " and Slingsby " Motor Tutor ") have already been produced and flown successfully, and a number of other single seat designs are coming along.

Lately, however, there has been an increasing demand for a two-seater U.L.A., which would enable Groups to give dual instruction and members to take up their friends. Such two-seaters are completely practicable and will be covered by the new U.L.A. category C. of A. providing that their all-up weight does not exceed 1,200 lb., their engine power does not exceed 75 h.p., and their stalling speed is not more than 40 m.p.h. A number of examples flew successfully before the war, amongst which perhaps the best known is the " Aeronca." About half a dozen " Aeroncas " are still in operation in this country, one of which was flown last summer by Lt. Cdr. Sproule, together with passenger, and luggage, to France and the Channel Islands, returning by the direct sea crossing !

The " Aeronca " is a wire braced, high wing monoplane with a side-by-side two-seater cabin cockpit, and powered by a 37 h.p. flat twin Aeronca JAP engine—similar to those now available with the Association. It has a welded steel tube fuselage, wooden construction wing and fabric covering. Details are as follows :—

Specification

Span	36 ft.
Length	20 ft.
Wing area	142 sq. ft.
Empty weight ..	570 lb.
Loaded weight ..	1005 lb.
Wing loading	7 lb./sq. ft.
Power loading ..	27 lb./b.h.p.
Fuel tankage ..	6¾ gals.

Performance

Max. speed	90 m.p.h.
Cruising speed ..	82 m.p.h.
Landing speed ..	35 m.p.h.
Rate of climb ..	450 ft./min.
Ceiling	12,000 ft.
Consumption	2¾ gals./hr.
Range	200 miles

Although the " Aeronca " has a reasonable performance on 37 h.p. when flown solo, it has a rather excessive take-off run, with two up. If such a type were fitted with the 50 h.p. engine which we expect eventually to be available for our own purposes, the additional power would give an all-round improved performance. Consequently, a 50 h.p. two-seater is considered most definitely to be a practical proposition. The writer suggests that economy could be gained if single and two-seater designs were produced using identical components, so far as possible, e.g. wings, engine mounting, undercarriage, rear fuselage and tail unit. Opinions from members on the need for two-seaters and their views as regards design specifications would be most welcome. In particular we would like to know whether side-by-side or tandem seating is preferred. We will publish an analysis of the replies received in due course.

Mr. Swinn's Auxiliary Powered Sailplane

In last April's *Bulletin*, we described an interesting project by Mr. R. Swinn of Blackpool, who is fitting an inverted 350 c.c. two-strike engine as a pusher power unit to a sailplane. His idea is to build the complete unit within a streamlined shell into which the engine will retract when not in use. The shell is to be mounted on struts bolted to attachment points to be built into the centre section, so that the complete " power egg " can be detached when not required.

Mr. Swinn has now written to say that the project is almost completed. The attachment points are at the wing root fittings, so that there is no interference with the sailplane's structure. Indeed, he considers the power unit could easily be fitted similarly to most of the sailplanes in this country with little alteration. The overall weight has come out rather more than his target figure of 50 lb., but since completing the construction he has seen a number of ways of reducing weight which can be incorporated later on. We hope to report news of his flight trials before long.

Jet Propulsion for Auxiliary Powered Sailplanes

In his letter, Mr. Swinn also suggested that a pulse-jet propulsion unit could easily be constructed to launch a sailplane and enable it to climb to soaring height. Such a unit, he considers, would be much less heavy than a petrol engine. He has written to the makers of the Jaggers model jet unit about the idea, and received a reply to the effect that a unit developing 72 lb. thrust could be made but it would cost approximately £180—though in quantity production, this might be reduced £20. He is hoping to come to some arrangement with the firm to get an experimental unit made up for the trial ; but if he fails, he proposes to attempt the construction of one himself, and would like to hear from anyone with ideas on the subject.

We consider this to be a remarkably interesting project which might eventually prove to be cheaper and less complicated than a retracting engine and propeller unit, and we congratulate Mr. Swinn on his enterprise. The jet motor principle is similar to that used on the German V.1. flying bomb—this is heavy on fuel, but as it would only be required for short periods to enable the sailplane to reach soaring height, a heavy consumption rate can be accepted. Further disadvantages would be :—

a. noise
b. reliability
c. short life of the pulsating ducts
d. difficulty in starting
e. difficulty in retracting the hot unit when soaring height is reached.

We feel, however, that these difficulties might well be reduced or overcome during the development

of the unit, and that the project is wellworthy of investigation. We would be glad to hear from any member interested.

OPERATIONS SUB-COMMITTEE SUPPLEMENT.

Contributed by F/O. I. G. Imray, Chairman, Operations, Sub-Committee.

Ultra Light Aircraft Meetings and Rallies

Information has been received from the Royal Aero Club that with effect from January 1st, 1949, in the interests of safety, it will be necessary for the Organisers of Flying Meetings to obtain Royal Aero Club permission.

A Flying Meeting is defined as one where air racing, record attempts or competitions are held. An Air Display is defined as a meeting where no racing, record attempts or competitions are held. For this latter type of meeting no official permission is required.

Group Secretaries are notified that Ultra Light Aircraft Pylon (or " Round the aerodrome ") Racing comes under the heading of Air Racing, and any pilot taking part in such races must be in possession of an Annual Competitor's Licence issued by the R.Ae.C. on behalf of the F.A.I. Application forms for these licences may be obtained from the R.Ae.C. With regard to the Rules and Regulations for the conduct of Flying Meetings, it is hoped that sufficient copies will soon be made available to the Association to allow a copy to be sent to each Group.

All Members (whether Group members or Private owners) who intend to take part in air racing or record attempts during the coming season will be well advised to apply now to R.Ae.C. for Application Forms for their Competitor's Licence. The cost of such a licence is 5/-d. (or free to Members and Associate Members of the R.Ae.C.).

Advance Notice. U.L.A. Rally Whitsun 1949.

It is hoped that an Ultra Light Aircraft and Glider Rally can be arranged at Derby for the Whitsun (May 29th) week end. This Rally is being organized by Air Schools Ltd. Derby, and as soon as particulars are available they will be published in the *Bulletin*.

In the meantime it is suggested that this Rally be earmarked as a " date," and that every effort should be made by Groups and Private owners to have their machines serviceable and available.

Register of Ultra Light Aircraft

A previous request to Group Secretaries and Private Owners asking for particulars of their aircraft has proved disappointing. Once again then it is requested that ALL Group Secretaries and ALL Private owners of ultra lights notify the Operations Sub-Committee (24, St. Georges Square, S.W.1.) giving full details of their aircraft. These particulars should include Aircraft Type and Registration (if registered) engine type and h.p., whether home or factory built, whether complete or under construction, and whether granted a C. of A. or Permit to Fly. Changes of ownership and additions to Group " fleets " should be notified from time to time.

Zaunkoenig

Twice recently arrangements were made for certain of our members to fly the " Zaunkoenig " at Gatwick, and twice they had to be cancelled at very short notice owing to the fact that the aerodrome was under water. On both the dates chosen, December 18th and January 8th, the weather would have been eminently suitable.

The " Zaunkoenig " has now unfortunately been returned by M.C.A. to M.O.S. at Farnborough. However, negotiations are now in hand for the machine to be transferred to this Association. If the outcome of these negotiations is successful, the " Zaunkoenig " will be housed at Elstree and looked after by the Experimental Group. We should then be able to commence our Training Scheme which we outlined in a recent *Bulletin*.

INSURANCE SUB-COMMITTEE SUPPLEMENT

Contributed by C. P. Choularton, F.C.I.I., A.C.I.B., Chairman, Insurance and Registration Sub-Committee

The thought of insurance is often the last item to receive consideration by Groups and Communal owners, when planning their future activities and when all other obstacles have been overcome a last minute application has to be made to secure insurance. Consequently restricted cover or higher rates may have to be met.

There is no Insurance Company or Group of Underwriters anxious to transact full cover on Ultra-Light Aircraft and the reasons, which are both valid and pertinent, can be summarised as follows :—

a. A continual loss has been sustained on the insurances of Club operated Light Aircraft and upon Sailplanes and Gliders over a long period.

b. Many of the aircraft operated by U.L.A. Groups are obsolescent and spare and replacement services are difficult, if not actually non-existent.

c. Insurers are sceptical of the special regulations upon inspection and maintenance granted to Ultra-Light Aircraft.

d. The system of solo-training is completely un-tested.

Quotations for full flight, ground and third party cover are unlikely to be below £15 per cent, until we have proved that our accident incidence is lower than that experienced in the similar fields mentioned previously. There will be no difficulty in obtaining third party only cover.

In one respect, we do possess an advantage. If manufacturers will have available kits of spares to enable the repair of accidental damage to be completed by Clubs, a saving of about thirty-three and a third per cent can be effected. This will go some way to minimise the charge on Groups as an interim measure and steps are being taken to explore this possibility.

We must, however, convince Insurers upon the strength of our position if any permanent advantage in rating is to be secured. This can only be accomplished by the highest standard of operating efficiency by Groups. Efficient construction and maintenance, thorough inspections, proper records and discipline will eventually secure the essential saving necessary to give us low flying costs.

It is proposed to ask Groups, by letter, to advise the Insurance and Registration Sub-Committee, brief details of operations and accident incidence each quarter and combined returns will be submitted to the various Companies and Underwriters. Similar information from Syndicates and Private owners of Ultra-Light Aircraft will be welcomed.

The Sub-Committee is always available to advise on all problems of insurance, whether when initially effecting cover, in respect of existing policies, or in connection with claims.

Please do not hesitate to use it.

On Solo Training

I was surprised to find the comments in the latest *Bulletin* about the solo training scheme proposed in the November issue. Although I have had no experience of this method, I feel that a few remarks are warranted.

The fact that a two-seater is needed for periodical checks proves that the more orthodox dual instruction is more favourable than training in single-seat aircraft. A pupil might pick up bad habits that cannot be eradicated during one or even two forty-minute checks.

A pupil when first encountering the circuit, becomes accustomed to the layout of the area surrounding the aerodrome, and this helps him during his legs and turns. Whether this is a good point or not will not be discussed here, but the fact remains that this does happen. However, assuming that most Groups will operate from bases other than recognized airfields, the pupil will have to receive his checks at a flying Club using a strange aerodrome, where he will be lost.

Another point is that serious damage is likely to be sustained by the aircraft during hops. Damaged undercarriages and frequent nosing over might keep the machine unairworthy for considerable periods, and constant ground-bumping will shorten its life an appreciable amount.

It seems that dual instruction up to solo standard is preferable to ab initio solo training, and the extra expenses incurred should be negligible. An Aeronca with a 37 b.h.p. JAP or a 65 b.h.p. Piper Cub should cost little more to operate than their single-seat counterparts.

It is when a pupil has completed his first few solo flights that he should progress to the single-seater, on which he can gain experience in general flying, cross-countries (after one or two in the two-seater) and aerobatics, which can be criticised from the ground.

From this it seems that the intermediate single-seat ultra-lights, such as the Fairey Junior, are of the greatest use to the movement as a whole, together with a few advanced types that should be shared among the Groups while the part of the very elementary type should be filled by orthodox two-seater trainers.

DAVID F. OGILVY.

Windsor, Berks.

The *Bulletin* does not seem to have contained any comments on the article by A. R. Weyl in the November issue on Solo Training, and I would like to present certain objections to the proposed scheme.

Gliding experience suggests that most damage occurs in the early stages of learning elevator control, i.e. in the low-hop stage. In gliding instruction the winch driver is always in a position to prevent a situation getting worse. With a power aircraft, it is essential that a considerable amount of power should be available if the aircraft is to reach flying speed before the end of the aerodrome is reached; this makes it unavoidable that enough power will be available to permit an inexperienced pilot to reach excessive height. There seems to be no way of avoiding this.

The attempts of inexperienced pilots to land before the end of the aerodrome is reached are likely to result in damage to the machine, and the cost of repairs to an aircraft costing £600 will be heavy. It is essential that this stage should be taken in the cheapest form of flying machine, and that is the primary glider. Only in this way can solo training avoid large repair bills.

A primary glider accelerates rapidly, and on return to earth, stops quickly. A low powered aeroplane without brakes does not, so that a very long field would be required for straight hops, and sufficiently big fields with hangarage are not easily found.

However, the use of dual control aeroplanes of normal types is included in the programme for check purposes. I suggest that this is a mis-use of dual. What is wanted is an Ultra-Light two-seater in which each stage of flying would be demonstrated before the pupil goes to practice it in single-seaters. Dual for check purposes after a stage is passed is a waste—everyone on the ground can see if the pupil is able to cope.

Dual before a stage is attempted would be valuable to prevent a pupil setting out with incorrect ideas. In this connection, every pupil starts out with the idea that altitude is directly related with elevator angle, and only after many hops, learns that elevator angle controls the rate of change of wing attack angle, which in turn controls the rate of change of height. There is no satisfactory way of teaching this in indirect relation on the ground—hence the damage on low hops.

J. A. ALLAN.

Bayswater, W.2.

ULTRA LIGHT AIRCRAFT ASSOCIATION

Preliminary Notice of Third Annual General Meeting to be held at Londonderry House, Park Lane, London, W.1. On Saturday, 7th May, 1949, at 3 p.m.

NEWS FROM THE CLUBS

ARMY FLYING CLUB

1. We have been particularly lucky this month with the week end weather. It has been first class every Saturday and Sunday. This has enabled us to really get into our stride; during the month we had some 150 successful launches, 2 " B " certificates and 5 " A " certificates were obtained.

2. The position with the Club Gliders is as follows:

One " SG 38," " Tutor," " Grunau ": Serviceable at Odiham.

" Cadet ": Under repair at Odiham. It is hoped that this will be serviceable in two/three weeks.

One " SG 38 ": Under repair at Eons of Newbury. Ready by end of March.

" Olympia ": Serviceable at London Gliding Club, Dunstable.

3. We have had one casualty during the month—the " Dagling." The " Dagling " finally came to grief on a ground slide on the 19th and I am quite convinced that its final collapse was through sheer age and weariness more than anything else. However, it has done particularly well during its long life and has been a very useful " buffer " to take off some of the shock of ground slides from the " SG's ". Its final curtain was at least most spectacular. It will now be broken up for spares; parts of it will be used to make up the Singer into a recovery car.

4. The following certificates have been obtained during February:

" *B* " *Certificates*:
O. Cdt. Adams Acton RMA.

" *A* " *Certificates*:
Major Awdry, HQ Eastern Command
Capt. Hannington, REME, Arborfield
Capt. Tugwell, Airborne Forces Depot.
Major Collis, REME, Arborfield
O. Cdt. Peal, RMA, Sandhurst.

5. It was originally proposed to hire a motor " Tutor " from the Ultra Light Aircraft Association in an attempt to start a power flying section of the club. However, in view of the financial situation, it has been decided to drop this project for the time being, and to concentrate all available resources into placing the gliding on a really sound footing. Now that we have a fair selection of gliders, we must concentrate on improving the winches, retrieving cars, and ground equipment generally. A larger number of launches and an increased membership are the first requirements to place the club on a sound financial footing; we cannot afford, at the moment, to waste our resources on a power flying section, which may well prove to be a gamble. In addition, the acquistion of the Motor " Tutor " entails further expense in hangarage and maintenance, since it cannot be kept at Odiham; it is doubtful whether sufficient members would come forward to fly the aircraft to cover the cost of hire and overheads.

6. The repairs on the " Olympia " sailplane (wrecked last August) were completed during the month. The aircraft was flown at Dunstable on 12th February and was quite satisfactory. While it is appreciated that all members are keen to get on to the sailplane stage, we have had to lay down fairly strict qualifications, which will be required before flying the " Olympia," to ensure that we don't have a repeat performance of the accident last year.

For the moment then, those members, who are qualified to fly the " Olympia," will be named by the Chief Flying Instructor, Major Storey. Full instructions for rigging the " Olympia," D.I.'s, and flying have been forwarded to those members who are qualified.

7. The following new members joined in February:

Capt. J. O. Parry, RA, RMA, Sandhurst.
Capt. H. F. C. Wakelin, RSF, Staff College, Minley Manor.
Officer Cadet B. N. Mann, RMA, Sandhurst.
Officer Cadet J. L. Aspden, MONS.
Sgt. K. T. H. Warnock, Glider Pilot Regt.
Sgt. K. J. Floodham, RAMC, Crookham.
Capt. M. A. Gordon Smith, 15/19 KRH, MONS.
Major D. M. Anderson, RAMC, Crookham.
Officer Cadet D. M. Saunders, RMA, Sandhurst.
Capt. P. H. Sheratt, RMA, Sandhurst.
Trooper R. D. Birch, 21st SAS (Articts) T.A.

8. Gliding facilities are available at Odiham on Saturday afternoons and all day Sundays. Two winches are in action and with the longer evenings on the way, we hope to get in a larger number of launches. Two gliding camps are being held during the Easter period at Lasham, about 4 miles from Odiham, between April 3rd—9th, and April 15th—20th.

VICTORIAN MOTORLESS FLIGHT GROUP

Newsletter No. 12. March, 1949.

Flying Diary:

Saturday, 19th Feb.: " Never a dull moment," might well be the motto of the VMFG and the Beaufort Club. About 11 a.m. on this morning, five of our people and three of the Beaufort types were about to drag machines out of our hangar, when your correspondent, stepping out the back door to get something which will never now be remembered, was shocked to see a small area of grass in flames, slightly north of the hangar, roughly 300 yards away in the centre of the new showground area. If there's one word that will galvanise to immediate action even the most indolent Aussie, it's F I R E, spoken on a hot summer's day; when the word is bellowed to people who have spent six months building a darned great hangar, now surrounded by acres of tinder-dry grass, the results are bound to be spectacular. My impression is of a hangar

filled with flying bodies which swooped down on the pile of beaters standing in readiness by the doors (appreciations to Fire-Precautions-Officer Patching !) and, without touching feet to ground, passed over two fences and began to fight the flames which, in less than half a minute had spread from a square yard to an area too large for us to have any hope of subduing it unaided. All that we could do was to head it away from the hangar towards the railway line, and this we proceeded to do. No attempt was made to get up to the township to sound the alarm, as the only available vehicles were winches and tow cars and whoever heard of THEM starting in an emergency ? We knew, too, that it was a matter of minutes before the smoke was sighted. Sure enough, the fire klaxon soon began belching and a little later the Clyde Road spewed forth people in cars, buggies, on foot and on horseback and pushbike. Way out in front was the Hon. Sec. of the Victorian Soaring Assen., John Wallis, driving as though he was in the Monte Carlo Rally. Up in the township, John had asked, " What's up ? " and been told, " The aerodrome's on fire ! " The Bushfire Brigade had things under control quickly, driving along the edge of the flames in their water-spraying truck, followed by men on foot with pump sprays. The weaker members of the gliding fraternity thereupon tottered out of the smoke and collapsed wheezily to the ground. Cause of the fire remains unknown. No one was seen nearby and none of our people had been within that paddock since the night before. There was no trace of anything, such as glass, which could have started it going. Not very comforting at all.

In the afternoon, the Beaufort people flew the two-seater and had one of those grim times when everything goes wrong. Our people spent most of their time flat on their backs ; that is, Viv Drough lay under the " Whippet," wrestling with a spring and Nance Iggulden and I, still wheezing a little, frankly spinebashed. About 5.30 p.m. the three of us wandered out to the north/south runway, where we found Esme Hilditch, Ron Roberts and Gordon Macdonald waiting for their cable, which had things happening to it up near the winch. There was also someone's flying suit . . .after a while we thought it might be an idea to stuff it with grass, then we pinned Ron's ski-cap to the collar. Len Travers was then spotted coming back with the cable, so Nance and Viv sat on Pilot Officer Prune so's Len wouldn't see him. (It was Len's flying suit). As soon as we'd gotten rid of Len, we put Prune on Ron's knee, and Prune promptly threw a horribly lifelike arm round Ron's neck, leering grassily into his face. Now we switch to the winch ; the " Phoenix " is about 500 feet up when John Wallis sees Prune peering over the side. " What," says John, " the hell is Ron doing ? " " Looking at the winch," says Doug Lyon. " Well," says John, " He must have a blasted rubber neck, I'm damned if I could do that". Prune then hung daringly by his toes before swooping with outstretched limbs to earth. A really intrepid birdman, we thought.

Sunday, 20th Feb. Overcast, drizzling rain. " Beaufort " flew for a few hours, getting AWFUL wet ; we worked in the hangar, staying beaut and dry.

Saturday, 26th Feb. **Australian Two-Seater Altitude Record Broken** . . . . just a sec., that looks familiar. Really, it's getting ostentatious the way these Beaufort people keep breaking that two-seater record. This day they did it again—but definitely. Ron Roberts and Eddie Byrne climbed from a winch-launch of 560 feet to 7,000 feet, time 1 hour 43 minutes. One of those days when you don't know where the heck to put the winch ; calm, with occasional light drift from any old where ; cu. forming well up. Hot and sticky on the ground. Beaufort people flying, VMFG still playing with that spring. At 12.53 hours, Ron and Eddie took off and found sluggish lift, in which they circled warily and lengthily and then suddenly we looked again and there they were stooging around at about 5,000 feet, well below cloud base but looking small and aloof and apparently temporarily out of lift. They hung around for ages and then they got it again and went up to cloud base, 7,000 feet. We thought it was rather a good effort. Meanwhile, Viv had the " Whippet " together again and as we were short of a winch-driver, John Wallis raced over to offer his services. He whipped Viv up to 1,000 feet and Viv found himself something that was good for 3,350 feet and half an hour, building up to 15 f.p.s. before it petered out. Soon after he landed, your correspondent was launched, eager as a beaver and returned sullenly to earth again, 3½ minutes later. Bah ! Later, Nance went up with Ron (under one of the numerous lease-lend schemes in operation between VMFG and Beaufort !) and had 6½ minutes, flying " Phoenix " herself for all but a minute. She earbashed us quite mercilessly about it and while your correspondent was busy writing out press reports on the record, Nance said—" Have you any cold cream, please Grace ? " I groped around in my dooverbag, without looking up, and handed over a tube. " Here you are, Nan." Nance begins to rub it in. " New brand ? " she asks, " smells a bit queer, doesn't it ? " This was followed by a wild cry—" Ah, toothpaste, it's TOOTHPASTE ! " The men seemed to find this little interlude most amusing.

Sunday, 27th Feb. Overcast, drizzling rain. We rigged the " Rhon " in the hangar and the primary people began to get excited about the prospect of flying again next weekend ; a few of us took " Coogee " out and had a circuit each in the rain, but in surprisingly buoyant conditions. With the rigging of the " Rhon," we had to re-shuffle things in the hangar. This was most entertaining. Comedy and drama followed each other quickly as the boys dragged things here and there. John Wallis was trapped between the trailing edge of " Phoenix " and the leading edge of " Coogee," pulling his head in just in time to avoid decapitation, having such a narrow escape that his hat remained uneasily on top of the wings ! The finished packing was a very neat job, the hangar containing " Phoenix " (54 feet span), " Coogee " (40 feet), " Heron " (40 feet), and " Rhon " (32 feet), three winches, tow-car, one glider trailer, stacks and stacks

of odds and ends and the week-enders stretchers and gear. For a while, we thought Ron had become hopelessly lost in the corner near the tap as we could see him crawling around apparently aimlessly, but it turned out that he had just gone mad with the tidiness and was putting things away.

Saturday, 5th March. The "Rhon" was rigged, a few jobs completed on her—as Nance was the only primary type present we suggested that we save time by lashing her to the seat, instead of fitting the safety harness, but, odd, she wouldn't come at it! We were going to use nothing but the best quality string, too. However, all checked and ship-shape the "Rhon" was towed out and the Ron (Roberts) carried out the test flight and pronounced her in order. We were able to give Nance 9 flights and, at the risk of making the girl swelled-headed, it must be recorded that, after a lapse of a year since the "Rhon" came to grief, she flew most capably. Mike Bruce, Viv and your correspondent, had a circuit each and, speaking for myself, I had quite forgotten what a LOT one can see from a primary. After releasing from the winch at about 950 feet I became aware of a distinct curling sensation in my toes.

Sunday, 6th March. "Heron," "Rhon," and "Coogee" towed out bright and early. Gordon MacDonald appeared slightly alarmed when an instructor commented, "We'll get rid of you first" and proceeded to order ground-skids for the "Heron." Gordon went on to 15 feet straights and then we started circuits in the "Rhon," with Jack Scully and Nance. Nance connected with a goodish thermal and came back over the landing-point without losing any height, which meant that she had about 800 feet to get rid of somehow. We heard a little wail come drifting down, but she doggedly beat up and down the boundary fence and at last put the "Rhon" down, loudly announcing that she, for one, didn't see what was so darned good about thermals. A little later the "Whippet" decided to play up, still "Whippet" has been behaving very well lately, so we can't complain. We had lunch while Fred Hutton made a fibre doover to make the necessary replacement. After quite a lot of effort the tow-car was running again and we dragged the machines out once more. By that time, the wind was strong and low interesting-looking clouds were racing over. The first circuit in the "Coogee" grounded everything, though, as conditions were found to be extremely turbulent, especially so within the last ten feet of the ground and careful ground-handling was necessary. So back to the hangar, but there's one thing about having a hangar, there's always something to do.

Report on the Annual General Meeting

Here are the names of the office bearers and committee men, duly elected for 1949.

PRESIDENT: Les Williams, 76, Atherton Road, Oakleigh.

VICE-PRESIDENT: Ron Roberts, 80, Teddington Road, Hampton.

HON. SECRETARY: Grace Roberts, 80, Teddington Road, Hampton.

HON. TREASURER: Alan Patching, 2, Sir William Street, Kew.

COMMITTEE: Geoff Richardson, 36, Mills Street, Burwood.

Mike Bruce, 2, Sir William Street, Kew.

Viv Drough, 5, North Road, Elwood.

John Day, 2, Noel Street, Brighton East.

Gordon MacDonald, 40, Lees Street, McKinnon.

Votes of Thanks were passed: To Geoff Richardson, for the grand job he did as Hangar Construction Chief. Jack Iggulden, for energetic efforts, having to do with getting water laid on to hangar. Fred Gascoigne, for good services as Hon. Auditor. Jack Scully, for good services as Committee man last year.

Entrance Fee and Annual Flying Subs.: After prolonged discussion a motion was passed which raises our entrance fee from 10/6 to £2/2/-, flying subs. from £3/3- to £3/10/6.

"Grunau" or "Two-seater?" On the subject of our building programme for later this year, discussion revolved around the question of whether the glider to be built should be a "Grunau Baby" or a high-performance "Two-seater." A sub-committee was formed to investigate all phases of this question. This Committee will report back to the first quarterly general meeting early in May. In the meantime, let's all give it some careful thought.

Unauthorised Persons: Motion was passed that unauthorised persons be prohibited from trespassing on club equipment or equipment in use by club or from entering hangar without permission. Judging by the gleam in the eye of the mover, the idea is that he can now legally hurl numerous small boys many yards over fences and into ditches.

Visitor from the West: Early Friday morning a few weeks ago, Bill and Joyce Iggulden, with the three small Iggies and the Roberts's were out at Essendon Aerodrome to meet Harold Luckley of the Perth Gliding Club, who was spending an hour in port en route to Brisbane. Having corresponded with Harold for some years, it was fine to meet him at last. He will be back in Melbourne later this month to spend a few weeks with us. As Harold is building an "Olympia," and unfortunately missed seeing Arthur Hardinge's job before it went to New Zealand, I hereby hazard a guess that Western Australia will also be represented at Berwick this Easter. How about it, Harold?

"Olympia" in New Zealand: And on the subject of Arthur and his "Olympia"—soon after arriving in Wellington, Arthur and his cousin, Mrs. Batten, who is accompanying him on the tour as his secretary, lunched with the Governor-General of N.Z., Lord Freyburg and Lady Freyburg. I know that the interest and encouragement extended by these two very fine people must be most warming to Arthur. More news about the tour next month.

That's all for now,

Your Hon. Sec., GRACE ROBERTS.

CAMBRIDGE UNIVERSITY GLIDING CLUB

At a dinner held in Cambridge on March 5th, the inaugural presentation of the Brunt Gliding Trophy for Inter-University competition was made by the donor, Professor David Brunt, M.A., Sc.D., F.R.S., to the C.U.G.C. for whom

the trophy was won by John Edwards who climbed 7,900 feet in our " Olympia " last summer. Our President, J. W. S. Pringle, M.B.E., M.A., proposed the toast of " The Guests," and Air Marshal Sir Roderic Hill, K.C.B., M.C., M.A., A.F.R.Ae.S., President of the Imperial College G.C., replied. In his address Professor Brunt stressed the value of the sailplane as a meteorological instrument.

During our camp at the Long Mynd in March there was never a dull moment. The highlight was David Carrow's fine Silver " C " flight of 102 miles to Newbury, which won him the Kemsley Prize of 40 guineas for a bunje-launched winter cross-country flight. He climbed to 10,300 feet a.s.l. in a standing wave over the Mynd, and to 8,300 feet in two others en route. This would seem to be the first flight of its sort (viz. by means of a *system* of waves) in this country.

W.J.G

GLIDING CLUB OF VICTORIA

Greater Efforts Needed

The time is now ripe for everyone to be exhorted to greater efforts. The successful Christmas Gliding Meeting should be a stimulus and not a drain on the strength and will power of the members.

First of all for the trainees :

Bent equipment is a sorry sight and requires a considerable display of " guts," if it is to be made serviceable again in a reasonable time ! So, get stuck into that repair work NOW ! Do it NOW ! Don't wait for the bunny who is the instructor to make the pace. This is your department and a crew who are willing will find the instructor and essential maintenance men only too happy to put in time supervising the work, when the crew come looking for jobs.

Also finish that job you are put on—don't just down tools any old time and leave the job to " someone else " to worry about. Burning a little " midnight oil " may be necessary now and again to save the work taking another week to finish.

Secondly : *for pilots generally* :

Are you flying each week-end or are you just talking about what you have recently done, and thinking about what you might do if someone else will fix up the equipment ready for you to fly ?

Do you turn up at the week-end ? Or do you phone up ? Are you keenly interested in sail-flying—or are you one who would like to fly if a crew would prepare the machine and other gear for you.

The Club should not only make the headlines, but should stay there and it is not the fault of the Committee or " that Secretary " or of anyone, but the individual club member if this is not the case.

EDITOR.

4, The Avenue, Oakleigh, S.E.12.

Carr Withall Annual Memorial Trophy

The Club Fund for the purchase of this trophy has now reached the total of £20. 13s. 6d. The latest donation received was £5 from C. L. De Jersey & Sons, Engineers, North Melbourne. All being well the Trophy will be presented for the first time at the Annual General Meeting on 15th March, 1949. The Award Sub-Committee has assessed the best flights for 1948 and the winner's name will be announced at the Meeting.

A letter dated 26th January, 1949, has been received from the late Carr Withall's wife (she has since re-married) Mrs. Beryl Stephenson. She expresses pleasure at the Club's institution of the Trophy and has forwarded a photo of her twin sons, who were born after Withall was lost in the Battle of Britain on 12th August

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1940. One of them (Peter) bears a remarkable resemblance to his father. Mrs. Stephenson is the niece of Dudley Hiscox, Chairman of the British Gliding Association and her husband is Geoffrey Stephenson—the only man to have crossed the English Channel in a sailplane.

Social Committee's First £100

The net profit of the Social Committee activities for the year ended 31st December, 1948, amounted to £100. 4s. 0d., and the transfer of £100 to the Club's Reserve for Flying Ground Facilities has been approved by the Executive Committee. The balance in the Social Committee Fund at 31st December, 1948, is now £9. 16s. 1d.

Now this is a real step forward in the history of the Club and has been achieved as the results of the efforts of a comparatively minor number of members in the face of difficulties and often with little support or encouragement from the main body of members.

A point worth making at this stage is that given the whole hearted support of all the members —that is a fair effort all round it would be quite possible to raise £200 during 1949.

SO ! HOW ABOUT IT ! YOU GET TICKETS SENT OUT TO YOU regularly— WHY NOT DO SOMETHING about spreading them around amongst your friends.

All our social functions are excellently conducted and we have had no dissatisfied customers ever. The Forester's Hall is centrally situated, has an excellent floor and is practically ideal.

Another point worth mentioning is that apart from the dancing the Club Dance is a good place for a rendezvous to meet fellow Gliding Enthusiasts.

Additional Tickets for the Dances are available from the members of the Social Committee. Tony Meriton (Secretary), 250, Richardson Street, Middle Park, Dave Darbyshire (Editor " Earbash "), 4, The Avenue, Oakleigh, Phone U.M. 3222, Ron Barker, 368, Barkly Street, F'scray, Lin Beck, 14, McNall Street, Richmond, Laurie Exell, 131, Victoria Street, Flemington, Phone FU 1927, and Bob McAliece, 48, Bangalore Street, Kensington.

Some Notes of Appreciation

South Australian visitor, Kevin Sedgman, writes as follows: " I wish to thank your Committee and club members for the way they received me at your Christmas Camp at Benalla, and for giving me the opportunity of the flying I wished in your Club aircraft. I was impressed by the high standard of maintenance on your machines and by all the flying activities I saw. The camp was a great help to me and the knowledge gained will be put to good use over here."

Our *Honorary Vice-President*, Dr. Fritz Loewe, Senior Lecturer in Charge, Department of Meteorology, The University of Melbourne has forwarded a note in appreciation of assistance of Club in regard to research work conducted at Benalla.

New Members

A hearty welcome is extended to the following new members: 203, Lewis H. Yardley; 204, John Dames; 205, Pat Delahenty.

On the Flying Field

Eric Ehrenberg has renewed his flying membership and is already in good form having made a thermal soaring flight of 38 minutes to 3,100 feet at Reservoir on 13th Feb., 1949. Eric had his first aerotow at Laverton on Saturday, 26th Feb., 1949.

Members at present to " Utility " stage are Bob McAliece, Laurie Exell, Peter Burkitt, Gordon Isaac, Jimmy Barton, Pat Bourke, Lin Beck and Tony Meriton.

Members away from Home

Jim Darbyshire writes from Bombay that he is on the way to England but hopes to be returning home shortly. His re-application for flying membership has been approved by the Executive Committee.

Bob Jervies has left Melbourne and is at present in the Mortlake district. He will probably be away from Melbourne for about 2 years.

Ted Desmond writes from the Met. Office, Jackson's Strip, Port Moresby, that he is having fun and games with a " Jeep " which he has acquired. His application for Silver " C " certificate has been approved by the Federation of Australian Aero Clubs and the Number is 2.S. or in other words the second one to be awarded in Australia.

New Members are Welcome !

Entrance Fee is £1. 1s. 0d., Flying Subscription £3. 3s. 0d. per annum. Ordinary Membership 10/- per annum. Flight charges range from 10/- to 12/6 per hour plus launching fee. The Club's Registered Office is: 28, Princess Street, Footscray, W.11. Hangars and workshop — Major Road, Fawkner.

BRISTOL GLIDING CLUB

March, 1949.

The 1949 soaring season started at Bristol on 19th March with a cross country flight of 27 miles by D. J. Farrar. This was made in an " Olympia " and starting by aerotow from Lulsgate, finished at the village of Somerton near Yeovil. The first part of the flight was made at about 5,000 feet and the last few miles at about 500 in an attempt to make Silver " C " distance over the poor thermal country of Kings Sedgemoor. At the same time E. T. L. Smith was getting colder and colder circling the Club " Grunau Baby " at cloud base over Lulsgate. He landed somewhat frozen after 1 hour 40 minutes vowing to be less pessimistic next time.

SHOREDITCH TRAINING COLLEGE

Gliding Club Report. March 1949

Repairs and burglar proofing of the hangar are now almost complete; the barbed wire apron which we considered a necessary precaution does credit to the ex-service campaigners who constructed it.

Wednesday, 9th

With the assistance of Fred Howl's car, a test hop was carried out and the afternoon devoted to ground sliding the new course, consisting of seven ab initios. We find that extensive wing balancing in windy conditions prove extremely valuable and also save petrol in that they require fewer ground slides.

Wednesday, 16th

Weather conditions were very rough indeed and a strong north westerly was gusting up to 35 m.p.h. However, the decision not to fly was reversed on the arrival of a photographer from the " Daily Mirror " who was anxious to secure some pictures of our " S.G. " in flight. Accordingly the machine was towed out by Fred's faithful old car and three hectic hops were

carried out by Terry Dawson and Louis Leith before the apprehensive gaze of our visitor. As weather was steadily deteriorating, flying became increasing difficult so we closed down and had a discussion in the clubroom before locking up.

During the following week, spirits were somewhat dampened by a circular from B.G.A. advising us of the necessity to comply with A.R.B. regulations concerning C's. of A. for all gliders and the subsequent cost.

We neither feel enthusiasm nor see any justification for this crippling piece of legislation. Previous records of accidents due to structural failure most certainly present no case ! and although the wisdom of having a C. of A. for every machine needs no emphasis, is it necessary to bleed the already weakened clubs of Britain any further ?

If the Ministry are so concerned with the safety of their pilots, then let them either fight for our rights to have decent machines to fly in or leave us alone with our present financial worries.

MIDLAND GLIDING CLUB
Winter Season 1948/49

Owing to a combination of circumstances notes of Midland Club activities since November have not been published in " Sailplane," but this does not mean that there has been any lack of flying at the Long Mynd. On the contrary, some very interesting things have occurred, rounding off 1948 in a satisfactory manner, and giving a good start to 1949.

On Sunday, 26th December a memorable Christmas Party was held at the Mynd. The year closed with a total of 1,550 hours flying time having been put in. Charles Wingfield was placed first in the National Gliding Competitions and David Ince fifth, whilst Wingfield was also awarded the " EON " Cup. During the year Prince Bira presented to the Club a magnificently mounted silver eagle to be known as the Siam Trophy, and to be awarded annually to the Club Member who makes the longest soaring flight from the Long Mynd.

In January the best day was undoubtedly the 16th when our standing wave was once again in evidence giving Edwards a climb of 6,200 feet and Wingfield and Hardwick over 3,000 feet. Later the wavelength of the wave must have changed, for there was such severe down-draught that hill lift was completely cancelled out in spite of an apparently adequate soaring wind.

The week-ends of 12/13th and 19/20th February were unfit for flying of any kind owing to low cloud lying on the hill-top. On Saturday, 26th February, Miller made an attempt on a Silver " C " duration flight, but lowering cloud forced him to land in the neighbourhood of Marshbrook after 4½ hours.

On March 12th the Cambridge University Gliding Club arrived with their aircraft for a nine days' camp as guests of the Midland Club. It was a good soaring day, and two ab initio pupils had dual instruction, whilst C.U.G.C. were soon airborne in their " Olympia " and " Prefect." March 13th was a day of high winds gusting at times to 55 m.p.h. The " T 21 " two-seater had to be flown so fast even to maintain station over the landing area that the instructor was unable to make himself heard. On March 15th the wind was at first northerly but later backed to west and Grantham of C.U.G.C. climbed to 5,100 feet, the last 300 feet in cloud. This was the first day on which a " Kranich " has ever been flown at the Mynd. It was also the first occasion on which a " Kranich " (together with other aircraft) has ever been squeezed into the M.G.C. hangar—comment from Teddy Proll after this feat had been achieved : " Oh ! My Goodness ! "

On 16th March the wind was very much north of west, but our wave was definitely operating in a big way. It was first contacted by Cambridge Club members who climbed to over 9,000 feet above hill-top and then went away—landing at Newbury, 100 miles. Later the wind became even more northerly so that the ridge was barely soarable and the lift near the edge was patchy and turbulent. Neill of the Midland Club was launched in the Club " Olympia " and after nearly an hour of hard work he reached, over Myndtown, an area of rising air with the smooth tautness typical of wave lift, and eventually climbed to a height of 12,000 feet above hill top, or 13,500 feet A.S.L. A full report of this flight appears elsewhere in " Sailplane."

On 17th March wind was westerly 20-25 m.p.h. and conditions seemed good apart from low cloud at 600 feet above hill top. Later this began to break and Dick in " T 21 " contacted lift half way between the Mynd and Wentnor (that is to say too far out to be hill lift) and in silky smooth air went rapidly up to 4,300 feet ending up over the south end of the ridge. Interesting note : wind at hill top level was 300 degrees magnetic and 35 m.p.h., whilst at 4,000 feet above it was 350 degrees magnetic and 45-50 m.p.h. Mrs. Foster in " Buzzard " also climbed to 4,400 feet.

The latter part of the week was disappointing in some respects though conditions appeared good. On March 18th there was good thermal activity but on 19th though winching continued all day from the south knoll no thermal contacts were made. On 20th the ridge was again soarable in a light westerly wind and 24 hours flying were chalked up. 21st March produced another light westerly with no wind at all in the valley and consequently very poor lift owing to reduction of the effective slope height. 26th/27th March brought strongly anticyclonic conditions with north-east wind veering to east and much haze—no flying done.

To the end of March flying times, including Cambridge Club figures, total 168 hours since the beginning of the year. The outstanding " funny " incident during the period was probably brought about by the forced landing of an unnamed instructor about a mile away from the Club house on the open hill top. After some searching, aircraft and pilot were located by a small party of Club members who proceeded to de-rig while a trailer was being brought. In readiness wings and fuselage were to be carried to the nearest track, but at this point darkness intervened. It is reliably reported that with one wing still missing the search party walked round and round for a solid hour with three feeble torches and much shouting before the missing wing was found —just where they had left it. Comment from Teddy Proll again : " Oh—my goodness ! ! "

NOTES

Gliding in S. Africa is to be State controlled but subsidised. Come on Springboks fight 'em. They know nothing about it so it is up to you, teach 'em and quote the example of this country. It's your necks you are risking not theirs and your insurance companies are as well able to take care of you as are ours. We await with interest any news of the steps you propose to take to preserve your independence.

Speaking to the Editor the Secretary General of the Royal Aero Club remarked that it had been overlooked that one of the conditions of the recent settlement by which Glider Pilots are not to be licensed, was that aircraft have to be registered and carry their numbers on wings, fuselage and fin. Minimum size for letters on wings is 20 inches (top right wing and under port wing), 14 inches on fin, and as large as possible on fuselage without obscuring out line.

Messrs. Slingsby's have orders in hand and negotiating for about 100 of their "Type 21" side by side two-seaters. Sweden has ordered 4 more, 70 are to go to the A.T.C. and R.A.F., some to India, and the recent meat shortage from the Argentine is holding up the fate of another large order. Hawkridge's two-seater—really a blown up "Grunau Baby"—has at last been rigged and seen the light of day. We hope to report on its test trials next month.

No one is building the prize two-seater machine which won the B.G.A. design competition.

Overseas Clubs with approved A.I.D. inspection can buy advanced Sailplane pre-manufactured parts from Slingsby's for local construction. This is a cheap method of getting the best wood machines to any part of the world, and they are warranted climate proof.

Group Capt. G. J. C. Paul reports from Montgomery, Alabama, U.S.A., that the only soaring he has observed to date has been by buzzards, which were nothing like as efficient as the German variety (circling about 1,500 feet) and almost invariably made lefthanded 360 degree turns. The German ones usually circled in the righthanded direction—like Jock Forbes.

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