Sailplane and Gliding

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COVER PHOTOGRAPH.—An Eagle at the north face of Mount Cook, South Island, New Zealand. Photo by Guy Mannering.

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WORLD CHAMPIONSHIP APPEAL

PLANS are well in hand for the preparation and equipping of the teams which are to represent Great Britain at the World Championships in Gliding in Germany during the early summer of 1960. The responsibility for getting together the necessary funds is again mine, and I ask once again that I may be allowed to launch my appeal for contributions—cash or kind—through the medium of SAILPLANE AND GLIDING.

It is intended to enter three teams and there are assurances given by the motor industry and glider manufacturers that requirements in the matter of vehicles and sailplanes will be available to us again in 1960. These magnificent contributions ensure the efficiency and elegance of the entry, and but for them I would be asking a great deal more than the £1,800 required to take the team of 17, their trailers and equipment, out to Germany and bring them back again nearly four weeks later. Other expenses include entry fees, insurances, instrumentation, petrol and oil, retrieving expenses and so on, all of which very soon mount up to an alarming extent. Each team member will make an agreed contribution to his own expenses, but we have still a long way to go to reach the target.

I am sure that those who have given in the past must feel that their gifts have played some part in sending a magnificently trained and equipped team to an all-important world competition from which it has always managed to emerge with outstanding credit and prestige. It will do so again, but we need the funds which go so far to make it possible.

Contributions—however big or small—should be addressed to me at Londonderry House and will be gratefully acknowledged.

BASIL MEADS.

EDITORIAL NOTE:—*Just as we are about to go to Press, the Council of the British Gliding Association has accepted the Selection Committee's recommendation that the following pilots and machines should be entered for the Championships:—*

In the Open Class: Nicholas Goodhart with an EoN Olympia 419; Tony Deane-Drummond with a Slingsby Skylark 3.

In the Standard Class: Tony Goodhart with a Slingsby Skylark 2. Reserve for both Classes: David Ince.

Handicapping in British Gliding

The following report of a specially constituted Sub-Committee was approved by the Council of the British Gliding Association on 9th December 1959, and is now put forward for the general consideration of the British Gliding Movement. The Sub-Committee members will welcome reports from Clubs, comments, suggestions and criticisms of whatsoever nature.

1. Purpose of Handicapping

THE only valid purpose of handicapping in a sport is to enable the participants to have more fun.

In British Gliding we now have, spread round the country, a large body of Silver C pilots who, that badge attained, need new worlds to conquer. True, there are the Gold Legs and Diamonds, but there are very many times when these longer flights are just not practicable, owing perhaps to weather, lateness of starting, lack of retrieving facilities, or sheer cost. The average pilot is then left with little incentive to do more than an hour or so's local fumbling, and it has been noticeable at many clubs the past year or so that the more intrepid spirits have, to lift themselves from this rut, been setting themselves little local tasks—out-and-returns, 100-km. triangles and so on.

At a few of the larger clubs these "tasks" are being put increasingly on an organised basis, with a "task for the day" and several participants, who compare notes afterwards—in the bar. One club, renowned for its originality of thought, has a competitive President's Ladder; and in another, a public-spirited member has offered a trophy based on an aggregate of various flights over a whole season. Thus the Gliding Movement travels slowly and inevitably towards local competitive flying, and it is to encourage, stimulate and channel this trend that a Handicapping System will find its immediate use; for at the average club the field for such a task will range from, say, a visiting Skylark III down through Club and Syndicate Skylark IIs and Olympias to, perhaps, an elderly, shining and well-loved private Kite 1, and the vital thing is that the owner of this last machine, as he tows his aircraft out to the launching point, should be able to say to himself: "If I fly really well, I have a chance of winning to-day". He will then get more enjoyment out of the day's flying, and so will the man in the Skylark III, for the competition thrust at him. And for those who do not wish to fly competitively, well, there is no reason in the world why they should not still continue to enjoy themselves happily as before.

There is a further special need for handicapping League II of the "Nationals" where the highest-performance aircraft, flying in a minority, won in 1957 and in 1959; and this, which has led to some adverse comment from the other contestants in that League, will be discussed in further detail.

2. Definition of Handicapping

It is necessary now to define the Ideal Handicap.

The intention is that the handicap be based entirely on the type of machine flown (*cf.* the Ocean Racing Handicap for yachts of widely differing shapes and specifications). The handicap is *not* based in any way on the skill of the pilot (*cf.* golf, where everyone uses identical equipment and the handicap is entirely one of skill).

The definition is perhaps best expressed by an example.

Take "A" with his Skylark III and "B" with his Kite I. Send them off on the same task, and on corrected results "A" scores 100 points and "B" 50 points. Now forcibly insert them in each other's aircraft. "A" in the Kite I, and "B" in the Skylark III, and send them off again in identical weather on the same task. If the handicap is perfect, the corrected results should again give "A" 100 points and "B" 50 points, i.e., the ideal system should evaluate the performance of the pilot, regardless of the type of machine he flies.

3. Pitfalls to Avoid

Handicapping, once started, will be here to stay, and it is essential that firm foundations be now laid for a system which may well last for many years and during which developments may take place which are undreamed of to-day. The following pitfalls must in particular be avoided:

(1) Excessively complicated formulae may lead to misunderstanding, argument, discouragement and eventually the disrepute of the whole handicapping system.

(2) In the present exciting and rapidly developing state of the Sport, injudicious

handicapping could lead to stultification of design and the channelling of development into narrow-purpose specialised machines to "beat the handicap".

(3) Too favourable handicap treatment of low-performance aircraft could lead to a retardation in the development of new and better gliders and of new techniques to utilise these machines to the best advantage.

(4) We must not fail to provide a "forum" whereby absolute comparative tests of new types may be measured, free of handicap, and where manufacturers may be encouraged to show their best.

4. The Perfect System is Unattainable

Even were it possible (which it is not) to obtain exact performance figures for all the various types of gliders, a perfectly fair handicapping system would still be impossible for the following reasons:

(1) WIND STRENGTH.—Obviously in a stiffish breeze a Skylark III may penetrate upwind, where a Kite I can only just hold its position. No handicapping can allow for this. Conversely, and not so obviously, in a downwind dash in a howling gale, the Kite I will travel nearly as fast and as far as the Skylark III (since it is the wind that does most of the work for both), and on handicapped results the Kite I will probably then be ahead.

(2) THERMAL STRENGTH.—This is the biggest single factor. In good lift there may not be much difference between the climbing ability of various types, particularly since the older aircraft with their slower speeds can sometimes get more into the core than the modern machines with their rather wider turning circle. But on marginal days with an absolute thermal strength of 2 ft/sec. the machine with a minimum sink of 1.9 ft/sec. will soar, whilst another with a minimum sink of 2.1 ft/sec. will fall, Micawber-like, to disaster. Hence thermal strength can on one occasion be comparatively unimportant and on another be a factor which (like wind strength) no amount of handicap can balance.

(3) DISTANCE BETWEEN THERMALS.—Here again, on a day of fair-weather cumulus, the lower-performance aircraft may be easily able to move from thermal to thermal, whilst on a day of towering cumulus with big gaps, or of dead strato-cumulus areas, it may be just possible for the high-performance aircraft to reach across to the next lift whilst lesser ships fall inevitably to earth; nor can this be compensated for by any amount of handicap.

There may be other reasons in other special circumstances (e.g. the problems of interlocking between handicapping, task-setting, and marking systems having speed and distance points), but these three basic ones will suffice to show that any system can only be a rough-and-ready "levelling up" to help the lower-performance machine in a general sort of way without any of the fine accuracy that is possible, for example, when handicapping racing aircraft on a circuit.

Further, no system can "level up" an SG38 with an Olympia 419, and no attempt will therefore be made to do so, the lowest performance bracket being the Grunau Baby/Kite I/T-21b range of performance. Lower than this, anyway, the pilot is almost always still a Silver C aspirant, and does not need the spur of competitive flying, nor indeed is he experienced enough for it.

5. Proposed Handicapping System

Your Sub-Committee has not, at the date of this report, been able to find a simple straightforward system which will really work for all cases. It has ideas for the future, with a scheme to be based on Polars, and recommends research on this problem. Meanwhile, however, it feels that handicapping ought, for the general good of the Movement, to be reinstated at once, in time for the 1960 Season, and proposes as an initial step the following admittedly rather broad categories:

Category	*Description*	*Suggested Handicap*
A	"Open Class"	Scratch
B	Gliders with a wing-span not exceeding 15 metres and two-seaters flown two up.	10% bonus
C	Gliders with load-carrying wing struts *and* an Aspect Ratio of less than 14.0	33⅓% bonus

EXAMPLES:

Category A: Skylark III, Olympia 419, Sky, Eagle (1 up), Weihe, Petrel (!).

Category B: Skylark II, Olympia II, Fauvette, Eagle (2 up), Kite II.

Category C: Grunau Baby, Prefect, Kite I, T-21b.

It is suggested that the Bonus be given on Marks Earned and the winning marks then

scaled to a maximum of 100 points for the task.

Workable ideas for further sub-divisions would be welcomed, but it is suggested that the above basis be used as a start (it goes back, in fact, largely to the Handicapping System existing in the Nationals before 1955). It will at least provide a foundation on which to build.

6. Future Research

For the future, your Sub-Committee recommends research into a categorisation of new and existing types to be based on an assessment of the aircraft's performance, due weight being given to minimum sink and to penetration at various speeds, using a method not at this stage discussed. Ideally, the aircraft Polars should be used, but since these are unlikely ever to be available for all aircraft, and since it would be unreasonable to accept manufacturers' estimates, the method will probably have to be based on the physical dimensions of the aircraft.

A final point is that, in the event of such research being successful, it will be necessary to check each individual aircraft (as at present is done with yachts), and any such check must be a simple process, capable of being carried out at Club level by a suitably qualified Official Measurer.

7. Analysis of League II Results, 1957 & '59

It is interesting to see what comparatively little effect the proposed system would have had on League II results in 1957 and 1959. For the first ten places the only alterations would have been:

1957 Torode and Partners (Petrel) drop from 4th to 10th.

1959 Blake and Partners (Skylark III) drop from 4th to 7th.

It is particulary interesting that the leaders in each case would not have changed; the handicapping here would merely have reduced their lead and would undoubtedly have served to "encourager les autres" and to stave off criticism of "pot-hunting"—no bad thing.

The Petrel is, of course, a special case, and the 1957 downgrading would have been rightly criticised as unfair. This is an excellent example of how unfair results can flow from a system of "broad categories".

A solution to this problem of elderly gliders can be proposed on the lines of "go up 5% all those whose type first flew before 1st January 1952". This would help non laminar-flow machines, e.g. Olympia, Sky, Petrel, Weihe and so on; but your Sub-Committee do not recommend this complication at the present stage of things, one difficulty being that types in service are liable to modification over a period of years and it could be argued (for example) that the current batch of EoN Olympia II's first flew in 1958 and not in 1947.

8. The British National Champion

Discussions in your Sub-Committee revealed a fundamental conflict in the scope of handicapping. Charles Ellis in his original paper stressed the value of handicapping as a method of selecting the British National Champion (and subsequently the British Team).

Lorne Welch and David Carrow feel that the British National Champion should be the man who produces the best absolute performance and that his selection must not depend on the whim of a necessarily rather arbitrary handicapping factor.

9. Recommendations

(1) It is recommended that the handicapping system proposed in Section 5 be instituted for the 1960 season and that its use be recommended for local competitions, for Rallies and for the National Soaring Weeks.

(2) It is recommended that a permanent Handicapping Sub-Committee of the B.G.A. be instituted. At the appropriate times, this permanent Handicapping Sub-Committee should co-opt a representative of the organisation responsible for the following year's competitions.

(3) It is recommended that this permanent

Sub-Committee be charged with the task of instigating and carrying through research into a handicapping system to be based on an assessment of the aircraft performance, preferably by the end of 1960.

(4) It is recommended that changes in the system (as may be recommended by the above Sub-Committee and ratified by the B.G.A. Council) be promulgated not later than 1st January of the year in which such changes are to become effective.

(5) Arising out of Section 8, the majority of your Sub-Committee recommend that for the next British National Championships League II be handicapped and League I be unhandicapped but divided into 2 separate classes, Open Class and Standard Class, who would be set identical tasks but whose marking would be kept entirely separate. The winner in each class to be announced as "British National Open Class Champion" and "British National Standard Class Champion".

The minority view is that the next National Championships should incorporate a handicapping system for both Leagues, in accordance with the recommendations produced by the Sub-Committee referred to in Paragraph 3 above.

DAVID CARROW
CHARLES ELLIS
LORNE WELCH

Nothing Outstanding Happened — New Zealand Style

An extract from a letter received from S. H. GEORGESON

WE returned about a week ago from the Hermitage after having a magnificent ten days soaring around the main peaks of the main divide.

Nothing outstanding happened, other than the excitement of landing Bruce Gillies on the Upper Tasman Glacier at about 6,000 ft. We did this deliberately after a fly-in with the ski plane and finding conditions hard. Bruce was eventually towed off with the Canterbury Aero Club's Piper, which also landed up there to retrieve him. This really was superb fun, as there is miles of hard snow plateau in this vast terrain, and the experience of doing this was really worth while.

I had an attempt at the World Altitude Record, but unfortunately this day turned up on the day when everybody least expected it, and also on the day when everybody was packing up to leave. Nothing happened other than I got one of the worst rides I have ever had in my life, and I think it is the only time I have been worried as to whether the aircraft would stand the turbulence.

I started hill-soaring at a very low altitude on Mt. Blackburn, and climbed to 8,000 ft. and then crossed the Tasman Valley over Mt. Wakefield. Here I suddenly encountered violent turbulence at about 6,000 ft., the Eagle spinning off turns on two occasions, and then the problem of trying to get the machine out of a dive with the speed at well over 100. These appallingly gusty conditions would keep stalling the aircraft and then putting the speed up to a very high degree. I stuck it for about half an hour and eventually got to 10,000 ft., and as the turbulence seemed to increase with altitude, I decided it was best to abandon the flight and land.

The curious part about this climb—which I did circling, as I find it's better to work this type of lift in this manner—was that we drifted from Wakefield across the valley over the Hermitage nearly to the Mueller Glacier. This was exactly into wind, which was about 40 m.p.h. at this altitude. The forward drift was due to the rotor action and was marked by cloud which I reached at 10,000 ft. This is the only time I have actually drifted against the wind due to this phenomenon.

It is evident that an accelerometer should be fitted if one is going to do this type of flying, as otherwise it seems to me to be impossible to tell just how bad the turbulence is.

Another peculiar thing from a personal point of view: I usually find that if things are a bit sticky, I get dry in the mouth; but on this occasion, after becoming dry in the mouth, I felt very peculiar in the mouth, and on putting my hand to my mouth, I

found I was actually frothing! Whether this was due to fright or being shaken up, I can't say.

The sad part of this occasion was that on reaching the ground, I was told that the lift was smooth above 10,000 ft., as a sailplane which was towed up earlier in the morning had descended giving this information. I have the feeling that if I had got through this turbulence, the lift in the upper air was considerable. We have radio which works very well indeed, but on this occasion the headphones would not stay on my head, so I was unable to receive information from the ground.

Jon took some lapse-rate movies of the rotor cloud which could be most interesting if they come out.

THIS GLIDING

Minimum Sink

He said that the machine, which gained second place in the world soaring championships in Poland last year, is capable of gliding seven miles at a height of 1,000 feet.—*Natal Daily News.*

Puzzled

Extract from letter received from Denmark by a Lasham member: ". . . I give you the regards of Mr. —— who happens to know you, as you have been teaching him in flying an aeroplane. He told me you were very, very helpful and tried to ease his nerves, until he one day lost about 50% of the lower part of an aeroplane—then he saw your true face. He claims he could not understand you were more concerned about the aeroplane than about him."

That Tell-tale Badge

The ruthless drive by 23-year-old T—— C——, manager of the —— Cinema, Hayes, goes on. His unremitting war is designed to maintain absolute peace and quiet during programmes. And he admits: "Admission is refused to anyone whose appearance I dislike." First of the three young men to get marching orders, 18-year-old E—— M—— . . . was wearing a badge signifying he passed his gliding pilot B certificate.—*Hayes Gazette.*

Gipsy Type

by L. P. Moore

In the early 1930's, when the gliding movement was re-establishing itself in this country for the first time after a long lapse, pioneers were busily quartering the hills in a search for club and competition sites and *ad hoc* meetings were the order of the day. They were gipsy days when mobility and flexibility were the first essential. They gave rise to diminutive gliders capable of being towed behind diminutive cars and of being handled and launched by three or four men. They put syndicate membership within the reach of many people's pockets: they were romantic as well as industrious days.

With clubs established, hangars, winches and large ground-handling crews and facilities generally available; with national and international competition breeding a super-duper class irrespective of most consequences on the one hand, and with subsidized A.T.C. breeding low performance dual and solo trainers on the other hand, the stimulus to the small mobile high-performance gipsy type dwindled to a point at which it offered no worth-while market. Alas, the last spark of post-war revival was extinguished when the attractive, promising little Wanderlust project failed, and here we are to-day with no British counterpart.

"What you've never had you'll never miss," the saying goes. Few of the present generation of sailplane pilots will remember Crested Wren and Scud II, and I suppose that is one of the reasons why there is no clamour to-day for a modern counterpart in this country. Scud II, a cantilever tapered parasol-wing type, represented high performance in the early thirties: the one-speed slow-speed low-sink days before penetration had been seriously thought about. Simple in the extreme, robust and well-finished, Scud II weighed but 150 lbs. and when first produced cost merely £95. A forty-footer packing into a lightweight trailer with a green canvas bivouac top, capable of being towed behind a light car, it was just the job for the gipsy type of operation.

That the gipsy spirit is alive to-day is borne out by the enterprises of such as Bill Crease and the *cris de coeur* from the late Fred Hoinville. It is the aim of their like to transform gliding from the competition and badge-qualifying field to one of thrilling exploration of mountain slopes. What could modern techniques offer such worthies?

In searching for the answer to this question, we could start with a Scud II and "laminarise" it, as it were, or we could start with what is probably the most advanced type of sailplane and scale it down from the super-class to the 12-metre type we have in mind; and I believe the latter course to be the better.

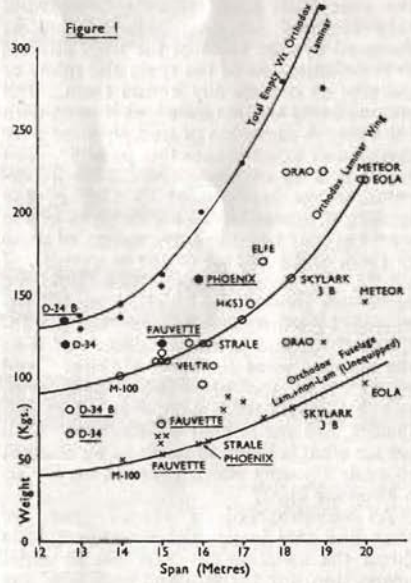
Shall we start therefore with the German Phoenix, which seems to me to represent the acme of perfection in the light of modern knowledge? This type of sailplane employs a form of construction in which the necessarily thick well-stabilised wing skin required for true laminar flow is designed to take most of the wing stresses to the elimination of the spars and many of the ribs as one usually knows them. The spar and ribs are integrated, as it were, with the skin. A sandwich of thin plywood over thick balsa wood makes this possible. The result is a 16-metre sailplane with a performance at least equal to that of the leading orthodox 17-20 metre types in the world at only two-thirds the weight of some of them and half that of the remainder. I would, in fact, suggest that Phoenix represents nearly the highest and best-balanced performance possible for the 16-metre class, and hence my choice of it as the starting-point for scaling down. And so, keeping the same wing plan-form, thickness/chord ratio, wing profile, strength factors and method of construction, shall we see what is likely to result as we attempt to scale Phoenix down proportionately to a 12-metre class?

As we progressively reduce span, we soon find that in practice we cannot scale down the sailplane as a whole in strict proportion, for the size and weight of the pilot and hence of the cockpit cannot be reduced. Thus the fuselage weight, which could be expected otherwise to vary approximately as the square of the wing span, in fact reduces proportionately a good deal less than that, with a result that the over-all nett supported weight of the pilot plus fuselage dwindles little with dwindling span. Meanwhile, however, wing area,

which varies as the square of the span, is reducing without compensating reduction in nett supported weight. This results in an increasing nett supported weight per unit of wing area, and this in turn leads to a beefing up of the wing in order to maintain the strength factor. In consequence the weight of the wing itself, which would otherwise vary approximately as the square of the span, reduces in weight far less steeply.

We are, in fact, increasing progressively both the ratio of nett supported weight and of over-all weight to wing area with a corresponding increase in over-all wing loading.

This reactive effect upon the wing weight makes it difficult to explain more lucidly what is happening as we scale down and so I have drawn at Figure 1 a graph showing



the relation between wing and fuselage weight on the one hand and wing span on the other, taken from a wide selection of well-proved efficiently constructed orthodox sailplanes, each of high performance in its own class (i.e. span) having an aspect ratio of 16 or over and extensive laminar flow. For comparison have been included the figures both for a selected few of the top performance non-laminar types and those of the latest high performance laminar types incorporating the wonderful new plywood/expanded plastic (or balsa) sandwich construction (Darmstadt D-14, Fauvette, Phoenix). A few of the types plotted have been named.

Eventually we arrive at our 12-metre laminar type therefore, to find it with a slightly higher wing loading than that of the Phoenix from which it has been derived, with the same frontal fuselage area but with a greatly reduced "wetted surface" area. We could therefore expect it to have a slightly reduced thermability but comparable penetration. The remarkable little Darmstadt D-34 bears this out as follows:—

	PHOENIX	D-34
Span (m.) ..	16	12.65
Weight (kg.) ..	162	123
Sink (m./sec.) ..	0.53	0.56
at Speed (km./h.)	69	73
Gliding angle ..	1 in 37	1 in 36

although, as the graph shows, both Phoenix and D-34 have an appreciably heavier form of wing construction than Fauvette, while none of the three fully exploits the sandwich form in its fuselage. The D-34 fuselage is in fact heavier than for normal form of construction.

Now let us apply the sandwich construction to the orthodox non-laminar type. As most of the wing surface is fabric-covered, weight-saving will be proportionately less than for the laminar type; but a considerable saving in fuselage weight can be expected. Making allowance for the more severe stress requirements nowadays, the result should be a 12-metre type weighing not more than Scud II but having a modern section and smoother, more stabilised unribbed wing surface forward of the mid-chord.

The following interesting facts emerge from the graphs. Comparing span for span:—

(a) Sandwich laminar wing is about 60% weight of orthodox laminar wing.
(*b*) Sandwich laminar wing is approximately equal in weight to orthodox non-laminar fabric-covered wing.
(c) Orthodox laminar 12-metre sailplane comes out at 130 kg.; sandwich laminar ditto, 80 kg.; orthodox non-laminar ditto, 80 kg.

But suppose we now approach the problem from M. Fauvel's brilliant point of

view and "treat" his tailless AV-36 to the new construction. Here we have a 12-metre type which, with an aspect ratio as low as 10 and weighing only 120 kg. (256 lbs.), is none-the-less somewhat superior to the Olympia—such is the proved benefit of weight- and drag-saving derived from elimination of the tail. I have little doubt that the designer could have saved even more weight if he had so wished, but with a wing-loading of a mere 15.8 kg./sq. m., possibly there was no great incentive to do so. However, our sandwich treatment should bring its weight down appreciably. This would then permit either a reduction in wing thickness from its high figure of 17%, or laminarisation, or an increase in aspect ratio, or a compromise combination of two or all of these improvements, all for the same wing loading or very little more. One's mouth waters at the thought of it and I only pray that M. Fauvel or someone else with equal imagination is contemplating something on such lines.

As it is, the AV-36 is somewhere near Fred Hoinville's dream of the "flying plank" with all the financial economy the constant-chord, constant-thickness wing implies. At 12 metres, however, I doubt whether there is much scope for increase of aspect ratio without the expense and complication of sweepback, because of the need to have adequate longitudinal lever-arm for stability and fore-and-aft control, and absence of taper adds wing weight.

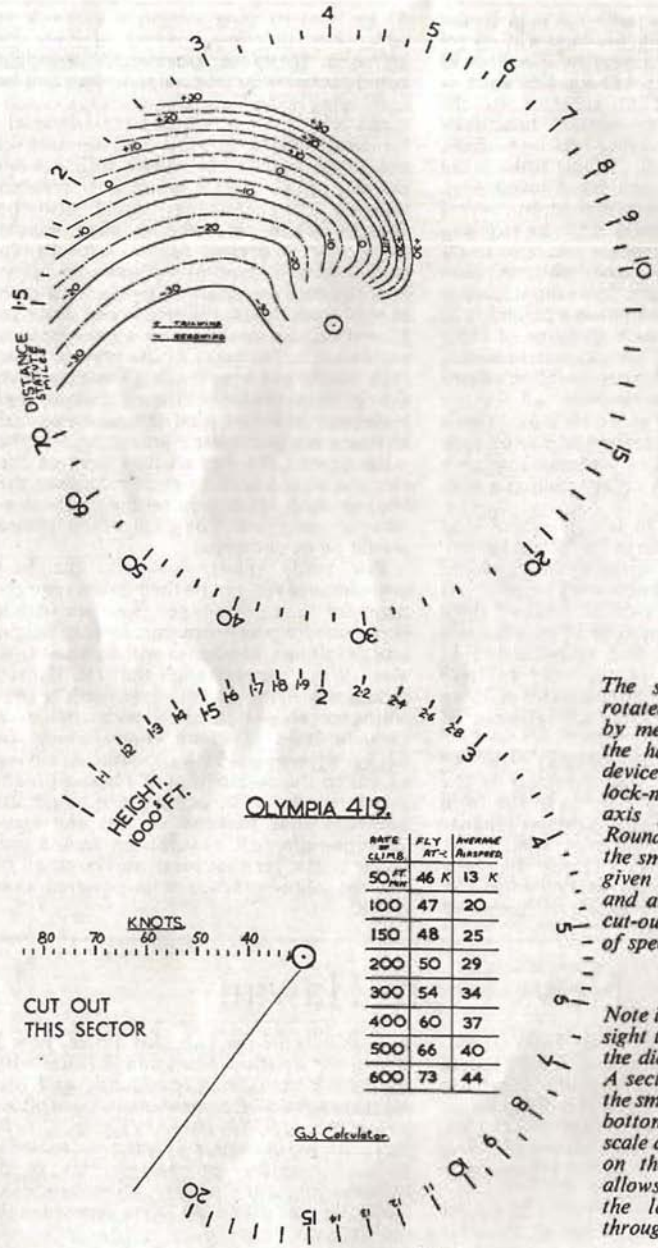
There is, however, another line of approach where financial economy is the dominant factor, and that lies in the form adopted by the intriguing taperless laminar and orthodox Hungarian Bibic: span 15 m., weight 155 kg., aspect ratio 20, sink 0.65 m./sec. at 68 km./h., gliding angle 1 in 27.8. Its fuselage is relatively heavy at 65 kg. and its wing section is as thick as 18%, but its wing loading is only 20 kg./sq.m. Given the "treatment," its weight could probably be reduced to 95 kg., and by employing wing-tip end-cap rudders combined with a much abbreviated tail solely for longitudinal stability and control, it should be possible to reduce weight even further. With wing loading now reduced thereby, wing thickness could also be reduced while yet keeping wing weight lower than its present figure. Aspect ratio is already at its optimum figure—20. The result should be enhanced penetration with at least equal thermability. Scaled down to 12 metres, one could expect a performance somewhat of the order of the present Bibic with weight and wing loading slightly above the optimum because of the untapered wing. I suspect, however, that the advantage of having a proportionately greater area of the wing nearest the more active core of the thermal would tend to counterbalance the heavier wing loading in so far as thermability is concerned. The great selling feature would be its cheapness.

For many pilots, however, the best performance will not be their main requirement for their gipsy type. Satisfied with a useful medium performance, lowest weight and maximum handiness will be their first aim. When we remember that Dr. Horten is actually flying a delta type with a performance almost identical with that of a Grunau Baby II at an empty weight of 37 kg. (I repeat—37 kg.) without having exploited the possibilities of plywood/foam plastic sandwich in achieving it, we must conclude that perhaps we are not daydreaming after all. Maybe we should aim at the outset for that ideal, surely, of all of us—the pilot-launched pilot-powered sailplane.

News From Hawaii

THOMAS J. Winkler writes from Honolulu:—I have managed to revive soaring in Hawaii. To create some dust and publicity, I flew on 25th/26th August an *unofficial* U.S. duration record—23 hrs. 43 mins. in a Pratt-Read. My co-pilot was Mr. Gèza Vass, a Hungarian refugee who came here from Canada.

Up till recently I was Director of Glider Operations, Hawaii Wing Civil Air Patrol—an auxiliary of the U.S. Air Force, now I am in the aviation education division with the task of collecting, evaluating and disseminating of all European and Asian glider programmes. With Pan-Am's help, C.A.P. national headquarters is after a national *subsidized* glider programme for youth aviation education and vocational motivation. I am proud to have started this movement.



RATE OF CLIMB	FLY AT	AVERAGE AIRSPEED
50 FT/MIN	46 K	13 K
100	47	20
150	48	25
200	50	29
300	54	34
400	60	37
500	66	40
600	73	44

The larger dial has distances marked round the outer edge, and the Polar curve (in this case for the Olympia 419), adapted for head- and tail-winds, is on the left of the centre.

The smaller dial can be rotated upon the larger one by means of the thumb of the hand which holds the device. A screw with a lock-nut serves as a common axis for the two dials. Round the outer edge of the smaller dial, heights are given in thousands of feet; and along one edge of the cut-out portion is a scale of speeds.

Note in Press:—By an oversight the circumferences of the dials have been omitted A sector must be cut out of the smaller dial, between the bottom edge of the "knots" scale and the figure "20" on on the height scale; this allows the Polar curves on the larger dial to show through.

INVENTORS' CORNER

THE G.J. CALCULATOR

THIS calculator started life as a simple, circular slide-rule, and as such had no advantage over the glide-angle graphs in common use. However, John Williamson had an idea which transformed the device. John's idea was to incorporate the performance curves of the aircraft in various winds directly on one of the components, and these curves were then traversed by a speed scale on the other component. When a particular speed was set against one of the performance curves, then the outer two scales give heights against distances directly. This is very useful on final glides because it enables one's achieved angle to be checked continuously, and if either undershooting or overshooting then the necessary speed change is shown immediately.

The best way to discover all its uses is to construct one and try it for yourself. I made 200 degrees equal to the interval 1 to 10 and the angles are of course in logarithmic series. The speed scale should cover the range you are interested in, and the position of the performance curves is then derived empirically. For example, if a 10-knot headwind and at 50-knot flying speed the curves give an achieved angle of 25 to 1, then set 25 miles on the outer scale against 5,280 ft. on the inner scale, and then a mark made opposite 50-knot mark on the speed scale will give the point of the 10-knot headwind curve. A series of such points at different flying speeds will give the complete curve. This is then repeated for headwind and tailwind components at 5-knot intervals.

GEORGE BURTON

Wingtip Thermistor Project

by Humphry Dimock

WHEN the thermistorised electric variometer came into use, it at once occurred to me that to split the two thermistors and fix them on the wingtips of a glider would be a logical step, as they could be used for measuring the difference in the wing-tip temperature when a thermal was approached, and would tell the pilot which way to turn. Not only that, but surely the presence of a thermal could be detected by its outspill. On making enquiries, it was disclosed that something of this nature had already been done by Peter Temple six years ago, using thermopiles which generated their own electrical current, and which did not require an amplifier, but operated a meter in the cockpit by simply connecting it up.

Peter Temple, in his article in GLIDING (Winter 1953-4), reported results such as I had expected. Derek Piggott also wrote an article in the same issue confirming it. Thereafter some gliders were wired for this on construction, but from discussions with senior pilots it appears that they were not impressed with the device; in fact, some condemn the idea completely.

Nevertheless I am proceeding with my experiments, and so far I have produced a model 2 ft.-span glider fitted with thermistors in the wingtip and an amplifier in the body to work a microammeter. It works as it was intended, so far as one can judge.

The next step is to construct a form of wind-tunnel so that the wingtips can be held in air of measured temperature difference and measured airspeed over the operational range. Subsequently it is intended to fit small loud-speakers each side of the head in the cockpit so that the readings become audible, and another behind the head fitted so that it will become noisy when the electric variometer registers green. One will then be able to enjoy the view and map-read as necessary instead of flying with eyes constantly watching instruments. This equipment is being fitted to my Eagle so that two people can enjoy the benefits instead of only one.

Although the thermopile method would seem to be the best type of detector, it must have the disadvantage that after a prolonged climb in a small-core thermal, the inner wing would soak up the warmer temperature and the inside junctions with it, so that on leaving the thermal, or as it weakens, the instrument would give the opposite indication. In other words, after finding the first thermal, it becomes unreliable. The thermistor will not be liable to this error, but may well have some of its own peculiarities. Time will tell, but in any case there is one thing of which we are assured,

BIG TOW IS JUST ANOTHER JOB

For the Vanguard Estate Car this is just another job. In this case, it is towing an Olympia Eon 415 Sailplane of the British Gliding Team which took part in the 1958 World Gliding Championships in Poland.

Philip Wills, whose Vanguard Estate Car towed his "unusually large and heavy trailer" for 4,000 miles in three weeks when he led the teams in the National Championships in Holland, wrote to us recently: "In some 25 years of Gliding I have not previously had a tow-car which has put up such an impeccable performance".

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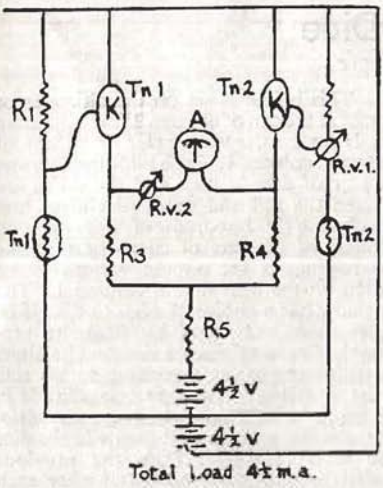


and that is that there will be lots of interesting fun next year for lots of people in seeing how it does or does not work.

Credit for the help in the electronics of the first model goes to my son Julian, who designed the circuit and amplifier, which astounded me by working perfectly when assembled and connected up. A member of the Portsmouth Naval Gliding Club is producing another set suitable for installation in the second model, so we will have two to play with in case one model is dropped and broken.

If any readers are interested in this project and have ideas which might help, I should be happy to discuss progress to date if they will get into touch with me.* There is no patent involved in the idea, and rumour has it that others are working on the same lines. I should be pleased to swop information.

* 26, Beechcroft Road, Alverstoke, Hants.

High-Speed Spiral Dives or Circular Fugoids?

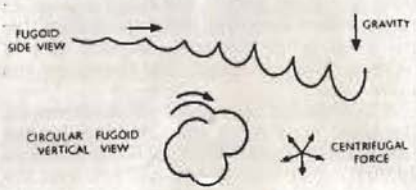
by Brennig James

WHEN I first began to think about cloud flying and read up all the lore, I was impressed with an almost superstitious reverence for the mysterious high-speed spiral dive; however, since that time, though I have done a lot of peculiar things in clouds, I can't honestly say that any of them could be described exactly as a high-speed spiral dive. Flying on turn-and-slip, the main thing that seems to go wrong is that half the time one appears to climb very fast and the rest of the time one goes down; also one's speed varies in time but not in phase, so that one feels that either the aircraft is doing a series of loops or that it is circling only half in and out of very strong lift. It was only by chance that I found the answer to this problem, but first let us consider the question of a sailplane's longitudinal stability.

Flying hands-off nearly always one's speed begins to fluctuate until the aircraft stalls repeatedly with increasing violence, a manoeuvre called fugoids; if you don't believe this, either watch people flying model aircraft or get some clear airspace and try it for yourself.

The next exercise is to fly hands-off in a spot of clear airspace at about 3,000 or 4,000 ft. and apply rudder continuously. The aircraft yaws, drops a wing, then turns quite smoothly and gently at first, then increasingly steeply after about the first turn. The speed now begins to fluctuate fairly violently, but despite this the indicated rate of turn remains fairly constant. This manoeuvre is best described as a circular fugoid and is a projection of the ordinary fugoid which is related to the vertical pull of gravity onto the radial pull of centrifugal force (see diagram).

I think the cause is not holding off sufficiently while circling in cloud, and the solution is to reduce bank or level out and start again. It would surprise me if this were not, in fact, the explanation of the high-speed spiral dive.



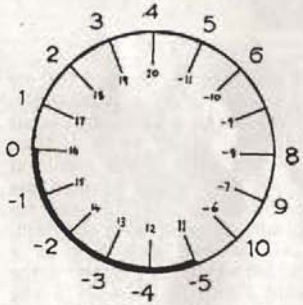
Thermal Dice

by John Pringle

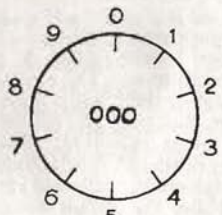
My fellow-members of the Cambridge University Club have at last persuaded me that it is time I wrote up this gliding game. It has evolved and improved a lot in the two years that we have been playing it, but since the first idea was mine, I suppose it is my job to put it on paper. The game was originally conceived "for amusement only", but in the hands of Bill Crease, Lionel Alexander and others, and now of Anthony Edwards, it has become a more serious exercise in flight planning. There are many variants, but the version which I shall describe is the simplest for others to try.

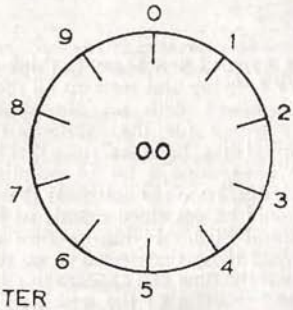
The object is to carry out a set task, which is chosen on contest lines before each game begins. The requirements are a quarter-inch aviation map mounted on soft fibre board, flagged pins for each pilot, a pair of red and green dice and either just a pencil and ruled paper or an instrument panel card. This last can be made in a few minutes out of cardboard and paper-clips; if it is not available the paper should be ruled with two columns headed "variometer" and "altimeter". Before the contest starts it is necessary to decide the type of sailplane to be used. Each turn in the game represents two minutes of flying time, and polars for the Swallow or Olympia, Skylark II and Skylark IIIB, or Eagle are shown in the table.

All contestants arrange their machines on the home aerodrome and draw lots for the first launch. Launching may be by winch to 1,000 ft. or by aero-tow to 2,000 ft. over the site. This height is set on the altimeter or written at the top of column 2; the minimum sink is set on the variometer or written at the top of column 1. Each pilot then throws the pair of dice in turn and the difference between the red and green dice gives him the *change* (in hundreds of feet per two minutes) of his rate of climb or fall; the new reading is set on the variometer or written on the next line in column 1. The pilot now has a choice of what to do. If he circles (does not move his flag), he presumably flies at minimum sink and he alters his altimeter reading according to his rate of rise or fall, or writes the new altitude in column 2. *If he circles, he keeps the variometer reading* and his next throw of the dice adds to or subtracts from the previous figure; the altitude is corrected after each throw. If he stops circling he may fly straight in any desired direction at any desired speed, and his loss of height through the air is given by the polar; since the variometer is total energy, the additional loss of height for fast flying must be allowed for in the altimeter setting. *If he flies straight, he abandons the mass of air in which he was circling and must, after working out his new altitude, re-set the variometer to the figure for minimum sink, or alter to minimum sink the figure written in column* 1.



VARIOMETER





ALTIMETER

These are all the basic rules. Naturally if the variometer shows climb the pilot will do well to circle unless he is in a great hurry. If it shows sink he will press on: how fast and in which direction is for him to decide.

Table (polars)

Speed (*m.p.h.*)	*Distance covered* (*miles*)	*Additional loss of height* (*ft. per 2 min.*) Swallow Olympia	Skylark II	Skylark III Eagle
45	0 – 1½	(300)*	(300)*	(200)*
60	2	100	100	100
75	2½	400	300	300
90	3	900	700	600

* Figures in brackets are "minimum sink".

Different people play different supplementary rules. The following give a good approximation to actual flying conditions.

(1) TOWNS, WOODS AND WATER.—When at less than 2,000 ft. add 1 to each dice throw when over large towns (those printed in capital letters), and subtract 1 when over woods or water.

(2) WEATHER CONDITIONS.—Decide beforehand the height of cloudbase and of the inversion or stable layers. When circling above cloudbase and for two turns thereafter, double all dice throws; when above the inversion or in a stable layer, subtract 4 from each dice throw until the variometer shows minimum sink (i.e. stable air) or less.

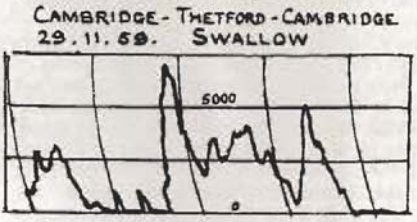
(3) RETRIEVES AND LANDINGS.
- (a) For a landing back on the home aerodrome—lose 1 turn for a fresh launch.
- (b) For a landing at another aerodrome—aero-tow retrieve at 3 miles per turn plus 1 turn for the launch.
- (c) For a landing elsewhere—road retrieve at 1 mile per turn plus 1 turn for the launch.
- (d) For a landing more than 200 ft. underground or in impossible places—prang (1s. to club funds).

(4) WIND.—Decide beforehand the wind strength and direction and move an appropriate drift at each turn.

(5) TURNING POINTS.—Pilots must be on the turning point below cloudbase in order to be observed.

The game will be found to produce a very realistic flight situation and can be complicated *ad lib* once its essentials have been mastered. We have had hill-soaring sites with lee eddies, standing waves and other aids and hazards. Special maps can be made with a half-mile hexagonal grid, which makes it easier if there is a big entry, but a notched perspex ruler is almost as quick and gives more latitude. We should be interested to hear of other improvements, provided they are not too complicated.

Last Sunday afternoon was wet, so my son John and I tried an out-and-return to Thetford in Swallows in no wind. He needed four winch launches to get away and came down on the way home. I got away at once (see barograph chart), but had to land



at Mildenhall aerodrome and have an aero-tow back. On my third launch after that, I found conditions had improved and went straight into cloud (base 4,000 ft., inversion 6,000 ft.), but made slow progress near Tuddenham and nearly had to land on the way back. The whole of this flight lasted 2½ hours, which is not good for 50 miles, but there were some terrible downs near the edges of the clouds, and anyway I am not yet used to this aircraft.

EDITORIAL NOTE:—Dr. Pringle states he will do his best to supply a pair of red and green dice if 1s. in stamps is sent to him at Peterhouse, Cambridge.

PORTMOAK INVASION

The story of the Handley Page Gliding Club's summer expedition to the home of the Scottish Gliding Union.

by L. W. Dowdall.

Two thousand seven hundred trailer miles in 24 hours' travelling perhaps constitutes something of a record for a Club expedition. Whether it does or not, it represents the total trailer mileage which was made when 19 members went on our summer expedition to Portmoak this year.

The major items of equipment taken, not including tents, cooking utensils, and even a scooter, were the Skylark 3b, Rhönbussard and T31 two-seater with their associated trailers. The motor transport consisted of the Club's two Humber vehicles, a firm's Bedford lorry and a private A-40 Sports.

The party was composed of four Skylark pilots, including 3 instructors, Geoff Wass (C.F.I.), John Rymill and the author; four Bussard pilots; one Tutor pilot; and 10 "dual" members including the two girls, Jackie Brown and Ursula McCullagh.

The expedition set out on the evening of Friday, 24th July for the Scottish Gliding Union's home at Portmoak in high anticipation of good things to come. The basic idea was to travel overnight, using a relay of drivers with two-hour stretches at the wheel, via Scotch Corner, Carlisle and Stirling.

The sheer splendour of Bishop Hill in the afternoon sunlight, as one approaches Portmoak from Kinross, is a sight no one can forget easily. This hill dominates the scene for miles around with its steep west-facing slope reaching up to 1,000 ft. above the local countryside. It was in this setting that at 4.30 p.m. on Saturday we arrived on the site, to be met by Tom Davidson (C.F.I.) and Mr. and Mrs. Andrew Thorburn, who immediately made us all at home. Our tents were soon erected, food orders arranged by Jackie and Ursula with Mrs. Thorburn, a kitchen set up in the Club-house, and by the time Geoff Wass arrived in the Bedford (after dynamo trouble) at about 8.30 p.m., the expedition was settled in, with the first meal already well on the way.

The next three days were rather a wash-out from the weather and flying point of view, with south-easterly winds blowing most of the time, bringing with them low, wet stratus across the site.

On Wednesday morning a drying N.N.E. wind was blowing on Benarty, the soaring ridge to the south and west of the site. The hill was working well and Geoff Wass and the author were fortunate enough to get on to it in the Skylark, before the wind slowly changed to its more usual (for this week) easterly direction. Most members flew circuits, however, in the Scottish Gliding Union's T21's.

The next three days were much of a sameness, with the sun now shining most of the time, and of course an easterly wind blowing continually. Friday proved the best day from the circuits point of view, when 63 launches were made.

Then came the Big Day. A strong westerly wind was blowing straight on to Bishop Hill for the first time. Paul Langston and one or two others were up early (for the first time in the week!) and Paul was sent off in the Skylark on his five hours. John Rymill followed in the afternoon to get his, making a total of 10½ hours' flying for the

"The next three days were rather a wash-out . . ." From left to right, complete with reflections: P. Ranson, L. Dowdall, J. Jordan, M. Whitley, M. Knott.

aircraft that day. John got to the highest altitude, 3,000 ft., flying in minor wave lift well out in front of the hill—most of the time in cloud—as was Paul's flight. The Bussard also spent several hours on the hill, and much to the surprise of all so did the T31. The technique with the latter was to gain at least 850 ft., if not more, on the launch, turn off immediately and head for the hill three-quarters of a mile away. Once the decision to go had been made, it was a matter of holding one's breath, and with eyes glued to the vario a bee-line was made for the nearest point of the hill. This would be reached at about 600 ft., when the green ball would waver before giving the reassuring "two up". Four beats very close to the hillside would suffice to get it to the top, after which it was plain sailing up to as high as 2,000 ft. above the site.

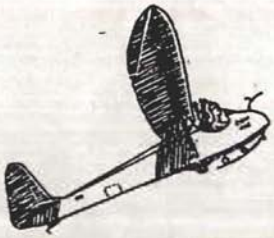
In all, everyone managed to get some hill-soaring experience that day, and 21 hours was completed on our machines alone.

Next day, Bank Holiday Monday, was our last. The hill was still working, but not so well as on Sunday. Both of the S.G.U. T21's and the Skylark, however, used it to good effect; but poor John Rymill, solo in the '31, found out by hard experience that things were not so good as the previous day, and was forced to land in a cornfield at the bottom of the hill. Watching from the lofty perch of the Skylark above, the author has never seen a glider stop quite so quickly! However no damage was done to the glider.

After saying our goodbyes to our hosts, we left at about 11 p.m. and speeded southwards by a slightly different route, via Edinburgh and Newcastle. The same shift system was used and all got home safe and sound, but all with a ticket for speeding!

On looking back, there is one factor which can be picked out as the most outstanding and that was the truly outstanding hospitality of the S.G.U., who gave us the full use of their clubhouse, their ground equipment, their hangar, and then their T21's with Geoff Wass instructing, not to mention the personal help and inspiration we received from individual members, especially Mr. and Mrs. Andrew Thorburn and Tom Davidson, during our stay at their site. The other factor which stands out is the sterling work done by Jackie and Ursula in preparing all our meals, and the way the rest of the Expedition put their backs into the various chores that needed doing around the site.

It is the comradeship which one meets in Gliding which makes it worth while.



ITS - ALL - YOURS

For and About Instructors

The Travelling Circus

THE idea of visiting clubs who had only limited training facilities of their own with an Eagle, grew from the Advanced Instructors' Course last September. It was felt that such visits could provide an opportunity for the club members to obtain experience not normally available to them, and, in the case of small clubs without even a soaring glider, a glimpse of future possibilities and the way ahead.

So far two experimental week-end visits have been made, and a third is booked for January. Two or preferably three instructors go with the Eagle, always including at least one member of the Instructors' Panel, and they fly any members put forward by the C.F.I. Club instructors usually want aerobatics or instrument flying. U/t instructors can be given practice in patter and demonstrations, and those of small experience first aero-tows, general flying or use of brakes. The Saturday evening is spent showing slides, and in lectures on various aspects of gliding and discussions.

The club visited is responsible for organising aero-towing for the week-end, and pays an all-in fee (at the moment £6) for the Circus. It then charges those pilots who fly the Eagle in order to recover its expenses. About 20 aero-tows were made on each visit. The number of visits that the Circus can make is limited by the availability of the Eagle, and any club who would like its services should write to the B.G.A.

Turbulence

Glider pilots are only too familiar with natural turbulence, but probably have little experience of, or interest in, the man-made article. It can have, however, disastrous effects on light aircraft, as the following summarized report will show. The information here has been taken from *Aviation Week*, to which acknowledgement is made. The whole report is an example of thorough investigation and clear presentation of valuable information.

A Piper aircraft owned and piloted by W. Miller, 31, crashed following structural failure in Delaware on 23rd September 1958. The pilot was killed.

On the basis of all available evidence the Board believes that the aircraft was airworthy and was being flown normally and competently in clear weather and smooth air when suddenly subjected to air loads greater than those it was designed to withstand. The overloads were downward and not consistent with loads normally imposed by any aerobatic manoeuvre. The pilot, who was known to fly conservatively, was transporting fragile and expensive phonograph equipment. There was no evidence of collision.

Thus, violent artificial turbulence produced by an aircraft having high span loading is the only plausible explanation. (1) The area was being traversed repeatedly by large military aircraft at the Piper's altitude. The wind was light, allowing longer life to the wakes of those aircraft (2) The nature of the failure can only be explained by violent downloads to both wings applied simultaneously.

Turbulence lies in the wake of all aircraft and its severity and persistence depend on several factors, which are still unknown to many pilots. Engineering studies clearly indicate that vortex disturbance can be enough to cause structural failures of light aircraft; however, vortices of such destructive magnitude are generally associated with large aircraft. Official Reports* discount the effect of the "prop wash" or the wake due to jet exhaust at a distance of 1,000 ft. They assert that severe turbulence

*Nat. Advisory Committee for Aeronautics: Technical Note 3377.

is created predominantly by wing-tip vortices.

A paper on this subject points out that a light aircraft at 100 m.p.h., penetrating the vortices of a large jet aircraft at 90 deg. and 1 mile behind, recorded an acceleration of plus 2.5*g* and minus 3.5*g*. Other aircraft at higher speeds have measured structural loads as high as 9*g* in the wake of a large jet.

The NACA, experimenting with smoke generators at the wing tips, determined that the energy of the vortex does not lessen appreciably for 35 secs. and the highest velocities within the vortices occurred 33 seconds after their origin. Velocities then decreased for 60 secs., the longest interval measured; but the vortex still retained a relatively large amount of circulation. From this it can be seen that peak velocity can be approximately 1½ miles behind an aircraft cruising at 180 m.p.h. Also that a relatively large amount will persist for 3 miles astern.

When a large jet aircraft climbs at approximately 420 m.p.h. the peak turbulence is 3½ miles back, and some will exist up to 7 miles. In relatively still air the turbulence can persist for several minutes (and after the aircraft is out of sight). The study indicates that vortices can persist, theoretically, for 30 minutes. The energy of the vortices depends on the ratio of aircraft weight to the wingspan and speed, being directly proportional to the former, and inversely proportional to the latter.

In summary, all tests and theory to date indicate that structural failure can be anticipated in light aircraft upon penetration of the vortices behind large aircraft.

When an aircraft runs squarely through a pair of vortices at their diameters the loads imposed are up, down, down, up, in that order. The total distance from entering one vortex to leaving its mate would be traversed at 120 m.p.h. in less than 2 seconds. Pilot reaction during this short period can only be surmised, but if the elevator control were moved forward on hitting the first updraft, as well it might be, the forces following would be greatly intensified.

The Piper PA-22 is designed to an ultimate manoeuvring load factor of 5.7*g* and a negative factor of 2.28*g*. Computations show that the loads which could be encountered in the wake of a large aircraft (such as a C-124) are of a magnitude just approaching the limit manoeuvring load factors of normal category aircraft, and under some conditions may exceed them. These conditions include any appreciable attempt by the pilot to hold constnat altitude upon encountering the vortex.

SAFETY MESSAGE TO PILOTS.

Attachment to C.A.B. Report.

It is unfortunate that vortices are invisible. If they could be seen they would look like a pair of hroizontal tornadoes stretching back from each wing tip. For miles astern these compact and fast-spinning air masses stay close together and parallel, sometimes undulating slightly, as a pair. They gradually weaken and die but can remain dangerous until their birthplace is far out of sight. Because the real hazard can be many miles astern and since it is not thick nor wide, the probability of running into this insidious hazard by chance is extremely slim. However, the result is sure to be startling and may be lethal.

The intensity of the vortex is directly related to span-loading and inversely related to airspeed; however, it is a safe and practical generalisation that the bigger the ship the more violent and long-lived will be the vortex disturbance. Technically, the faster the plane is moving, the less energy it casts off. The more it weighs in relation to its span, the greater will be its trailing danger. Also, the blows (the airloads) felt on piercing a vortex depend on the speed of entry. At half the speed the shock would only be one-fourth as great.

Don't pass close behind any other aircraft; the bigger it is, the more time it should be given. Two minutes should suffice as a working rule. Avoid places and altitudes frequented by large aircraft, [particularly] near high density airports. If you are to pass behind a crossing aircraft, change altitude so that you will be at least 100 ft. higher, or lower—preferably higher, and slow down. If you do get into a bad vortex, your best procedure is to ignore altitude changes and use no elevator control.

Pot Pitots

Recently I have flown with pilots who have been sufficiently confused over A.S.I.

readings under certain conditions of flight to be unable to believe their senses in the matter of what the aircraft is doing. This is obviously potentially dangerous.

The reason for the confusion appears to come from lack of understanding on the part of the pilot of the effects of yaw on pot-pitot installations.

What happens is that when the glider is flying at an angle of yaw, as it is when side-slipping or spinning, the assymmetrical air flow across the nose and around the static vents can cause errors in the air-speed indicating system. On Skylarks and Eagles this takes the form of a reduction in the indicated air-speed reading at large angles of yaw. At greater angles this reduction can cause readings below zero. If during a spin the pilot glances at the A.S.I. he may see the needle moving backwards, or he may just notice that it has settled down at some position giving an apparent reading of some 70-80 knots. If he does not understand what has happened, he will be confused, and may come to the wrong conclusion.

The following are examples of pupil pilot reactions.

(1) The pilot, on seeing an indicated reading of 70-80 knots during a spin in an Eagle, did not believe that it was still spinning, and took inadequate recovery action.

(2) The pilot, doing a spin in an Eagle, noticed the false high reading during a spin, did not notice the indicator return to normal during the recovery, glanced again, and found that he now had a lower reading, and must consequently still be stalled. He kept the nose down trying to regain speed, and continued until the Eagle reached over 100 knots, when the instructor mentioned the matter.

(3) A pilot who had been taught spins in an Eagle, and had noticed the apparent high readings in a spin, when subsequently doing spins in a T-21B assumed that its A.S.I. behaved in the same way. During the recovery dive he assumed that the glider was still stalled, as the speed seemed to be the same as it was when spinning in the Eagle, and so in the region of 75 knots moved the stick hard forward.

This is the extent to which inexperienced pilots can get confused over something they do not understand, and which occurs in conditions of flight which are unfamiliar, and which they may to some extent be frightened of. If this confusion is not to

become a fruitful source of accidents, then pupil pilots must have explained to them simply the effects of yaw on pot-pitot installations, and the fact that the pitot static installation does not produce this effect.

Above all, pupils must be taught never to allow themselves to be mesmerised by instrument readings. Their basic training must be adequate to ensure that they can fly well enough to allow their common sense and experience to correctly assess the value of the antics of a needle on a dial. This means that, before they go solo, they should be able to carry out safe and reasonably well-judged circuits without help from the A.S.I. and altimeter.

ANN WELCH.

JACK AKED

C.F.I. Blackpool and Fylde G.C.

IN his twin capacities of C.F.I. and Honorary General Secretary, Jack Aked has played a major part in the development of the Blackpool and Fylde Gliding Club, which he founded some years ago with Mrs. Aked. In the early days, the Club possessed only a Mark I Cadet, and an ancient Austin saloon which had been converted into a light truck by the removal of the rear portion. Members received their initial training by means of auto-towed low hops The Austin did the towing, and Jack, seated on a cushion at its rear ("like an oriental sultan" was how one long-standing member described it), controlled its speed with a hand throttle, and in between times endeavoured to keep the Cadet in a wings-level attitude by signalling to its pilot with bats. The driver of the Austin, apart from controlling his fear that the Cadet would land on his head, had merely to steer a straight course.

As things progressed, a two-drum winch, a T-21B and an Eon Baby were acquired. Afterwards, when development of the site at Scorton began, a trailer was built, and a small portable winch for use on the Fells was constructed. It is with the T-21B that Jack's name is chiefly associated at Blackpool, however, and week after week he is to be seen being drawn inexorably into the sky in the 21, there to be subjected to all the tempests, bumps and horrifying silences that a pupil pilot can produce by the misapplication of hand or foot to the controls.

An extremely gifted instructor, possessing above all a great fund of patience, Jack is never too busy to approach, and he will always spare the time to discuss any difficulties experienced during training. With the further development planned at Scorton, the appointment of a deputy C.F.I., and the acquisition of a high-performance sailplane, Jack will soon be able to leave the T-21B occasionally to indulge in some flying for his own pleasure. It is a privilege that none of us at Blackpool will begrudge him.

K.R.P.

British Gliding Association News

Maintenance Manual

Owing to an unfortunate mistake the Title Page was not referred to Mr. Stafford-Allen for checking. We apologise for this error and wish to state that Mr. Stafford-Allen is *not* the Ground Engineer of the London Gliding Club, which post has been held by Mr. J. N. Quinn since 1st March 1956.

Annual Ball

This will be held on Friday, 11th March 1960, from 8.30 p.m. to 2 a.m. in Londonderry House. Single tickets, at £1 each, will include a buffet supper. Dress: dinner jackets, uniform or lounge suits. The numbers are limited, so get your ticket in good time from this office.

Annual General Meeting

The Meeting will be at Londonderry House on Saturday, 12th March, at 10 a.m. The Instructors' Conference will be at the Kronfeld Club, and a Conference of Club Managers, Secretaries and Treasurers will be held the same day.

World Champion Seeded List

The first six are in alphabetical order and the last five also are in alphabetical order:

A. J. Deane-Drummond, H. C. N. Goodhart, G. A. J. Goodhart, D. H. G. Ince, G. H. Stephenson, J. S. Williamson.

(7) A. W. Gough, (8) G. E. Burton, (9) A. D. Piggott, (10) D. M. Kaye, (11) L. Welch, (12) D. L. Martlew.

D. Brennig James, Anne Burns, C. A. P. Ellis, K. C. Fitzroy, D. A. Smith.

Pilots on this list are eligible for selection to represent the U.K. in foreign Nationals. (Anyone who is asked may fly in foreign Nationals, but not as representing this country—subtle but important distinction!) And of course our World Championship Team is eventually selected from the Seeded List. May we please have any further proposals for names to be added to our 1960 list of seeded pilots! These will then be considered by the Seeding Committee under John Furlong.

Note from the Chairman

The B.G.A., like most other gliding organisations, is always up against the problem of Finding Enough People to Do the Work. Apart from our Secretariat, the vast proportion of the actual work is carried out not by the Council, but by the various Committees and Panels. These are the following:

Magazine Cttee.	World Championships Master Cttee.
Airways Cttee.	
Publicity Panel	
Instructors' Panel	Technical Cttee.
Equipment Cttee.	Handicapping Cttee.
Flying Cttee.	

Whereas Panels do not have to meet very often, and carry out their work mostly by correspondence, Committees do have to get together. And as most things, including the Ministries, are in London, it is almost inescapable that committees must meet in London, and hence that Committee Members shall be able to get to London with reasonable ease. This is frankly a damn nuisance, since it makes it impossible to use a fair proportion of our best talent, and just possible to think of the B.G.A. as being "run by a clique"—i.e. people who live within a workable radius of Londonderry House, and who are prepared to do a lot of work for love.

Is there any talent available which we do not know of? I most earnestly ask anyone with the time and capacity to help on any of the above Committees or Panels in 1960 to send in their names *now*.

One job that needs doing is for someone to take charge of the B.G.A. photographs and make a library of them.

Records Homologated

BRITISH NATIONAL DISTANCE: 384 miles (617 km.) by G. A. J. Goodhart in Breguet Fauvette, Moret Episy to Pau-Idron, France, on 12th June.

UNITED KINGDOM DISTANCE, BRITISH NATIONAL & U.K. GOAL FLIGHT, AND U.K. SPEED TO A 500-KM. GOAL: 360 miles at 56.4 m.p.h. by H. C. N. Goodhart in Skylark 3, Lasham to Portmoak, 10th May.

U.K. MULTI-SEATER GOAL AND RETURN: 131 miles by W. A. H. Kahn and L. G. V. Gallie in Eagle, Lasham-Nympsfield-Lasham, 4th May.

WOMEN'S BRITISH NATIONAL & U.K. SPEED ROUND A 100-KM. TRIANGLE: 27.1 m.p.h. by Mrs. Anne Burns in Skylark 3b, Lasham-Thruxton-Welford-Lasham, 22nd April.

WOMEN'S BRITISH NATIONAL & U.K. DISTANCE, ABSOLUTE ALTITUDE AND GAIN

OF HEIGHT: 282 miles, 18,400 ft. absolute, 16,750 ft. gain by Mrs. Anne Burns in Skylark 3b, Lasham to Bellingham (Northumberland), 10th May.

WOMEN'S BRITISH NATIONAL & U.K. SPEED TO A 200-KM. GOAL: 42.3 m.p.h. by Mrs. Anne Burns in Skylark 3b, Pirbright to Exeter Airport, 20th June.

WOMEN'S BRITISH NATIONAL & U.K. SPEED ROUND A 200-KM. TRIANGLE: 25.6 m.p.h. by Mrs. Anne Burns in Skylark 3b, 19th July.

WOMEN'S BRITISH NATIONAL GOAL FLIGHT: 221.01 miles (355.68 km.) by Mrs. Ann Welch in Skylark 3, La Ferté Alais to Angoulême, 4th August.

WOMEN'S BRITISH NATIONAL & U.K. SPEED ROUND A 100-KM. TRIANGLE: 37.3 m.p.h. by Mrs. Anne Burns in Skylark 3b, Lasham-Andover-Welford-Lasham, 25th July.

Ruling on Record Claims

If the same record is broken twice on the same day, the Flying Committee will recommend the award of the record to the best proven performance. If there are two equal performances on the same day qualifying for the same record, the Flying Committee will recommend that the record be held jointly by the pilots concerned.

NATIONAL GLIDING WEEKS

DURING two separate weeks in the coming summer NATIONAL GLIDING WEEKS will be organised by the British Gliding Association at six different Club sites:

WEEK 1.—28th May—6th June inclusive:
- Cornish Gliding Club at Perranporth;
- Lakes Gliding Club at Tebay Gill, Westmorland;
- Scottish Gliding Union at Portmoak, near Kinross.

WEEK 2.—24th July—1st August inclusive:
- Yorkshire Gliding Club at Sutton Bank;
- London Gliding Club at Dunstable;
- Derbyshire and Lancashire Gliding Club at Camphill, Gt. Hucklow.
- Coventry Gliding Club.

LECTURE COURSES

Gliding Instructors

A course of lectures for instructors, trainee instructors and interested pilots (if there is room) will be given at the Kronfeld Club (74 Basement, Eccleston Square, London, S.W.1) on Mondays, 25th January, 1st, 8th and 22nd February. Fee 10s. for the course. Registration forms and details from the Secretary, B.G.A.

Hail and its Prevention

Mr. F. H. Ludlam, Reader in Meteorology at Imperial College, (well known for his studies in the meteorology of soaring flight), is giving a course of six lectures on this subject on Thursday evenings from 11th February to 17th March inclusive. The lectures are from 6.45 to 8.45 p.m. in Huxley Building, Exhibition Road, South Kensington (opposite the Science Museum).

The lecture subjects are: Penetrative convection in the laboratory and the atmosphere; growth of cloud particles; formation of showers; formation and growth of hailstones; hailstorms; and prevention of hailstorms.

The fee for a single lecture is 2s., payable on the spot (if seats are available); or 10s. for the six lectures, payable by cheque, money order or postal order (made payable to the University of London and crossed "Westminster Bank, Tavistock Square Branch, University of London A/C"), to be sent to The Cashier, University of London, Malet St., W.C.1, with "Extension Courses" marked on the envelope.

TREVELYAN SCHOLARSHIPS

THE Trevelyan Scholarship Trust has been formed to counteract the unfortunate tendency nowadays to subject boys "at an early age to heavy pressure to specialise in a narrow field to the detriment of their general development and education." Backed by a number of big industrial firms, the Trust can now award annually at least 34 scholarships of £450 a year each for three years, tenable at Oxford or Cambridge, to boys selected by interview, backed by headmasters' reports and "particularly by the evidence of written reports submitted by the candidates on an arduous and exacting task or project which they had undertaken."

Concerning awards already made, the Selection Committee states: "Many of the project reports were of very considerable merit, disclosing a high degree of originality and an impressive level of attainment in fields which in many cases were quite divorced from the candidates' principal subjects of study at school." So it is not surprising that the Trust should wish their Scholarship Scheme to be brought to the attention of readers of SAILPLANE & GLIDING

LONG MYND EASTER RALLY

POSTERS have been circulated to clubs calling for entries for the Midland Gliding Club's Easter Rally, to be held from 15th to 19th April. Pilots who may not have seen the posters are advised to apply for entry forms to Lieut.-Col. G. Benson, Marston, Pembridge, Leominster, Herefordshire, *without delay*, as entries are still limited.

COMPETITION NUMBERS

These numbers have been allotted for permanent use in competitions held in this country. Anyone who disagrees with any item on the list should inform the Secretary of the British Gliding Association immediately.

No.	*Owner*	*Sailplane*
1	P. A. Wills	Skylark 3
2	L. G. Kiloh & Partners	Skylark 2b
3	A. Coulson & Partners	Skylark 3b
4	W. A. H. Kahn & Partners	Skylark 3c
5	D. S. Bridson	Skylark 2
6	H. C. N. Goodhart	
7	J. V. Inglesby	Olympia
8	E. J. Furlong & Partners	
9	London G.C./C. A. P. Ellis	Skylark 3
10	P. Scott	Olympia 419
11	M. V. Laurie & Partners	Eagle
12	Army Gliding Assn.	Skylark 2
13	Aylett Moore & Partners	Eagle 3
14	Bristol G.C.	Olympia
15	Imperial College G.C.	Skylark 2
16	R.A.F.G.S.A.	Skylark 3
17	Shorts G.C.	Short Nimbus
18	G. Benson & Partners	Skylark 3
19	D. O. Burns & Partner	Skylark 3b
20	D. R. Clayton & Partners	Skylark 3b
21	Surrey G.C.	Weihe
22	London G.C.	T-21b
23	L. Redshaw & Partners	Olympia
24	R.A.F.G.S.A.	Kranich
25	R.A.F.G.S.A.	Olympia
26	R.A.F.G.S.A.	Olympia 2
27	R.A.F.G.S.A.	Olympia 2
28	R.A.F.G.S.A.	Olympia 2
29	R.A.F.G.S.A.	Gull 4
30	R.A.F.G.S.A.	Gull 1
31	R.A.F.G.S.A	Grunau Baby 2b
32	H. R. Dimock & Partners	Sky
33	R. H. Perro t & Partners	Skylark 2
34	R. G. Fowler & Partners	Gull 4
35	Surrey G.C	Skylark 2
36	R. A. Mann	Skylark 3
37	B. Thomas & Partners	Skylark 3
38	J. D. Jones & Partners	Olympia 2
39	Polish Air Force Assn. G.C.	Olympia
40	G. H. Nixon & Partners	Olympia
41	P. A. Macnaghten & Partners	Skylark 2
42	D. A. Smith	Skylark 3
43	M. C. Russell & Partners	Petrel
44	A. H. Warminger	Skylark 3
45	J. C. Riddell	Skylark 1
46	E. Day & Partners	Sky
47	D. M. Riddell & Partners	
48		Olympia 2
49	P. Hampton & Partners	Skylark 2
50	W. G. Lydiard & Partners	Olympia 2
51	Handley Page G.C.	Rhönbussard
52	Army Gliding Assn.	Skylark 3
53	A. Doughty & Partners	Kite 2
54	D. H. Darbishire	Olympia
55	Cambridge University G.C. & J. S. Johnstone	Eagle
56	Cambridge University G.C.	Skylark 2
57	Cambridge University G.C./ J. Burton	Olympia 2
58	Army Gliding Assn.	Eagle
59	Elliotts of Newbury	Olympia 415
60	D. M. Kaye & Partners	Eagle 3b
61	London G.C.	Olympia
62	London G.C.	Skylark 2
63	Army Gliding Assn.	Skylark 2
64	London G.C.	Sky
65	R. Harwood & Partners	Skylark 3b
66	F. G. Irving & Partners	Skylark 3b
67	C. J. Walker & Partners	Skylark 3b
68	R. T. Willbie & Partners	Skylark 3b
69	Surrey G.C.	Olympia 2
70	H. N. Gregg & Partners	Skylark 3
71	J. Tweedy and Partners	Sky
72	Army Gliding Assn.	Olympia 419
73	R.A.F.G.S.A.	Skylark 3b
74	R.A.F.G.S.A.	Eagle
75	Elliotts of Newbury	Olympia 419
76		Meise
77	Cranwell Collge G.C.	Olympia
78	Bristol G.C.	Skylark 2

No.	Owner	Sailplane
79	Leighton Park School	T-21b
80	Crown Agents G.C./ J. E. G. Harwood	Swallow
81	D. W. Stowe & Partners	Skylark 2
82	H. R. Dimock & Partners	Eagle
83	Derbyshire & Lancashire G.C.	Skylark 2
84	Derbyshire & Lancs G.C.	Olympia 2
85	M. Gilbert & Partners	Skylark 2
86	R.A.F.G.S.A.	Olympia 419
87	R.A.F.G.S.A.	Olympia 2
88	W. Lawson	Eagle
89	Elliotts of Newbury/ R.A.F.G.S.A.	Olympia 401
90	Elliotts of Newbury/ R.A.F.G.S.A.	Olympia 403
91	J. R. Jeffries	Jaskolka
92	G. M. Butt & Partners	Olympia
93	Southdown G.C.	Olympia 2
94	Yorkshire G.C.	Swallow
95	Yorkshire G.C.	T-21b
96	Imperial College G.C.	Eagle
97	F. A. O. Gaze	Eagle
98	R. C. Pick & Partners	Swallow
99	Soaring Holidays (Gliding Hire) Ltd.	Olympia
100	G. A. J. Goodhart & Partners	Bréguet 905
101	Handley Page G.C.	Skylark 3
102	Kent G.C.	Olympia 2
103	J. W. E. Berry & Partners	Olympia
104	Coventry G.C.	T-21b
105	Royal Naval G.S.A.	Skylark 2
106	Midland G.C.	Olympia
107	L. M. Mackie	Jaskolka
108	V. C. Carr & Partners	Olympia
110	Army Gliding Assn.	Olympia 2
111	M. Seth Smith & Partners	Skylark 2
112	R.A.F.G.S.A.	Olympia
113	R.A.F.G.S.A.	Olympia
114	R.A.F.G.S.A.	Olympia
115	R.A.F.G.S.A.	Olympia
116	R.A.F.G.S.A.	Olympia
117	R.A.F.G.S.A.	Olympia
118	R.A.F.G.S.A.	Olympia
119	R.A.F.G.S.A.	Olympia
120	Oxford G.C.	Skylark 2
121	H.Q. 2nd T.A.F. G.C.	Weihe
122	Surrey G.C.	Olympia 2
123	Surrey G.C.	Skylark 2
130	Lakes Gliding Club	Olympia 2
131	East Yorkshire G.C., R.A.F.	Grunau Baby
132	R.A.F.G.S.A.	Skylark 3
141	Alexander & Partners	Kite 1
172	N. P. Anson & Partners	Olympia

Still available: 109, 124,-129, 133-140, 142-171, 173 and higher.

Gliding Certificates

DIAMOND FOR GOAL FLIGHT

Name		Date
R. I. Tarver	Coventry Gliding Club	29.8.59

SILVER C CERTIFICATES

No.	Name	Club or School	Date
875	R. A. S. Langston	Handley Page Gliding Club	27.9.59
876	R. W. Paige	Empire Test Pilots' School	16.8.59
877	A. Eldridge	Wessex R.A.F. Gliding Club	30.8.59
878	J. Provins	Yorkshire Gliding Club	21.8.59
879	J. B. Goldesborough	Yorkshire Gliding Club	23.9.59
880	L. J. Moulster	London Gliding Club	16.8.59
881	D. L Contestavlos	London Gliding Club	29.8.59
882	N. V. Morland	Windrushers R.A.F. Gliding Club	27.9.59
883	E. B. Jerzycki	Polish A.F.A. Gliding Club	3.10.59
884	F. C. Green	Cambridge University Gliding Club	11.9.59
885	D. C. Banting	Wessex R.A.F. Gliding Club	7.8.59
886	J. A. Evans	Moonrakers R.A.F. Gliding Club	17.10.59
887	E. E. Reeves	Moonrakers R.A.F. Gliding Club	4.10.59
888	N. A. Dean	No. 643 A.T.C. Gliding School	19.7.59
889	E. G. R. Williams	London Gliding Club	25.10.59
890	P. A. Martin	Coventry Gliding Club	27.10.59
891	D. S. Rennison	Yorkshire Gliding Club	8.7.59
892	H. Simler	London Gliding Club	30.8.59
893	G. L. Lawson	Surrey Gliding Club	2.8.59

C CERTIFICATES

Name	Gliding Club or A.T.C. School	Name	Gliding Club or A.T.C. School	Name	Gliding Club or A.T.C. School
D. E. Tomkins	Imperial Coll.	J. L. Banks	Midland	P. A. Cottrell	Midland
C. T. G. Harmsworth	Bristol	S. H. C. Marriott	Army	A. J. Milne	Aberdeen
J. Bridgewater	Imperial Coll.	C. J. Sellick	Lasham	R. J. Robinson	632 G.S.
T. J. Goodwin	Derbyshire & Lancashire	H. M. Southall	Midland	F. Garwood	Bristol
		G. M. Balden	Surrey	R. D. Catt	Clevelands
		J. M. Phillips	B.B.C. Group	J. M. Hancock	Taunton Vale

Name	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*
I. S. Fudge	621 G.S.	J. Hardy	Bristol	I. D. Colvin	Moonrakers
R. A. Hastings	Northants	F. A. Rodwell	Newcastle	N. Lamb	Suffolk
L. V. Wood	Windrushers	C. W. Barker	London	G. A. Glennie	Condor R.N.
J. E. Kilgallon	Avro	T. H. Hamilton-Brown	HQ. 2nd T.A.F.	P. A. M. Badley	Derbyshire & Lancashire
E. C. West	East Anglian	M. K. Field	Midland	J. Armstrong	Delhi
O. R. Maddock	Kent	R. Jones	Wessex	R. B. Coote	Southdown
C. Agg	Coventry	G. F. Lloyd	Bristol	S. B. Taylor	Southdown
H. R. Browning	Imperial Coll.	D. J. Robson	London	G. Garlick	Newcastle
M. J. Roberts	Oxford	J. J. Hudson	Derbyshire & Lancashire	I. A. Edward	B.B.C.
M. Chisholm	Surrey		Army	J. Thompson	Newcastle
R. P. Hill	617 G.S.	M. P. Watson	Yorkshire	G. L. Lawson	Surrey
S. W. Bown	Midland	J. A. Towers	Fenland	F. Horridge	Army
J. A. Knight	631 G.S.	W. J. Burnett	Derbyshire & Lancashire	A. C. Wood	Derbyshire & Lancashire
A. J. Nurse	Bristol	A. Osborne		P. T. Gant	Geilenkirchen
D. D. Ranft	Army				
D. Keena	Suffolk R.A.F.				

HOME MADE

THIS glider shown below has been built by Kenneth and Richard Westmacott, of Brinkworth, Wilts, out of parts of disused aeroplanes, including a Tiger Moth. Having received some publicity in the Press, they were visited by the Secretary of the British Gliding Association, who found a pair of brilliant boys living in an out-of-the-way farm, who for years had made models and noted in their diaries every glider flight seen from their house. They are not interested in flying themselves, only in building and construction, and have built their full-sized model without thought of stressing, etc. They intended to fly it to 4 feet "to see whether it would fly"; but, with the excitement of towing it behind a Vanguard, they got carried away—literally—and have flown many times to 100 feet or more. They found that, unless they left the cable attached until the glider landed, she stalled and landed on her sprung undercarriage, though without breaking. Besides themselves, one of the pilots was a boy who had a B gliding certificate obtained with the Air Training Corps.

While the boys are entitled to much credit for what they have done, the glider appears not to be really airworthy, and we do not recommend others to follow this example; moreover, they should remember that all aircraft have to be insured before they can be flown.

A POSTCARD BY GLIDER MAIL

This postcard, sent by Mme. Irena Zabiello, made the first stage of its journey from Leszno in a sailplane.

CROSSWORD SOLUTION

B	O	C	I	A	N	W	E	A	L	D	S	T	O	N
I	N	S	A	N	E	I	N	C	E	P	T	I	O	N
G	T	B	E	G	I	N	T	E	S	T	A	M	I	D
F	O	U	R	L	A	C	E	S	T	E	R	R	E	N
L	I	N	O	E	T	H	R	O	W	A	T	A	P	E
I	S	J	S	L	O	O	P	N	A	R	C	O	T	I
G	U	Y	Y	A	W	L	S	E	L	L	I	N	G	N
H	A	L	F	R	O	L	L	A	I	L	E	R	O	N
T	O	L	U	K	P	E	A	V	W	A	S	H	O	U
S	P	I	N	T	E	S	T	O	I	N	S	I	D	E
K	O	L	I	O	N	L	E	N	G	T	H	S	H	M
Y	B	A	C	K	F	I	R	E	I	Q	I	H	A	M
A	R	C	U	L	E	N	T	I	C	U	L	A	R	A
B	E	S	L	I	N	G	S	B	Y	A	L	L	T	H
B	A	B	A	A	N	O	A	V	E	R	Y	L	A	S
A	M	E	R	R	Y	X	M	A	S	T	O	Y	I	N

Diary of Lectures and Film Shows

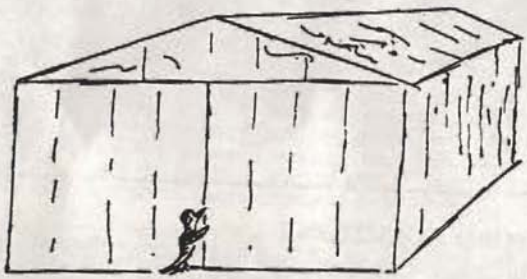
Wednesdays at 8 p.m.

Jan.	27th	Shell Films: History of the helicopter. Schlieren.
Feb.	3rd	Test Flying, by D. Morgan of Vickers Armstrong.
„	10th	South African Films. "Whispering Wings" etc
„	17th	John Fielden: Taunton Vale G. C. Film

06.45

06.55

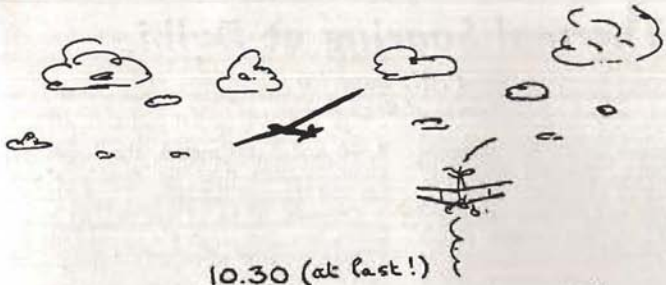
07.30

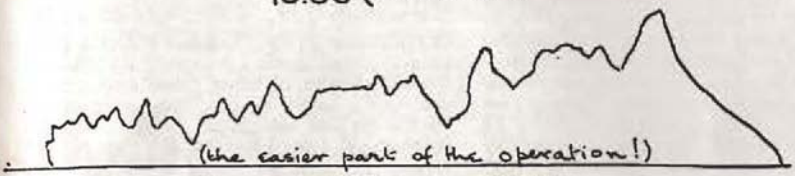


08.15

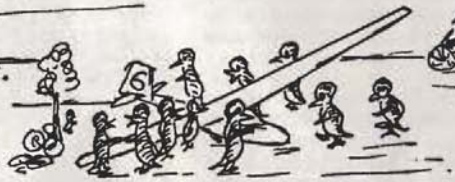
08.30 — 10.15

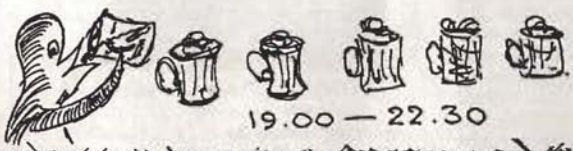
GOLD DI

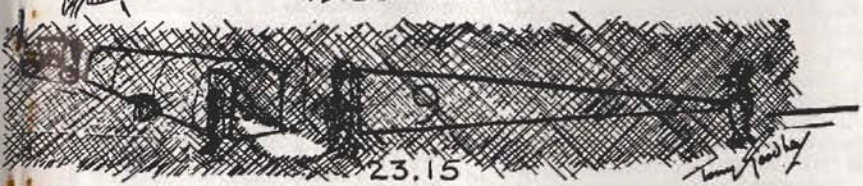




10.30 — 17.50







STANCE

Thermal Soaring at Delhi

by P. K. Banerjea
(Delhi Gliding Club)

ON 30th September 1959, Mr. Banerjea set up an Indian duration record of 8 hours 14 minutes in thermals. At 09.52 hours he was winched to 1,000 feet and found weak lift. At 11.15 the first cumulus clouds appeared and he climbed to their bases at 4,300 feet. At 13.00 a cumulo-nimbus began to form over the airfield, so he moved 10 miles north, and stayed there under small cumulus clouds until they started disappearing about 15.30, by which time the cu-nim had cleared and small cumulus were again forming over the airfield. They, in turn, had cleared by 16.30, so he moved 7 miles south to a solitary flat cumulus and reached its base at 6,000 feet by 17.15 hours. Then it, too, disintegrated, and he landed back at the airfield at 18.06, which was 11 minutes after sunset. After a detailed account of his flight, of which the above is a summary, Mr. Banerjea continues as follows in reply to some questions we asked him:—

I WAS airborne at 09.25 hours. Average strength of thermals between that time and 11.00 hours was approximately 1 metre per second. Between 11.00 and 14.00 hours it was approximately 3.5 metres per second, going up to a maximum of 5 metres per second; and between 14.00 hours and 16.00 hours it was approximately 1.5 metres per second. Between 16.00 hours to about 17.15 hours, when thermal activity ended, I would put it at an average of 0.75 metre/second, although under the cloud, which I was fortunate in catching, I got up to 2.5 metres per second. During that portion of the year in the late evening there are very few clouds in the sky, and except right under them the lift is usually weak. The thermal distribution, except in the early and late part of the day, was quite frequent—I would say, on the average, at intervals of about 500 metres.

Our summer conditions, however, are vastly different. The sun rises some time before 05.30 hours and sets at about 19.30 hours (on the longest day, 23rd June). By 07.00 hours it is already pretty hot and by noon, out on the field, the temperature is sometimes over 45°C. The sky is pale blue due to dust haze, and high up, between 4,500 and 5,000 metres, the larger of the cumulus caps over the thermals can be spotted through the haze. The surface wind is between 10 to 15 knots. At noon, at times, you can reach the cloud base within 12 minutes after releasing the hook at about 300 metres.

Personally, so far, I have had not many opportunities to fly in summer at Delhi, and most of these figures I am quoting are from the experiences of other pilots here. We still don't know exactly how long after sunrise the thermals gather enough strength to lift the gliders. I feel that if we are really serious about it we may get off between 08.00 and 08.30 hours in the morning, and provided there are no dust storms in between, we may be lucky enough to make a landing not before 20.00 hours (when there is still some light). Thus, just now, we are inclined to think that a duration flight of between 11½ and 12 hours will be achieved sometime next summer.

Winter here is vastly different. In the months of November, December and January we get approximately 4 hours of soarable conditions between 12.00 and 16.00 hours, with an average thermal strength of 1 metre/second, the maximum being approximately 2 metres per second. There is invariably an inversion clamp between 1,000 and 1,500 metres. It will be considered a great achievement if somebody here does his five hours in the height of winter.

As regards your question about vultures and other soaring birds in India, I must

CONVERSIONS (APPROXIMATE)

Thermal Strengths		*Altitudes*	
m/sec.	*ft/sec*	*metres*	*feet*
0.75	2.5	300	1,000
1	3.3	500	1,640
1.5	5	1,000	3,300
2	6.5	1,500	5,000
2.5	8	1,700	5,600
3.5	11.5	4,500	15,000
5	16.5	5,000	16,400

Temperature: 45°C=113°F.

admit that they are a great boon to us. There are literally thousands of them flying over big cities like Delhi, and there are anything between half-a-dozen to a hundred of them circling in any one thermal. When you are up, the trick is to keep your eyes scanning the sky around you and, wherever the red ball is up, to head for the nearest cluster of dots milling round together. Of course they can be a source of danger also, as there have been numerous cases of bird hits on gliders over here with resultant damages. Fortunately till now the pilots have never encountered any difficulty in bringing down the damaged gliders, but in case of a hit on some part of the tailplane the consequences could be quite disastrous.

Thus, while soaring in company with the birds, we have frequently to take evasive action to avoid a hit. It is the usual practice of the vultures to fold their wings and drop down whenever a collision is imminent, but the kite (a smaller bird) tends to apply full airbrakes and increased incidence, resulting in its suddenly slowing down and going up. We must remember this difference in their behaviour and, after recognising the birds, must pull up in the case of a rushing vulture but dive down if it is a kite.

Apart from these bigger birds over Delhi, we also come across a very small species of birds (which look like swallows to me) flying and soaring haphazardly within the strong core of a thermal, busily devouring any insects or other edibles kicked up by the thermals. The frequency of occurence of these birds is, however, not so much as that of the bigger birds, but we have come across them at altitudes up to 1,600 or 1,700 metres.

Peggy Miéville

BACK in 1955, when we were still plain GLIDING and our sales were just reaching the four-figure mark, a shy young girl joined the Magazine Committee. Her name is Peggy Miéville and she is quite a pundit in the advertising world. She offered to help us obtain more advertising, and in a remarkably short time our revenue from this source—the life blood of any magazine —went up and up. This enabled us to increase the number of pages per issue and soon our sales chart took on the appearance of a barograph trace on a superb day.

Who is this young tycoon who worked these wonders for us? Peggy is the Managing Director of her own firm which employs a staff of five. She was the youngest ever Space Buyer (not outer) in London, and in 1950 at the age of 22 became one of the first women to obtain the Diploma of the Advertising Association (their Diamond C, in fact). Earlier in her life, whilst at Edinburgh University, her aim was to become a Probation Officer. Luckily for us she changed her mind and came south to seek fame and fortune.

The "bug" caught her soon after arriving in London, and she joined the London Gliding Club. In next to no time she was the Minutes Secretary to the Club Committee and went solo (in a glider). Peggy still works for the Club and is a tower of strength at their parties. Her firm, Messrs. Cheiron Press, Ltd., is very active indeed. It does much of the London Gliding Club's secretarial work, sells space on the sides of trailers for four gliding clubs—(a useful source of income to clubs)—and handles the advertising for eight regular magazines apart from numerous other journals.

The success of our magazine depends almost entirely on Peggy's hard work, for without advertising revenue we would have to cease publication. If any of our readers can help her by taking space either for themselves or their firms, she and the Magazine Committee would be most grateful.

W.A.H.K.

LATEST "3 DIAMONDS"

In our issue of February, 1958, we gave a list of all pilots in the World who had acquired 3 Diamonds to add to their Gold C. It included one British pilot, Nicholas Goodhart (International No. 42), and took the list up to No. 80. Here are some additional ones.

No.	*Name*	*Country*
81	Graham Thomson	U.S.A.
82	Robert Brown	U.S.A.
83	Lyle Maxey	U.S.A.
84	Dewey Mancuso	U.S.A.
85	Sterling Starr	U.S.A.
86	Max Beck	Germany
87	Rudolf Gailing	Germany
88	Gordon Hookings	New Zealand
89	Zvonimir Rain	Yugoslavia
90	Bozidar Komac	Yugoslavia
91	Hans-Werner Grosse	Germany
92	Heinz Huth	Germany
93	Bodo Stähle	Germany
94	Hans Böttcher	Germany
95	Adam Witek	Poland
96	Nandor Opitz	Hungary
97	Robert Symons	U.S.A.
98	Jacques Lacheny	France
99	Maurice Combettes	France
100	Francine Abadie	France
101	Jean Pelletier	France
102	Jean Lartigue	France
103	Roland Talaire	France
104	Pierre Bouillet	France
105	Jeanine Cordonnier	France
106	Daniel Barbera	France
107	Mario Fabbro	France

STOP PRESS.—*Tony Goodhart has just gained his 3rd (height) Diamond in France.*

FIRST SILVER C'S

IN THE WORLD

1.	Wolf Hirth	Germany
2.	Robert Kronfeld	Austria
3.	Günther Groenhoff	Germany
4.	Kurt Stark	Germany
5.	Otto Fuchs	Germany
6.	Hermann Mayer	Germany
7.	Peter Riedel	Germany
8.	Martin Schempp	Germany
9.	Heini Dittmar	Germany
10.	Paul Steinig	Germany
11.	Eberh. Muschick	Germany
12.	J. K. O'Meara	U.S.A.
13.	Peter van Husen	Germany
14.	Walter Fremd	Germany
15.	Anton Endres	Germany
16.	Heinz Kensche	Germany
17.	Otto Bräutigam	Germany
18.	Rudolf Oeltschner	Germany
19.	Ludwig Rotter	Hungary
20.	Erich Wiegmeyer	Germany
21.	Karl Bauer	Germany
22.	Ernst Philipp	Germany
23.	Hans Fischer	Germany
24.	Heinz Kern	Germany
25.	Hanna Reitsch	Germany
26.	G. Eric Collins	Gt. Britain

IN GREAT BRITAIN

(*International No. in brackets*)

1. (26)	G. E. Collins	17.5.34
2. (45)	P. A. Wills	20.9.34
3. (75)	R. G. Robertson	20.7.35
4. (85)	S. Humphries	19.8.35
5.(174)	J. C. Neilan	2.11.35
6.(177)	C. Nicholson	17.11.35
7.(208)	Mrs. N. Allen	17.5.36
8.(241)	P. M. Watt	9.7.36
9.(244)	H. C. Bergel	25.7.36
10.(291)	A. L. Slater	18.9.36
11.(298)	G. O. Smith	16.10.36
12.(338)	J. S. Fox	3.5.37
13.(542)	R. S. Rattray	6.9.37
14.(543)	P. B. N. Davis	6.9.37
15.(545)	G. H. Stephenson	6.9.37
16.(560)	D. G. O. Hiscox	20.9.37
17.(561)	K. G. Wilkinson	20.9.37
18.(562)	J. E. Simpson	20.9.37
19.(563)	J. V. Rushton	20.9.37
20.(564)	G. A. Little	20.9.37
21.(565)	K. Lingford	20.9.37
22.(566)	J. S. Sproule	20.9.37
23.(567)	K. W. Turner	20.9.37
24.(568)	E. J. Furlong	20.9.37

Correspondence

ADVANCED TUITION

Dear Sir,

At the risk of being labelled a heretic and a retrogressive moron, let me state without reservation that I find your December issue's article "It's all Yours" positively unpalatable. This nausea is brought on not so much by the actual subject-matter of that article as by its typification of the current trend to convert the British gliding movement from a purely sporting movement to a highly efficient competitive machine of International standing. Surely we have been led quite far enough up this wedge-shaped ladder without those last few rungs of individual discovery, which attracted us to the sport in the first instance, being removed. I refer, of course, to the use of two-seaters to teach the more advanced and the most advanced aspects of gliding.

Gliding attracts, and, let us hope, will continue to attract, people who have very pronounced characteristics of individuality—people who want to get on with the job of gliding by themselves. This feeling is suppressed nowadays in the early stages of training by the use of two-seaters (for reasons of safety), but, with very few exceptions, nobody remains on these monsters longer than they are absolutely forced to. How many pilots return voluntarily to two-seaters for further training after the solo stage? Quite clearly, the gliding fraternity does not like practical tuition whilst in the air. Flying time is precious and glider pi'ots by and large treat it as such, using it to discover and rediscover the character of the atmosphere and the limits of their own prowess. The more these discoveries and rediscoveries are removed by practical instruction, the less the aesthetic and exploratory appeal of our sport.

Happily it seems most unlikely that the advanced instruction advocated in the article referred to will catch up with us for years and years, if ever, for economic and practical reasons. We shall, therefore, be able to continue to teach ourselves and to enjoy our sport as a sport rather than a glorified military exercise. For those that do not agree with me, let them go to an institution (see December, 1957: "1966 and So On") designed and organised expressly for the type of advanced instruction envisaged: but for heaven's sake, leave the rest of us alone to muddle along on the model of our past and, curiously enough, not unsuccessful International Championship team members.

For the disciples of the writer of "It's all Yours", may I recommend power-flying. It is not nearly so frustrating, retrieves are eliminated, goal flights are a virtual certainty, no good days are wasted, and the risk of "failures" are negligible.

J. R JEFFRIES.

Hindhead, Surrey.

RACE TIMING IN AMERICA

Extract from a letter from Mr. Ben Shupack, of the Soaring Society of America.

. . . May I describe the system I developed at our national soaring contest to help me in my job as chief timer? I believe this is an improvement over the du Boulay system described in the August issue of SAILPLANE AND GLIDING (p. 225).

I projected a vertical plane in the sky in a simple and inexpensive manner. I borrowed a large thick glass wall-mirror across which I drew a black line with a marking pen. Next I borrowed a small table, placed it at one end of the starting line, made it level and placed my mirror flat on it with the black line on the mirror lined up with the starting line. Then in order to time a sailplane I followed its mirror image across the line.

I found that when my vision was not exactly over the line in the mirror I saw two lines* which became one as I moved my head to the proper position. That is when I had a perfect vertical plane projected into the sky. This device proved practical, portable, effective, simple and completely accurate.

I, too, needed the assistance of an identifier and recorder who was one and the same person.

A later improvement was the use of a large spherical mirror, for then we had complete flexibility in picking up the image and following it across the line. This spherical mirror was obtained for us by Jim Gray whose fertile brain thought of the many colour-television

tubes which have become "duds" and whose face is a portion of a sphere about 24 ins. in diameter. These "duds" are a cheap source for mirrors.

Some remarks about the sun would be in order. At Elmira, I faced southerly toward the sun. I did not find the sun any more troublesome in the mirror than when I used the ropes.

I can recommend the Shupack method as easier to execute and having greater accuracy than the du Boulay system.

BEN SHUPACK.

New York, U.S.A.

* The black line and its reflection from the back of the mirror.—ED.

A FOURTH DIAMOND

Dear Sir,

It is becoming increasingly obvious that a 4th Diamond is required.

May I therefore suggest a task of 70 km.p.h. round a 300-km. triangle as the qualification for this? I feel that this would not only be a fairly difficult task and therefore would probably be valid for some years to come, but also might stimulate glider designers to build aircraft to achieve greater ground-speeds, which seems to be to be the main idea of advanced competition soaring in these days.

JOHN H. HOLDER.

Lasham Gliding Centre.

BIRDS IN CLOUD

Dear Sir,

In SAILPLANE & GLIDING for April 1957 Mr. Kuyper of Nairobi reported having seen what he took to be an eagle entering cloud and apparently staying inside. His request for reports of similar observations has, so far as I can discover, produced no answer in your columns, and the following report may therefore be of interest.

On 6th December, 1959, I was circling in 5 to 10 feet lift underneath a medium-sized cumulus in an open-cockpit Prefect of the Accra Gliding Club. Just as I was coming up to cloud base (12,800 feet above ground level), I noticed that four vultures were circling a little way below me. I had been waiting for an opportunity to get a really close look at vultures approaching cloud in lift, and so I opened the Prefect's airbrakes slightly and allowed the birds to outclimb me.

They soon reached cloud base, and I watched them circle up into the cloud (all four of them) until they disappeared in the mist. I kept the airbrakes open for another two circles, but the birds did not reappear.

They were about 200 feet above me when they reached the cloud, and by circling the Prefect widely and slowly, I was able to keep them in view throughout their climb. I do not think this was a case of birds being "sucked" into cloud by strong lift against their will, as I imagine they could have escaped the 5-10 feet lift had they wished.

They seem to do this by opening their "airbrakes", i.e. by extending their legs fully downwards and gliding off in a straight line. However, there have been occasions in the past when I have suspected them of going into cloud, but this was the first time that I could be certain that I had really seen it happen.

Accra, Ghana.

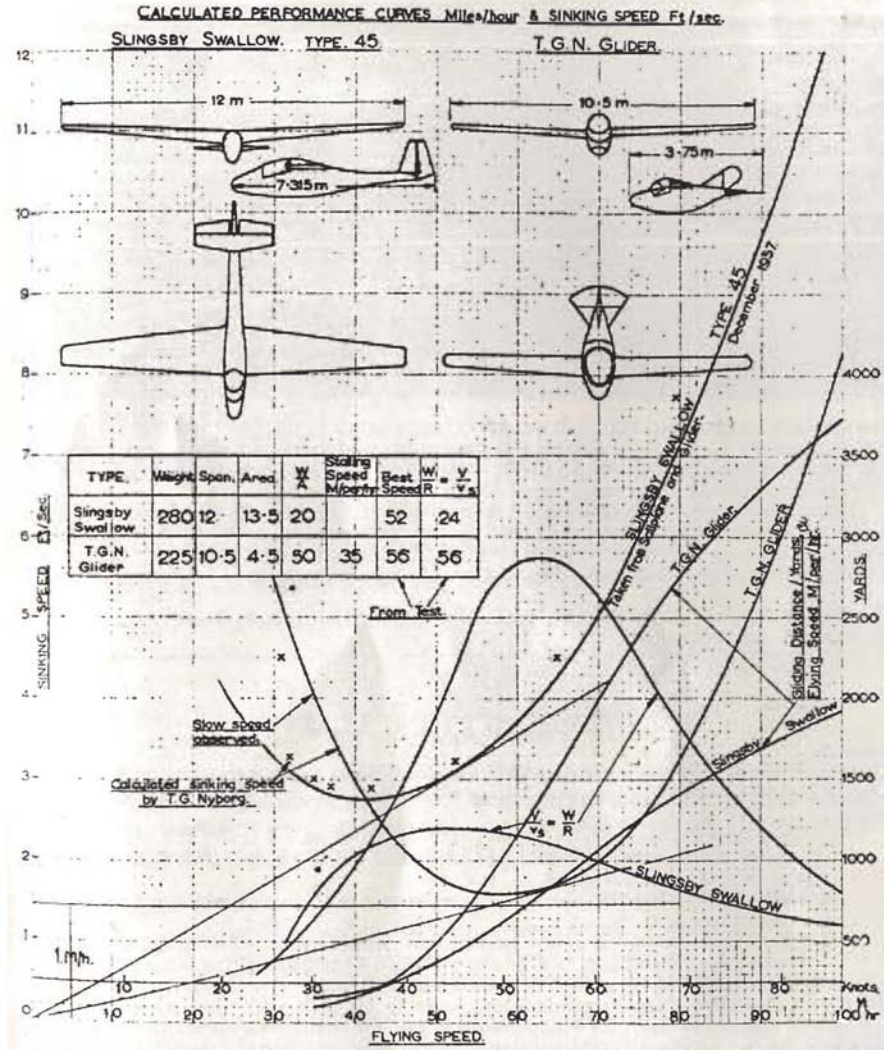
P. G. BURGESS.

NYBORG AND SWALLOW GLIDERS COMPARED

Sir,

When looking through back numbers of SAILPLANE AND GLIDING I was interested in the particulars and estimated performance of the Slingsby Swallow (Type 45) given on page 324 of the issue for December, 1957. From the dimensional information given I have calculated the sinking speed curve shown by "x" points against that shown in Spec. and also the gliding angle $\frac{V}{Vs} = \frac{W.}{R}$ The corresponding curves for my own TGN Glider calculated by the same method and the outline of my machine are shown on the same diagram.

My method of calculation is based entirely on dimensional and performance information obtained from birds, and is independent of variable constants, yet it permits very

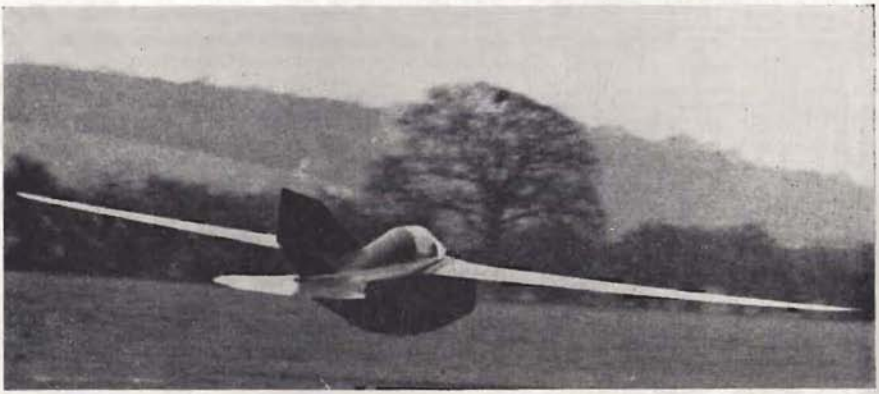


TYPE.	Weight	Span.	Area	W/A	Stalling Speed M/sec	Best Speed	W/R = V/Vs
Slingsby Swallow	280	12	13·5	20		52	24
T.G.N. Glider	225	10·5	4·5	50	35	56	56

closely practical performance characteristics to be calculated immediately for flying "devices" as widely separated as a Tern weighing 0.026 kg. (0.05 lbs.) and the TGN weighing 225 kg. (500 lbs.).

I would be most interested to know by what method the performance curves for the Slingsby Swallow were calculated, and if my curves are more or less accurate in practice than those given, despite the fact that the only information available to me about this machine is the published scale outline.

It may be of interest that the TGN Glider is the logical design arrived at from my own method of calculation, and I was hoping to prove it finally this summer but, unfortunately,



the machine was smashed up. This was very disappointing to me, but I feel that my theory has been amply proved even without this present hoped-for demonstration. For example, the photograph enclosed shows an earlier machine on a 20-sec. flight of 450 yds. 3 to 4 ft. from the ground with a starting speed of 55 m.p.h. in absolute calm.

If any member cares to send me the dimensional data for any machine I would be glad to produce performance curves calculated by my method which could then be compared with the practical results. I feel that this would be a real contribution to an improved understanding of the theory of flight and I hope you will support me in it.

T. G. NYBORG.

Boughton Villa,
Bransford Road, Worcester.

P.S.—Mr. Slingsby gives the best gliding angle as one in 26.

STANDARD CLASS AGAIN

Dear Sir,

Surely the right answer for World Championships is to have them alternatively for Open Class and Standard Class (or whatever Class the F.A.I. may later introduce). In this way:

(a) The designers would have 6 years (though personally I prefer the old two-year interval to the new three-year one between Championships) in which to perfect and produce their creations.
(b) Each nation would be able to enter at least 3 sailplanes in whichever class is in competition.
(c) The World Champion would be just that, without what some people feel is the implied stigma of being "only" the Standard Champion at the same time as the Open or World Champion is declared.

If the Standard Class Championships were to coincide with the Olympic Games (i.e. every 4 years), I believe they would gradually gain the status of Olympics and they might even one day get accepted by the International Olympic Committee—though some glider pilots may think such a possiblity one to be avoided.

One final point. The standard class aircraft at present available in any quantity have quite remarkably similar performances: Skylark 2, Olympia 415, Bréguet 905, Ka6, to mention those best known in "the West". I suggest that now is the time for the F.A.I. to introduce a class of World Records for flights in Standard Class gliders in place of the two-seater class (whose records are all, except absolute altitude, lower than those of the single-seat class).

TONY GOODHART.

A.N.F.C.E.
B.F.P.O.6.

"Ashvini": An All-Indian Two-Seater

by H. J. Gursahaney

Senior Scientific Officer, Civil Aviation Department

THE Ashvini has been designed to meet the need for a two-seater training glider to serve as a replacement for the medium and low performance machines at present in use.

The components of the glider were subjected to a comprehensive series of static tests for the various conditions of loading specified in the relevant airworthiness requirements, and where found necessary the necessary strengthenings were made before commencing initial trials on the prototype. The "Type Certificate" for the Ashvini was formally presented by the Prime Minister, Shri Jawaharlal Nehru, to Shri S. Ramamritham, the Designer, on the 22nd February, 1959.

The Ashvini was also tested by the German test pilot, Frl. Hanna Reitsch. She made the following observations on the stalling and spinning characteristics of the glider:—

Stalls.—The glider has excellent stall characteristics. It is necessary to put the glider in a very steep attitude to stall it and the speed at stall is very low. In view of this, it may be necessary to warn the pupils that other gliders will not behave as safely as this. The ailerons are effective right up to the stall and the glider has no tendency to drop a wing. It always puts its nose down.

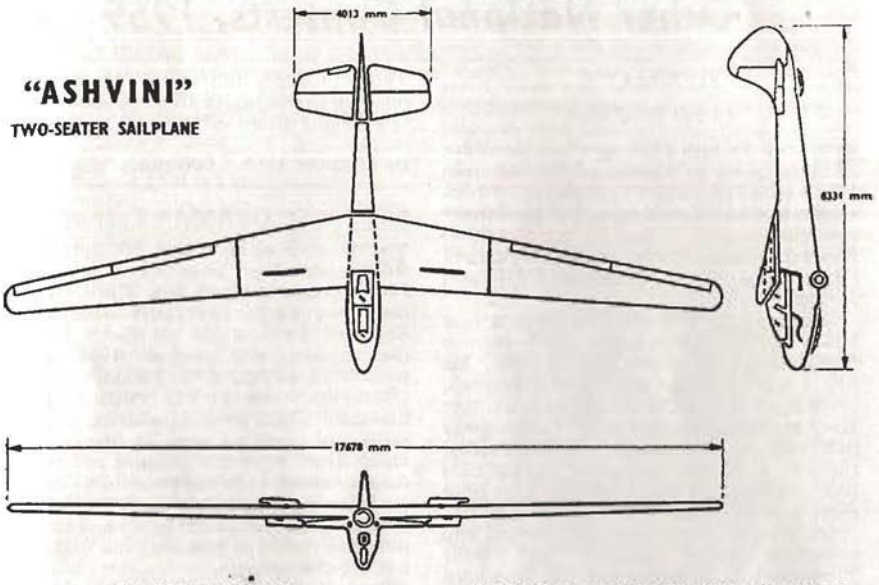
Spins.—The glider does not like to enter into a spin. To put it into a spin, it is necessary to pull the stick fully back to bring the glider to a very steep attitude and then apply full rudder. The glider recovers from a spin very easily as soon as the controls are put into normal position.

The most significant feature of the Ashvini is the use of indigenous materials in its construction. The spruce for the structure comes from the forests of Kulu. The plywood sheets of Rosewood and White Cedar for the wings and fuselage come from South India. The fabric covering the wings and control surfaces is a product of a local cloth mill. These materials obtained from the four corners of India are tested for conformity to specifications evolved by the Technical Centre, Civil Aviation Department.

Frl. Hanna Reitsch in the front cockpit of the Ashvini; standing beside her is the designer, Mr. S. Ramamritham.

"ASHVINI"

TWO-SEATER SAILPLANE



Leading Particulars

Span, 17,678 mm. (58 ft.); length, 8,331 mm. (27 ft. 4 in.); height, 2,440 mm. (8 ft.).

Empty weight, 318 kg. (700 lb.); All-up weight, 500 kg. (1,102 lb.).

Wing: area, 19.51 sq. m. (210 sq. ft.); max. chord, 1,562 mm. (61.5 in.); aspect ratio, 16; taper ratio, 2.5; sweep-forward (leading edge), 4°; dihedral, 2°; incidence, 3°; wash-out 3°.

Aerofoil: root, NACA 4418; tip, NACA 4412.

Stalling speed, 30 knots (35 m.p.h.).

Minimum sink, 0.82 m./s. at 31 knots (2.7 ft./sec. at 36 m.p.h.).

Best gliding angle, 1:23 at 41.7 knots (48 m.p.h.).

Maximum permissible diving speed, 120 knots.

Permissible manoeuvres: inside loops, stall-turns, spins and steep turns up to 3 *g*.

Steam Launching for Gliders

UNDER this title Mr. Jos. Reder, a Heidelberg engineer, has written as follows to *The Aeroplane & Astronautics* suggesting a possible new method of power-assisted launching:—

"I wonder why it is that up to now nobody has used the well-known 'thrust-giving' possibilities of hot water stored in high-pressure bottles as a means of launching gliders quickly and cheaply? All one needs is a 50-gal. high pressure boiler (about 700 p.s.i.) put on a light car. Heat up cold water to about 270° C. (520° F.) with oil burners or cheap coal fires.

"Feed some 10-12 gal. of this 'hot water' into super-light (only about 25-lb. empty weight) high pressure bottles placed at the C.G. of the high-performance glider. Disconnect the feeder line from the car-boiler and open the expansion valve to the hollow bladed stern propeller of the sail-plane.

"The expanding 'hot-water-wet-steam' mixture, blowing out of the blade tips of the stern-prop between the 'V'-tailed elevators will shoot your glider in a few seconds up off the ground with about '1 *g*,' and in about one minute with about half of that thrust up to some 1,500 ft. or even 2,000 ft. high into the sky."

JOS. REDER.

Wiesloch/Heidelberg.

Other National Contests, 1959

DENMARK

by Per Weishaupt

THE 5th Danish Gliding Championships took place at Vandel in Jutland from 5th to 16th July, with 17 sailplanes—7 two-seaters and 10 single-seaters. All the former four champions met here for the first time: Aksel Feddersen ('51), Harald W. Jensen ('53), Aage Dyhr Thomsen ('55) and Jorgen Friis ('57).

Friis won the first day (6th July), a race which nobody fulfilled and which became flying along a set course with 44 miles. He flew a Ka-7 together with Arne Jorgensen. Niels Sejstrup and Ole Didriksen in another Ka-7 arrived at another goal 57 miles away next day at 23.4 m.p.h. Nobody came through a 70-mile triangular course next day, but Sejstrup and Didriksen won once more with 63 miles.

On 9th July there were more clouds and somewhat better weather, and Dyhr Thomsen in a Jaskolka ZO was first with 29.3 m.p.h. on a 68 miles out-and-return race to his home town Herning and back. Not unexpectedly, this week's flying ended with Sejstrup and Didriksen in the lead, but with the four former winners fairly low down the list.

Competitions were resumed again on the 12th with a 51-mile race to Aarhus aerodrome; 12 arrived, the fastest being H. W. Jensen with 59.4 m.p.h. After two days with high winds and rain, a 127 miles out-and-return race to Randers was carried through by two two-seaters, beating the former record of 96 miles. Erik Toft and G. Schutze were first in a Bergfalke, closely followed by Friis and Jorgensen.

The seventh and therefore last competition day was Thursday, 16th. A 200-km. race was the task in spite of only one such performance having been flown earlier in Denmark. But ten machines came back, and two other nearly. H. W. Jensen was winner with 30.4 m.p.h., Sejstrup and Diridksen second with 29.8 m.p.h.

The final result was that Sejstrup and Diridksen won with 5,435 points, Friis and Jorgensen being second with 4,642 and Svend Ravn third with 4,548. Hans Borreby (Eon Olympia) had 4,212, H. W. Jensen 4,199. Of the former winners, Dyhr Thomsen was ninth and Feddersen (who just had arrived back from Venezuela after not having flown since St. Yan in 1956) tenth.

In all more than 6,000 miles were flown.

GERMANY

BETWEEN 21st June and 5th July, seven contest days were fitted in at the Forchheim aerodrome near Karlsruhe. In the Open Class 13 entries included six Zugvogel 3's and the all-plastic Phoenix (described in our August, 1958, issue), which finished 5th. E. G. Haase, the World Champion, won in his HKS 3. The Standard Class, with 21 entries, included sixteen of the Ka-6 type, in one of which Heinz Huth won; his machine and that of the runner-up, both had pendulum elevators for reducing drag in high-speed glides.

Radio was installed at goals and turning-points as well as at base, and this was found a great convenience.

Two unfamiliar names, Spanig and Plarrer, finished third in their respective Classes, and made the fastest speeds on one race day. The biggest task was a 300-km triangle on 4th July; three Open and four Standard pilots got round it, Haase doing best with 33.74 m.p.h.

Leading Scores

Classes	*Pilot*	*Sailplane*	*Points*
OPEN	Haase	HKS3	3,759
	Spanig	Zugvogel 3	3,141
STANDARD	Huth	Ka-6	4.056
	Bottcher	Ka-6	3,850
	Plarre	Ka-6	3,425

SWEDEN

THE Swedish Nationals took place in cloudless weather from 5th to 11th July with flying on seven consecutive days from Alleberg, mostly with speed tasks on triangular and dog-leg courses. Eighteen pilots took part, 12 on Weihes, 4 on Zugvogels, and one each on a Spatz and a Moswey. Per Axel Persson won with 5,469 points, followed by Irve Silesmo with 5,213; both flew Weihes. Sven Jonsson on a Zugvogel was third with 4,811 points.

PER WEISHAUPT.

UNITED STATES

THE 26th U.S. Soaring Competitions were held at Elmira, N.Y., during the first 10 days of July, with 35 participants.

WEDNESDAY, 1ST JULY.—A no-contest day, as only 4 pilots completed a 52-mile course to Bath and back.

THURSDAY, 2ND JULY.—Of 11 pilots who made the day's goal at Tunkhannock, A. J. Smith went fastest in a Lo-150, in spite of a 20-minute hold-up over a slope en route.

FRIDAY, 3RD JULY.—Dick Schreder, in his HP-8, won a 109 mile triangle via Ithaca and Endicott at 34.1 m.p.h., using only one thermal per leg. Twelve got round.

SATURDAY, 4TH JULY.—Dansville and return, 102 miles, was the task on this day of mostly dry thermals, and Dick Schreder won again, at 43 m.p.h. But A. J. Smith, with 40.3 m.p.h., maintained his over-all lead.

TUESDAY, 7TH JULY.—After two days of bad weather, the met. man, Barney Wiggin, forecast thermals all the way to the East Coast in a 20-knot N.W. wind, with cloud base at 6,000 ft. So it was Open Distance. Dick Johnson, in a Weihe, made best distance of 285 miles to Narragansett, raising himself to 3rd place over-all (he had been 8th on the first day). Francis Compton (L-K) did next best with 272 miles. Many pilots did not follow Wiggin's advice which was:—

"Pilots who wish to go farther than the Atlantic Coast will have to crab either to the right or left for greater distance. For those who crab left there will be greater vorticity which supports vertical motion while those who crab to the right will be going into a diffluent wind which tends to disperse thermals."

THURSDAY, 9TH JULY.—After a day of rest, the final contest day brought Dick Johnson to the top with a 233-mile flight, overtaking Schreder and A. J. Smith who only managed 71 and 47 miles respectively. Christopher Drew and Robert Smith also exceeded 200 miles.

Leading Results

	Pilot	*Sailplane*	*Points*
1.	R. H. Johnson	Weihe	4,243
2.	R. E. Schreder	HP-8	3,696
3.	A. J. Smith	Lo-150	3,627
4.	C. M. Drew	Ka-6	3,561
5.	P. Bikle	1-23E	3,519
6.	B. M. Carris	1-23H	3,512
7.	P. Schweizer	1-29	3,179
8.	F. Sebek	Ka-6BR	3,161
9.	R. B. Smith	1-23G	3,123
10.	F. B. Compton	L-K	3,074
11.	L. S. Rehr	1-23G	2,969
12.	C. A. Moeller	1-23G	2,642
13.	W. O. Hoverman	1-23D	2,628
14.	W. L. Mix	1-23D	2,531
15.	W. H. Coverdale	Ka-6BR	2,422
16.	J. D. Ryan	1-23G	2,350
17.	C. E. Kohls	Ka-7	2,079
18.	D. C. Johnson	L-K	2,059

At the 1959 One-Design Regatta at Elmira, N.Y., nineteen Schweizer 1-26 all-metal sailplanes, many of them home-built, are lined up.

Findon's Folly

by P. S. Lamb

EDGEHILL slipped under the Tiger's nose, the altimeter showed 2,000 ft. I waggled my wings and felt the slight jolt as the Oly released. Findon was on his way—some mumbo-jumbo about Gold C distance, Diamond height—the lot. This was it.

A rapid return to Edgehill, drop the rope, land, and hitch up to Vic Carr in another Oly. No, it's not Vic—a chap in a red hat—Howard Greenway. They must have switched—why? Oh, well, they're gliding types—anything can happen. Another climb, another release, and Howard is on his way.

Rush into the barn with the Tiger, dark inside against the brilliant blue outside, with small fluffy cumulus just beginning to pop. A cigarette to calm my ragged nerves, then out on to the 'drome to join John Greenway and Vic. They ignored me. "He's going, anyway!" said Vic. "Come on, Howard, stop mucking about," said John. "He's away," said Vic, and as the small dot of the Oly disappeared to the north, they joined me on the ground.

"What happens now?" said I. "We'll get in Findon's car and head north." "How do I know when to stop?" said I. Dim like. "Ring me up from time to time," said John.

And so I did as I was bid, and off we went—on a retrieve, on my own. My first. I had volunteered to do this for Ivor Tarver in the Nationals—but he came back to Lasham from his out-and-return, so my services were not requred.

How far north, though? Findon had said something about Durham, but having seen these types before, I had rosy visions of him flopping in a field somewhere about Leicester way and me being back for tea.

I rang John up from Leicester. No, he hadn't heard a thing. "What do I do?" said I. "Press on," said he and hung up.

"Ollerton Roundabout. Any news?" "No," said John. I knew what to do and I did it.

Ferry Bridge. "What cooks?" He had landed near a brewery at Castle Eden. Instructions followed, and I went on northwards, mentally calculating if he had got his Gold C. Tickled pink that he must have done, and basking in the reflected glory of having launched him and retrieved him. Of course he'd got it.

Quick stop for some sweets. Woman in shop said: "Hope you don't mind me asking, but what have you got in that trailer? It must be a very long horse." My day was made.

11 p.m. Castle Eden; I stopped and asked a passer-by where the glider had landed. "Over the crossroads, love," she said. And so to the dew-covered dismembered Oly, glinting in the light of the policemen's torches—dozens of them—the Police House was at the crossroads.

"I don't think I have made it, Pete," came Findon's first words out of the gloom. What! You'd better have done, thought I, as the visions of those hot and dusty miles and the loss of a day's pay crossed my mind. We loaded the Oly into the trailer and said

Coventry Club members from left to right: Alwyn Findon, Vic Carr and Howard Greenway

"goodbye" to those people who invariably seem to spring out of the ground on these occasions, and went for the night to Hartlepool.

To bed, you would have thought. Not on your nelly. Findon insists on getting his wretched map out, and under the lights of Hartlepool's Sea Front at 1 a.m. in the morning, he measures it out, kilometre by kilometre. No, he hasn't done it, he thinks. "Chucked 3,000 ft. away to land in that field, Pete. Should have gone north." The poor chap went to bed muttering these things and continued when he got up.

He missed his Gold C by 2.3 kilometres. It's a hard life, isn't it?

Unscheduled Operator

by John Byrne

With this remarkable flight from the Dublin Gliding Club, Mr. Byrne not only set up an Irish altitude record but he became the first pilot to complete his Silver C in Ireland.

BALDONNEL aerodrome gets itself in the lee of the Dublin-Wicklow mountains only when the wind is from the south-east. The usual south-easterly produces a very satisfactory rain which stops when the wind stops. However, 21st June produced a dry variety of the right consistency to place the upcurrent over the launching area.

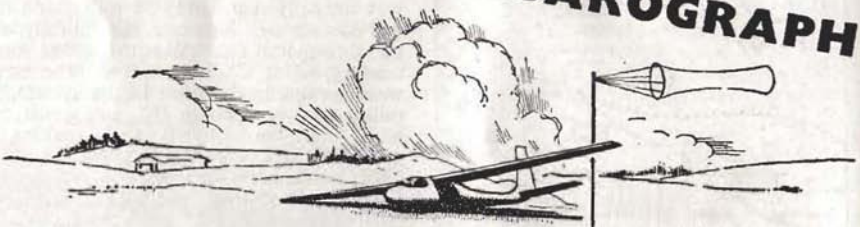
I was launched by car to 1,450 ft. in the syndicate Petrel at 13.45 and met the wave quite suddenly while flying cross-wind at 1,100 ft. (1,400 ft. a.s.l.). The initial climb was made by exploring the wave in the fore-and-aft direction only, the philosophy being "what we have we hold". Our experience here is that the lift in the lower strata of waves is very narrow laterally and is confused by turbulence. It is fatal to explore. The Petrel couldn't quite be throttled back to maintain station in the 15-knot wind, so we did 180-degree turns at the ends of the "beat". The first 4,000 ft. was gained in 14 minutes and the climb to 12,700 ft. a.s.l. took over an hour. Wind was then about 30 knots indicated, and we were practically asleep doing nothing in the warm sunshine. The zone of lift was at most a mile broad by half a mile deep (see A on map).

A single wave cloud several miles upwind was the only one within 30 miles, and its call was strong. However, we dutifully set off downwind (N.N.W.) to collect our missing Silver C distance leg. The next wave, probably the third in the system, 5 miles out over Leixlip (B), was easier to work and gave 13,100 ft. a.s.l., making a gain of height of 11,700 ft. Three subsequent waves were counted.

The rest of the flight was uneventful barring the last 3,000 ft. A special chapter on "landing in fields in Co. Monaghan" will have to be added to "The Soaring Pilot". The terrain was like Switzerland scaled down a hundred times, except that there were no flat bits. We (just) got down in one piece at 17.11, two miles west of Ballybay, giving a distance of 59 miles.

The wave system used was first located by Jim Bellew, who climbed to 15,000 ft. in a Tiger Moth about four years ago. In 1956 four pilots reached 6,000 ft. in Petrel and Grunau. Last year Freddi Heinzl made 3½ hrs. in it. But more often the wave blows

FCI MINIATURE BAROGRAPH



Here is a barograph specially designed by Firth Cleveland Instruments Ltd. for gliders. It is small, light, robust and easy to set up; it gives six hours continuous recording on a 7 in. length of graph, and is easily sealed for competition purposes.

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in vain, the region of lift being out of reach of a car launch.

Aer-Lingus are responsible for the title of this article. I am thus described in the paperwork relating to the barograph calibration.

A Fairy Story of our Modern Times

ONCE upon a time there was an airfield standing next to quite a busy main road, and it happened that this airfield was the home of a certain anonymous gliding club. Well, this road led to the far away West Country which, as you may have been told, is where many people go to spend week-ends and holidays; so not surprisingly, when the weather was good for gliding, it was also good for motorists.

Now a glider coming in to land or soaring gracefully overhead is quite an "eye catcher", and many motorists looking heavenwards to watch these happenings didn't see the other car or inadvertently wandered into the hedge which surrounded the airfield. Now, readers, I don't want you to think that *all* motorists were silly enough to watch gliders whilst they were driving; plenty of them stopped to watch, and their stationary cars beside the road caused traffic jams, so that all the rest of the motorists could watch the proceedings, whether they wanted to or not.

Anyhow, you can see that this sort of road had a definite requirement for one of those gentlemen from an organisation who drives along on a motor-cycle and sidecar saluting those cars who display the organisation's badge, and it is about one of these gentlemen that our story unfolds.

The patrolman who was assigned to this stretch of road was, in fact, a very good patrolman, never missed a salute, and was always very charming when he helped to pull the cars out of the hedge. But nevertheless it *was* interesting watching the sailplanes, and one day his curiosity got the upper hand, and, leaving his mount on the grass verge, he nipped through the fence for a closer look. He wasn't quite within touching distance of a large caged-in trailer affair when he had a spanner thrust into his hand; and before he could ask whether they were members or not, he had removed the carburettor and cleaned out the fuel lines. He was also given a circuit in payment for his service; but alas! that was the start of what may be called the "bug".

Well, so it went on: every week-end a quick nip through the hedge to see the club, and it wasn't long before he had been signed up and was learning to fly one of these machines himself. Trouble was that when the inspector drove by, there was a prominently painted motor cycle with no patrolman. After a few hasty excuses, it became evident that the motor-cycle would have to be pulled in behind the hedge, and from then on it was the duty of all pilots flying to report the last known position of the inspector's van. The reporting procedure went very well and there were no more incidents, except that one keen club member, espying a motor-cycle and crash helmet, thought that to help things along he would have a go, and the real patrolman landing from his first solo saw a bogus one driving up the road saluting every car in sight.

Came one fine day, and the C.F.I. suggested that this would be an ideal day for the cross-country, so with the bike well hidden, off glides our patrolman and, after passing the 50-kilo point, he lands very nicely in a field near to a main road Still in his uniform, he gets out of the glider and is met by another gentleman, also a patrolman, but from a rival organisation, who upon seeing the dress is naturally interested. What was actually said is not known, but there is an organisation who are still wondering how a report came to their offices that one of their patrol aircraft crash-landed in a field, the pilot escaping without injury. It wasn't there when they went to have a look.

Actually it wasn't very long before our Silver C patrolman realised that he would have to find another job which didn't keep him occupied over the week-ends, so he changed his employers and became a real full-time member of the club.

You know, this is the sort of fairy story which still persists in being told around our club; but naturally, you mustn't believe a word of it.

B.B.

Advertisements with remittance should be sent to Cheiron Press Ltd., 3, Cork St., London, W.1. (REGent 0677) Rate 6d. per word. Minimum 7/6. Box numbers 2/- extra. Replies to Box numbers should be sent to the same address.

PUBLICATIONS

"AUSTRALIAN GLIDING" — monthly journal of the Gliding Federation of Australia. Editor, Allan Ash. Subscription 30 shillings Australian, 24 shillings Sterling or 3.50 dollars U.S. and Canada. Write for free sample copy. "Australian Gliding", 34 Oxford Street, Kingswood, New South Wales, Australia.

"MODEL AIRCRAFT"—Official Journal of the Society of Model Aeronautical Engineers. Features contest winning model designs, constructional articles, photographs and reports of international and national contests. 1/6 monthly from any newsagent. Send for specimen copy free from "Model Aircraft", 19-20 Noel Street, London, W.1.

READ POPULAR FLYING the bi-monthly magazine of the Popular Flying Association. Subscription £1 a year. Specimen copy with scale plans of the Hirtenberg HS9A and history of this unique aircraft 1/6d. from The Popular Flying Association, Londonderry House, 19 Park Lane, London, W.1.

SLOPE SOARING with a radio control model sailplane is a fascinating pastime and a typical phase of aeromodelling. Read about this and other aeromodelling subjects in AEROMODELLER, the world's leading model magazine, published monthly, price 2/- MODEL AERONAUTICAL PRESS LTD., 38 Clarendon Road, Watford, Herts.

SITUATIONS VACANT

GENERAL ASSISTANT required for progressive workshop in the East. Candidates should be capable of supervizing the construction of gliders and light weight aircraft. Marine experience in the construction of various types of smaller craft would be advantageous. The post offers scope for advancement to a keen man of good education and initiative who is prepared to work hard. Reply with details of age, education and experience to Box 58.

LASHAM GLIDING SOCIETY Ltd. near Alton, Hants, require the services of a full time Flying Instructor for 6 months (extendible to 8 months) with effect from 1-3-1960. Please apply, stating previous experience to the General Manager.

SITUATIONS VACANT (contd.)

SOUTHDOWN AERO SERVICES of Lasham require a first class sailplane repairer. Good rate paid.

THE DERBYSHIRE and LANCASHIRE GLIDING CLUB is in need of an experienced instructor to take charge of training courses in 1960. Apply Secretary of Derbyshire and Lancashire Gliding Club, Camphill, Great Hucklow, Tideswell, Derbyshire.

FOR SALE

AIRCRAFT TABLE MODELS Scale 1: 50 High-class finish, varnished in either natural wood or ivory. The base is rectangular with a stylised cloud. All types of sailplane cost only 8.50 DM. Flugzeug-Modellbau Werner Reuss, Göttingen, Fliederweg 4, West Germany.

EX-SERVICES STOP WATCHES (Wrist and Pocket), Split Action Stop Watches, Time-of-Trip clocks, Wrist Chronometers and Watches, etc. All with 12 months guarantee. From 52/6. Binoculars, Telescopes. Send S.A.E. for List:—United Technical Supplies Ltd., Dept. S.G.3, Harrow Road, London, W.2.

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TELECOMM Radio Telephones for Glider, Recovery Vehicle or Trailer use. H.P. terms, discount to Clubs. R.E.E. Telecommunications Ltd., Telecomm Works, Crewkerne, Somerset.

TWO SEATER FALCON SAILPLANE, now due for major overhaul and C. of A. available for quick sale. Offers to Sqn. Ldr. A. Lawson, H.Q.M.C. Officers' Mess, Amport, Nr. Andover, Hants.

FOR SALE (contd.)

WINCH Four drum Diesel Electric winch driven by Gardner 6 LW 64 KW 220 v D.C. gen set with Ward Lenard Control. £750. No offers. As lying at Kidlington. Apply: Chris Wright, CUNninham 4120.

GULL I—1938 with C of A, spoilers and instruments. Apply to John Whitehead, Secretary A. G. C. Heatherlea, Peterculter, Aberdeenshire.

KITE 2A. Excellent condition. Current C of A. Modified wing tips. Perspex canopy. Complete with instruments. £425. Trailer extra if required. Box 59.

WANTED

LIGHTWEIGHT OLYMPIA TRAILER. Price, Particulars to Secretary, Chilterns Gliding Club, R.A.F. High Wycombe.

WANTED (contd.)

CREWS for Rhodesian Teams in Internationals. Wealthy, German speaking drivers a Godsend, but any volunteer welcome. MITCHELL, Box 8110, Causeway, Salisbury.

PARACHUTE and BAROGRAPH wanted, H. R. Dimock, 26 Beachcroft Road, Gosport, Hants.

SAILPLANE of any type or condition, no objections to a machine needing a complete rebuild or repair work. Box No. 56.

SKYLARK III to hire for whole or part of Summer season by experienced pilot. High rate paid and Insurance undertaken. Box No. 57.

TRAILER TYPE WINCH, also Glider Trailer. R. Hayball, Lakehayes, Tatworth Chard, Somerset.

GLIDING FILM

An excellent film depicting gliding activities called "Sailing the Sky", one of the "Look at Life" series, is now going the rounds, and Messrs. Rank Film Distributors, Ltd., have kindly advised us of the following bookings:—

Cinema	*Town*	*Days*	*Starting*
Essoldo or Mascot	Westcliff-on-Sea	7	Jan. 24
Plaza	Amesbury	3	Jan. 28
Regal	Evesham	6	Jan. 25
Palace	Bedworth	3	Jan. 25
Palace	Nuneaton	6	Jan. 25
Palladium	Hartlepool	3	Jan. 25
Majestic	Durham	3	Jan. 25
Regent	Redcar	6	Jan. 25
The Cinema	Pembroke	3	Jan. 21
Tivoli	Hednesford	6	Feb. 1
Haven	Stourport	6	Feb. 1
Alexandra	Kenilworth	6	Feb. 1
Alhambra	Dudley Port	6	Feb. 1
Regent	Darlington	3	Jan. 25
Hippodrome	Shildon	3	Feb. 1
Palladium	South Shields	3	Feb. 1
Regent	Sunderland	3	Feb. 1
Essoldo	Banbury	7	Jan. 31
Regal	Birchington	4	Jan. 31
Regal	Hayling Island	3	Feb. 4
Carlton	Tooting	3	Feb. 4
Classic	Kilburn	4	Feb. 4
Tonic	Bangor (Co. Down)	3	Feb. 1
Astoria	Belfast	3	Feb. 1
Playhouse	Moreton-in-Marsh	3	Feb. 4
Ritz	Seaford	3	Feb. 8
Rialto or Century	Leytonstone	6	Feb. 15
Palace	Bordon	4	Feb. 21
Savoy	Petersfield	4	Feb. 21
Cameo	Gt. Windmill St., W.	3	Feb. 29

CLUB AND ASSOCIATION NEWS

Do club members realise just what they can do to help their Press Secretary keep abreast of news in the club.

The Press Secretary's job is to pass on news to S. & G. and the local press. To do this he must rely on everybodys' co-operation in the club. Don't leave it for him to find out by chance, make a note of dates, times and names, etc., and see that he gets it in good time for inclusion in reports.

We like to receive regular news of the clubs and it is so much easier for a Press Secretary to send in news if he has the facts at hand.

Overseas clubs of course have a climatic problem which often restricts their activities to certain times of the year, but here at home flying continues very much all the year round.

Would Press Secretaries please note the address for sending club news is now:— Club News Editor B.G.A., Londonderry House, 19 Park Lane, W.1., to be received by Wednesday 17th February, as usual typed on foolscap double spaced.

COLIN MOORE.

ANDOVER

In spite of the gloomy weather, the club has managed to use every available opportunity for gliding. It is not an uncommon sight to see the gliders hurtling through the murk towards the close of the day.

The keen types who turn up under these conditions get many more rides and plenty of experience under bad conditions which will stand them in good stead during next year's soaring season. We would like to congratulate Aircraftsman Mancini on winning the Novices Trophy awarded each year to the outstanding novice of the year.

Sad news has arrived to tell us that the stalwart of the club, Flt. Lt. Allen, is shortly to be posted to Germany. He will be greatly missed by all for his outstanding service and devotion to the club and to gliding in general. We wish him and Mrs. Allen the best of luck in their new surroundings. His skill and knowledge of running a gliding club should be an asset to the fraternity in Germany. J.D.

BRISTOL

The period covered by this report is characterised by the return to normality of the weather, and consequently the amount of flying dwindled to a small amount at the end of the year. However, if the weather follows its usual pattern, by the time this report appears we should have had the January Wave and the New Year North Westerlies which are usually good for a few hours soaring.

Most activity lately has been on the ground, outdoors and indoors. A major project is the drainage scheme which is now under way under the direction of one of our surveying members, who even seems to be able to get the females wielding pick axes and shovels. Another stalwart is slowly digging himself into a hole which will eventually take a tank for bulk Tiger fuel.

Indoor work includes a complete overhaul of the T21, including the 10-year inspection and C. of A.'s on several other machines. All the Skylarks now sport bubble canopies which all pilots have found

to be a tremendous improvement over the originals.

A couple of winch overhauls have been carried out and a group of the mechanically minded are engaged in designing a new winch to the best engineering principles of functional simplicity; or that's the idea, anyway.

Tony Penetelow has now taken up residence at Nympsfield and will conduct the courses during 1960, amongst other duties. We hope that Tony will have as successful a year as Noel Harper did.

A.L.S.

CORNISH

FROM the 1st January next the Club reaches another landmark. Fred Breeze will be joining us then as resident ground engineer. For the past two or three weekends sundry members, under the whips of Bernard Warmington and Harry Hooper, have been partitioning part of one hangar to make a workshop. It really is quite remarkable how much can be achieved by a dozen people wielding hammers and saws when a little expert advice is available. Now we are waiting for the Swallow kit!

The appeal for funds to purchase the Swallow kit is well under way. The Christmas Draw produced a very satisfactory contribution, although not as much as John Flower had hoped. John had the thankless task of organising the draw and the vast amount of paper work that goes with it. The draw was made at a very successful social evening on Saturday, 12th December, by Ann Welch. The roar that went up when the first name she drew was that of Ted Berry, our Secretary, was quite something. Really, everyone was delighted that Ted of all people should win the draw.

Ann was a very welcome visitor. We always learn a great deal when she visits us. On this occasion she brought a large number of slides which were projected during the social, and very much enjoyed.

Flying has been rather curtailed recently owing to the bad weather, but some ridge soaring has been possible on the odd good day. Nick Goodhart paid us several visits while stationed nearby, and duly had his brains picked. We would very much like to see other pundits (perferably with gliders) at Perranporth. They can be assured of a warm welcome.

The Annual Dinner was not as well attended as we had hoped, but a very pleasant evening was had by all who did turn up. In his speech, Bernard Warmington, our Chairman, said that we were looking forward to 1960 being a record year, and that many more of our members would be able to enjoy advanced gliding.

P.V.P.

COVENTRY

THE 1959 season has been rounded off in a suitably convivial manner with the traditional dinner and dance, held on 11th December in the gaily decorated premises of the Coventry Aeroplane Club. Also decorated was the menu for the evening, which depicted what we understand is the definitive version of Laurie Watt's ornithopter—equipped for glider towing, naturally!

We were delighted to have with us on this occasion, Mrs. Woodhams, the wife of our President, who presented the Club's Annual Awards. These were distributed as follows:

The "Coventry Evening Telegraph" Trophy (awarded to the pilot making greatest progress)—Reg Ludgate.

The Jimick Trophy (best flight of the year)—Mike Smith.

The Founder's Trophy (lady pilot making most progress)—Sheila Hands.

The President's Trophy (for longest cross-country in club aircraft)—Doug Cunningham.

Doctor Gregg, our chairman, also made a personal award to each of the four pilots of the club entry in the Nationals this year: Doug and Gus Cunningham, Peter Berthelsen and Lou Glover.

However, the end of the year has compensations other than wining and dining, and the north-westerlies blew in no mean fashion on 27th October, enabling Peter Martin to complete his Silver C with a five-hour flight at Edgehill in the Olympia. Gus Cunningham also managed his five-hour leg on the same day, riding out some exceedingly cold and wet squalls in the open Prefect, and Julian Temple logged his duration in November.

John Greenway, incidentally, is able to provide winch launches at Edgehill for visitors with their own aircraft. Prior arrangement is necessary, and John's address is Sugarswell Farm, Shenington, Nr. Banbury (Phone: Tysoe 204). Ridge wind required: north-west.

Resplendent in a magnificent new paint scheme, the Viking has at last emerged from its long period in the workshop, where our Ground Engineers, Lou Glover and Laurie Watts, have put in a great deal of work in eradicating the ravages caused by excessive damp in a pre-war aircraft. But what are we to think when we discover that since working on the Viking, Lou has taken to parachute jumping, and has already made five drops? P.M.

DERBY. and LANCS.

OUR hope that this year's cross-country season would be extended right up to the last day of the year seems to have been disappointed, as no interesting waves have been used so far.

We can therefore only record the arrival of a brand new Olympia II and the acceptance flights by Ron Tune, Steve Osborne, John Riddall and Jock Milne, who are now trying to rent factory floor space for the construction of the trailer.

We can also congratulate Austin Wood, Phil Badley and a third pilot, on their C flights and Jock and Steve for passing their examination after a year's serious study.

The Social Sub-Committee have been more favoured by the weather as the Barbecue party on the 4th October was held in the open courtyard on a starlit and nearly tropical night. That night, Harry Midwood and company launched a 20 ft. high giant rocket.

This was followed by the official Bonfire and Fireworks party in early November at which a hot air Montgolfier and a 3 stage rocket were successfully launched.

The formal Annual Dinner and Dance was again held at the St. Anne's Hotel in Buxton on the 4th December with David and Anne Ince as Guests of Honour, with a strong supporting all star cast consisting of Fred and Mrs. Slingsby, John Furlong and John and Sally Jeffries. (John Jeffries had, it will be remembered, run all our camp courses bar one, this year.) Some rather startling tributes were paid in one of the after-dinner speeches, something to the effect that there were more retired glider pilots among the active membership at Camphill than at any other club, which proved that it was such an attractive club that members continued to come even if they no longer wished to soar.

O.W.N.

DUMFRIES and District

WE have now taken delivery of our new T31 and have handed over to "Slings" the syndicated Tutor for C. of A. However, owing to foul weather and winch teething trouble we have only made one circuit to date. Incidentally the winch was built from a 30 cwt. lorry, not a 15 cwt. as stated in our last report.

The Club have been given the use of the ex-R.A.F. aerodrome at Locharbriggs, just outside Dumfries, until such time as the owner requires it. It is intended to start instruction there as soon as the winch, etc., is proved serviceable. This site is familiar to the instructors who flew there as week-ends with No. 1 A.T.C. Gliding School, until it was disbanded two years ago. Given good weather this site, ideal for the training of ab initio pilots, should assist us when making our start.

At present we are investigating the possibilities of purchasing (at no great expense, therefore narrowing the field) a hut large enough for housing the fully rigged aircraft. This will speed up the entry of the T31 into the air or delay the exit from bed of the duty instructors, especially on cold frosty mornings. R.W.R.

EAST YORKSHIRE (Driffield)

ON 14th October, 1959, a new club was formed at Royal Air Force, Driffield, in Yorkshire, officially known as "The East Yorkshire Gliding Club, R.A.F.G.S.A."

Initially, of course, our main activities were confined to the classroom; not for us, as yet, the joys of soaring flight, but rather an initiation into the strange and intricate theoretical mysteries of Ground Handling, Organisation, the Principles of Flight, the ups and downs of Meteorology (with particular emphasis on the 'ups!!!'), Navigation and Navigation Law.

Our first glider—a T-31—arrived shortly afterwards, and our C.F.I., Squadron Leader Bowring, I suspect overcome with impatience, promptly disappeared in the direction of Sutton Bank, and returned with a C Certificate!

Early in October our first winch arrived. I was fortunate enough to catch a quick glimpse of it before it disappeared beneath waves of grubby, happy enthusiasts, armed with such diverse weapons as spanners, hammers, splashing paint brushes, and strange unidentifiable objects—these latter often seemed to arouse considerable discussion . . .

The result of this toil was creditable; gone was the rusty, rather sad looking object, and in its place was a gleaming, functional-looking piece of machinery, complete with signalling light and full weather protection.

11th October, was First Launch Day. In retrospect it seems amazing that our first launch was completely successful, considering our relative inexperience. This was undoubtedly due to the efforts of our C.F.I. to ensure that our briefings were adequate and fully understood.

Despite a necessarily late start that day, we managed to achieve 27 launches before dark, and, by the end of October, flying only at week-ends, we had accomplished 118 launches (7 hrs. 28 mins.), despite unkind weather.

In mid-November our second aircraft, a Mark IIB Grunau Baby arrived. Although November, as is only to be expected, did not give us the most suitable gliding weather, we nevertheless were able to add another 240 launches (18 hrs. 32 mins.) to our total, and four of our members, Group Captain Frogley, Master Pilot Crowther, Flight Lieutenant Beer, and Sgt. Hewett, gained their B Certificates.

Membership has now increased from an initial 31 to 61 at the time of writing. We have purchased a second winch, which will, however, require considerable rectification, and we are hoping to receive two more gliders within the next month or two.

Very shortly now our clubrooms should become tenable, and should anyone drop in on us during a cross-country attempt, either intentionally or otherwise, or care to visit us by car, or even on foot, which appears to be fashionable at the time of writing, we would be delighted to see him (or her!) to exchange the latest gossip—and perhaps even useful telephone numbers!!

M.J.F.

HALIFAX

THE loss of our President, Ian Fisher, due to his death in a motor accident, is, sadly, the main item of news from this club. Ian was a fairly recent convert to gliding and was extremely keen and enthusiastic. He was a member of the Yorkshire Aero Club and a keen motorist.

We are now in possession of our farm club house and furious cleaning, rebuilding and painting is going on so that we can get it into use as soon as possible. Needless to say one of the items causing most interest is the progress towards "opening time" of our bar lounge. After months of exposure to the bleak Pennine winds we feel that we are in the lap of luxury even to have four walls and a roof to shelter us. All the

activity is not confined to the clubhouse—the ground equipment is also being given the treatment by the ground engineers. If you assume from the foregoing that we are doing little flying you are quite right. All this is taking place in a lull brought about by a slight mishap to our T31 which will take some weeks to put right, but Messrs. Slingsbys have the job in hand so we hope to get it back before very long as good as new.

We had a very successful fireworks display and barbecue to mark Guy Fawkes Night and are following this month with the Christmas Dinner. The increase in the social activity of the club is tending to make Nancy Bramham, our Social Secretary, the hardest worked member of the club, for Nancy also runs the club "Pools", which is no easy task. We have recently visited our neighbour clubs, Doncaster and Derby and Lancs. and hope to see something of them when we are organised in the clubhouse.

S.C.

KENT

THE club still continues to use Lympne as a base, but in the near future we should have definite news of some sort concerning a site.

The autumn gales in October produced some good ridge-soaring days, notably Saturday, October 17th, when the wind was a steady 20 knots from the S.S.E. Sunday, 18th October also looked promising, and Roy Hubble determinedly made an early start in an attempt on five hours—only to find that the wind was too westerly after all.

However conditions improved later on, which was annoying for Roy, as it was too late for 5 hours, but very satisfactory for everyone else, especially Owen Maddock, who got his C with 27 minutes in the Prefect.

The last flight of the day was by Sue Parkinson and Olga Greaves in the T21, who became so engrossed in soaring the ridge that they had to be shot down with a white Very light from the tower. Richard Parkinson was overjoyed when they let him fire the fatal shot, as he has never had the opportunity of shooting down his wife before.

The ridge was again soarable on Saturday, 24th October, but 5-hour attempts by Glyn Richards and Philippa Buckley both failed as conditions were too poor early on.

During the week-end of 31st October—2nd November, a party of members took the

club Olympia and syndicate Skylark to Camphill. There was only one soaring day, on the Sunday, but all members of the party—Sue and Richard Parkinson, Glyn Richards, Roger Neame, "Jonah" Jones, and Philippa Buckley—enjoyed flights in a Camphill wave that day.

The journey home was marked by a drive on the newly-opened M1 with the trailers. All trailer drivers should have experience of this as P2 before being sent solo.

The week-end of 7th-8th November was notable for the visit of Brian Masters from Lasham, who came to categorise instructors. His headgear was much admired by club members.

In the latter half of November, flying has been somewhat curtailed because the airfield has been waterlogged; however, the opportunity was taken on Sunday, 15th November of depositing various items of K.G.C. property in sundry temporary homes in distant parts of Kent.

On Saturday, 21st November we were very pleased to see Ian Abel, who is now living in Norwich: he was Treasurer when the club started in 1956, and Chairman 1957, and is now a member of the Norfolk club.

P.B.

LAKES

OUR Annual Dinner and Dance was held this year on 10th December, and I think it is safe to report that like last year a good time was had by all present.

A feature which proved to be popular and most amusing last year was repeated this year, namely, "The Drinking Race". The "Drinking Race" is comprised of two teams of ten members each. The teams are then drawn up into two ranks down the middle of the dance floor and facing inwards, so that each man of one team faces his opposite number of the other. So positioned each man is armed with a pint of bitter "free gratis".

At the word "go" the number ones put lips to glass where they are obliged to stay until the vessels are drained. Having sunk his beer the man lays full length upon the floor. Then, and only then can number two quench his thirst.

The team which had our most recent member to fly solo, Dr. Andrew Gill, was indeed fortunate, for Andrew in position number eight safely put his team in the lead as he again demonstrated last year's achievement of being the smallest man with the biggest and fastest swallow.

It was regrettable that our President, Lord Lonsdale, was unable to attend this dinner because of being indisposed due to food poisoning, and that Mr. Philip Wills could not be present to receive the Lonsdale Trophy which he won during our "At Home" competition during August Bank Holiday Weekend. It was at this competition that Mr. Wills officially opened our new hangar and club room.

Although we were unable to get a speech from Mr. Jack Paley after he had been presented with the Leighton Hall Trophy, we did, nevertheless, get a laugh. Jack, appearing most embarrassed as the word "speech" was chanted, suddenly seemed to have full command of the situation.

Rising to his feet, Jack said, "Seeing that I won this Trophy in silent flight, I'll keep quiet". He promptly sat down.

D.H.M.

LONDON

"FOG, rain and low cloud," normal service has been resumed after the long period of fine weather.

Sunday, 25th October was our last week-end day for good thermals for 1959 and that day we flew 100 hours from 132 launches. Roger Barratt in his Kite I, Ernie Williams

in the Prefect and J. Spottiswood from Duxford in his own Olympia qualified for their five hour durations the last two to complete their Silver C's; and Messrs. Zeally, Bedward, Keating and Fereday qualified for their C's. Another duration a few days earlier in the Grunau Baby was by John Cardiff.

Provisional figures for 1959 show over 3,200 hours flown from 14,800 launches these figures showing 20 to 40% increases over previous records. We flew on 252 days compared with 247 in 1958.

A study of soaring conditions during the period 1st April to 31st October, show that we were able to soar on 131 days out of the 201 days flown, this total includes 20 days when it was only hill soarable but does not include days when soaring would have been possible in an east wind had we been able to aero tow. The winds during this period were well divided with 50% S.W., W. or N.W. and 50% N.E., E. or S.E.; we had some very long spells of Easterlies the longest during the eight weeks, mid-August to mid-October when it was Easterly 49 days out of 60, with one spell of 24 days without a change. Fortunately we can aero tow in a north-east wind and even an east or south east if they are light enough to tow off cross-wind, but in a strong east or south-east wind the downdraught from the hill stops towing and also seems to prevent thermals from forming within reach of a winch launch.

Our Tiger Moths and their pilots did an excellent job last year with over 800 tows to their credit.

The Christmas dance was held on Saturday, 12th December and it was 2 a.m. before the band was allowed to go home, the dance was a great success and I don't think I was the only one who was thankful for the fog which prevented an early start the following morning. The Annual Dinner and Dance will be held on Saturday, 27th February. J.F.W.

MIDLAND

SINCE our last notes were written we have entered the winter period, but have had some good soaring, with thermals quite active up to the end of October. We have had wave soaring also in both westerly and southerly winds, but in no case did the lift go up to any great height.

Our second T21 has now been converted to an enclosed canopy, as have both of our

Prefects. All these modifications have been carried out by Teddy Proll who incidentally designed, as well as built the Prefect canopies, which have greatly improved visibility. We now have an Army Skylark based at the Mynd for the winter.

We are already thinking about our Easter Rally 1960, and about the time this issue of SAILPLANE & GLIDING reaches you, posters will have been sent round to all clubs, calling for applications for entry forms. Entries will be limited to fifteen visiting aircraft, as in anything but a westerly wind, launching is limited, so get your application form in as soon as you can. Application forms may be obtained from Lt.-Col. G. Benson, Marston, Pembridge, Leominster, Herefordshire.

If we get good weather (Easter is late this next year), we hope to set some really worthwhile tasks, that will give serious competition practice to the best of pilots. Although we are unable to offer pilots and crews accommodation, we can arrange parking for caravans and tents, and all the facilities of our Clubhouse. In addition to the Mynd Cup, two other prizes will be awarded.

G.B.

MOONRAKERS R.A.F.G.S.A.

THE main news item for the report is that the Club have had a most successful start to the winter ridge soaring season. Our thanks go to Neil Swanton who has generously put at our disposal a fine large field at the base of Huish ridge. The first week-end produced 27 hrs. and since then five Silver C durations have been flown. The shocking part of the story is that prior to arrival of John Williamson (C.F.I.) the use of the ridge was hardly considered, but now it only needs the Met. man to mention the possibility of a wind with a touch of South in it and the equipment is put in the field overnight and flying starts at the crack of dawn.

During the past few months we have regretfully said goodbye to four staunch supporters of the Club, namely Plt. Off. Bill Keppel-Compton (K.C.) A.C.1 Dave Ellis, S.A.C. Eddie Hodges and S.A.C. John Dack. We wish them all the best with their postings and hope to see them again at Upavon whenever they have a chance to visit us.

Thanks to that ridge and the supporting ground organisation, we heartily congratulate Major John Evans, Flt. Lt. Eric Reeves and S.A.C. John Dack, on obtaining their Silver C.'s. John Dack found that the southerly winds did not quite fit in with his off duty time, so he flew his five hours at Fovant. However, he started his distance leg from Huish (without a map!?) and landed at Staverton. Also congratulations to our Chairman, Gp. Capt. P. A. Cooper, Sqn. Ldr. R. B. Stratton and Cpl. Steve Warick-Fleming, they also recently clocked the required five hours in the Olympia. Other qualifications in the past few months are C's for "Bob" McLuckie and Ron Colvin and B's for Peter Lewis and "Jock" McPherson. Our deepest sympathy goes to J.T. Geoff Chandler, who came to earth after 153 miles on a very fine attempt at his Gold distance.

The statistics for 1959 have proved what a wonderful year it was. The Club recorded 5,813 launches and 970 hrs. and the totals passed all previous records by at least 90%.

Work for the non-flyable winter days is in the shape of a badly damaged Weihe trailer which was purchased from Lasham. History has come home to roost, for the trailer met its doom when on its way to retrieve our C.F.I at Okehampton in the 1957 Nationals.

At long last we have a Club Room, it needs quite a lot of work in order to bring it to a usable state but the panelling has almost been completed and the floor laid. Some members have remarked that the inside looks like a large coffin but as it is six feet underground, their comments are understandable. Dick Stratton is planning the cooking and heating arrangements, so we should soon be able to offer visitors the odd cup of tea.

The Moonrakers wish all gliding clubs a Very Happy New Year of Soaring, if you ever come down our way during any week-end, just drop in for a visit.

E.R.

NEWCASTLE

THE good summer we have had may have spoiled us but we have taken the recent horrible weather very badly, however in spite of all the elements could throw at us in the way of gales, rain and fog, flying has continued mainly in the intervals between the "scattered" showers.

The only exception to the "hibernation" of the privately owned machines is the Green Kite I whose new owners are getting in as much practice as possible for next summer's soaring, so there is very little news as far as flying is concerned.

There is a great deal of activity going on under cover at the moment however, with the new Swallow syndicate busy building a trailer to house it when it arrives, and Eric Vissenga and Hetty White putting the finishing touches to the re-paint job they have been doing on the Sky.

Looking back, 1959 has been our best year. The previous best total of launches in a year was set up in 1956 with a total of approximately 2,300 but we had exceeded that by the end of October this year, and when the figures are calculated at the end of the year it is likely that 1959 will give us a substantially increased record to aim at. The number of certificates gained in 1959 was 14 Bs, 3 Cs, 2 Silver Cs and 1 Gold C completed. Cross country miles remain much the same as last year but we have hopes of extending our "milk-run" to Sutton Bank considerably further to the south during next year.

There are other developments under way at the moment which should help to improve matters still further so that though '59 has been an excellent year there are hopes that 1960 should be even better.

L.A.C.

OXFORD

FOR "flat-site" Clubs, winter months have little to offer that is remotely exciting, except of course, an occasional glimpse of the far end of the aerodrome when the murk is less thick.

A visit by "The Eagle Circus" for a week-end was therefore doubly welcome for in addition to breaking the monotony of successive circuits it enabled us to enjoy a form of training beyond the scope of all but the largest clubs.

"Polishing for Pundits" was however, curtailed on the Sunday by persistent low cloud, so the near-solo and early-solo pilots came in for some unexpected dual aero-tow experience.

The Oxford Aeroplane Club provided a "tug", John Gibbons, Dave Roberts and the trusty Kidlington Tigers maintained a steady service on both days.

With aero-tows at cost and a small subsidy from club funds our junior members were able to take full advantage of air experience we cannot normally provide, and we are very appreciative of an idea promoted by Ann Welch and in which she was ably assisted by John Neilan and Paul Minton, and grateful to the Imperial College College Gliding Club who made the "Eagle" available for this much needed purpose.

The C. of A. for our T21b was also an occasion of interest for evidence was found of an unofficial member who, it must be presumed flew with us without a signed "blood chit"—an aviating mouse whose constructional genius exceeds his audacity.

With a collection of the "Inspection Labels" Sling's men stick to each rib, he produced a flat, s.c. no mod. con., with exceptional view. Whether this was vacant because of our ab initios' efforts or the proximity of the C. of A. we shall never know. Nor shall we be permitted to find out whether reconstruction had been effected and residence resumed for the tail-plane, with all other flying surfaces, has been recovered and the whole aircraft re-sprayed.

It has been our pleasure to have Imperial College G.C. with us while they seek a new home.

W.L.

PHOENIX (Germany)

DURING the months of July and August, we logged nearly 100 hrs. in the Kranich, two Grunaus and our newly acquired Weihe. This was accomplished with approximately 550 launches. During this period we also had a number of first solos. Namely, F.O. Wright, F.O. Nelson, Capt. Symons, S.A.C. Lloyd, J. Lambert, L.A.C. Clarkson, J.T. Allan and W.P. Harris.

Two days stand out as being exceptional in the number of C and Silver C legs completed. On the 5th July, Flt. Lieut. Plumb accomplished a 50 km. triangle in the Weihe. At the same time Cpl. Dawson was launched off in a Grunau. He landed in Grave, Holland, 2½ hrs. later and 70 kms. away. J.T. Waters soared to over 6,000 ft.

obtaining Silver C height. Then to finish off, both Flt. Lieut. Stanley and Cpl. Harden obtained C duration, consecutively.

On Saturday 18th July, Flt. Lieut. Mayes completed his Silver C with a quick 50 km. triangle, again in the Weihe. When he returned, Cpl. Dawson took it up to complete his Silver C with a five hour duration flight. During the afternoon J.T. Butler obtained Silver C height.

On the 3rd of August, Jeff Lambert obtained his C duration with a flight of 12 minutes, when more experienced members could only manage 5 or 6 minutes.

Cpl Harden obtained Silver C height on 8th August.

The club now has six Army members, most of whom come from as far away as Belgium to fly with us.

We are all very grateful to W.O. Harris for the hard work he has put into our Pfeiffer winch. This winch is now beginning to look very business-like, and by next season should be as new. We hope that W.O. Harris will be able to reap the rewards by having better launches next year.

Cpl. Dawson has been checked out for carrying passengers, reducing the work of Flt. Lieut. Mayes, who has been doing most of the instruction during the last three months. Fl. Off. Wallis, our new treasurer, will soon be taking up duties as an instructor.

Weather permitting, we will continue to fly until the end of November. Then we must start overhauling the aircraft for next year.

N.M.T.H.

SALISBURY (Central Africa)

SINCE you have had little news from the fraternity in the Federation for some years, I feel that you should have some from this club, at least. In the Federation of Rhodesia and Nyasaland there are now clubs in Salisbury, Bulawayo, Gwelo, Umtali, Selukwe, Broken Hill, and on the Copperbelt. The figures of Salisbury should be read against the population figures. There are a quarter of a million Europeans only—Salisbury has 80,000—and, as yet, there is no African club! Salisbury is the leading Club—in fact, it is probable that the Club is the leading club in Africa. I am enclosing a tabulation of figures of its recent operations. It should be borne in mind that the country is flat to undulating near the present site, and only thermal and cloud flying is possible.

The flying membership is now 40, and the club merely owns a Tiger and a T-31; private syndicates, however, own a Skylark II, Swallow, Spatz, Bergfalke, Grunau Baby and Huetter 17. Silver C's are won most months, the altitude and distance being routine, only the duration being regarded with trepidation, thermalling for five hours requiring more determination than possessed by the writer! The airfield is 5,000 ft. above sea level, the shade temperature varying from 30° to 90° F. The thermals start at about 10.30, and cease at about 4 p.m.—at least at low altitudes. The newest pastime, however, is to climb at about 3 p.m. to cloud base—often about 12,000 ft. a.s.l.—and to spend as long as possible on the way down at minimum sink. Dave Ryland, in his Spatz, and the C.F.I., Douglas Elliott, in his BF have both recently needed a flare path of car lights with this technique.

Last August, which is midwinter here, four members did their five hours, and Doug Elliott did his 300 km. out and return in the BF—on this flight he was down to 500 ft. above McIlwaine Dam before picking up lift, and shortly before Dave Ryland, on a 300 km. triangle, was forced down to 500 ft. over an African Reserve—twenty miles from a road or telephone. He was making his approach to ditch in a small dam—the only clearing in the bush—when he contacted lift. Our conditions may be good—but, on occasion, they can be very, very dicey!

Finally, three of our members have submitted their names for the forthcoming Internationals. However, the expense of these to us south of the Equator can well be imagined, and it is not certain how many will be able to attend at the last moment.

R.L.M.

SCOTTISH G.U.

THE recent rains and storms have made the period the most disappointing and frustrating of the year. Flying has suffered, so also has the work schedules, although, of necessity, improvements to the drainage ditches have progressed.

Despite the weather we were visited by Ann Welch and Anthea Russell, who were immediately initiated in the mysteries of ditch digging, and a reciprocal categorisation was then arranged. Result, three additional flying instructors for the S.G.U. and two ditch-diggers for the B.G.A.

Money raising schemes are again the popular pastime with a view to hastening the building of a Clubhouse. The Annual Draw appears to be as well-supported as ever, but mention must be made of the Furnishing Fund organised by Mrs. D. Lawson. This fund derives income from the weekly sale of raffle tickets for knitted hats, mittens and other items. The money is then invested in Premium Bonds and to date this has reached £60. "Ernie" has now stepped in and one of the Bonds has added a further £25 to the kitty.

The C.F.I. has announced a change in his staff with the appointment of T. Docherty as Deputy C.F.I. and Advanced Flying Instructor. Additional instructors have been appointed and initial arrangements for the 1960 Courses have been made.

Very shortly we must start to think of C. of A.s, Rab Williamson (Ground Engineer) and crew made such noble efforts at them last time that many visitors to the site commented upon the fine appearance of the Club aircraft. Comments like these well earned and rarely given. G.A.S.

SUFFOLK (The Grasshoppers)

A NEW R.A.F.G.S.A. club was formed at Wattisham in 1959, to meet the demand for gliding in the area. Operations commenced in June with a Grunau Baby, followed shortly afterwards by a T-31 that had been repaired in record time by club members. The club rapidly became a centre for several R.A.F. stations and a keen Royal Navy element have joined us from H.M.S. Ganges.

The usual painful problems on starting a club occurred but they soon receded into the background due to excellent help from the R.A.F.G.S.A., and Wattisham itself. A keen nucleus proved they were capable of keeping aircraft and equipment up to a high standard of serviceability.

The Suffolk Club use auto-towing as a means of launching, with rope instead of the usual piano-wire. It has proved very successful and a launch-rate of twenty per hour is quite easy to achieve with two cars and Ottfur rings at each end of the launching ropes. Unfortunately, the cars used were cheap ones and soon gave up due to the beating they got. However, an old Fordson staff car has been overhauled and we now have an excellent vehicle for the job for a modest £20. We hope, next

Trophy winners at the Scottish Gliding Union. L. to R.: R. G. Parker (Vice-(resident), Bob Porteous pbest height), E. V. Anderson (President), Mrs. E. V. Anderson, and Tom Docherty (best distance).

season, to have both winch launching and auto-towing, which should enable us to meet the big demand from our 75 members.

Besides the T-31 and Grunau, we now have a Gull IV, a Cadet to be converted into a Tutor and a Buzzard. We have to sell the Buzzard, much to our regret, as we now find the purchase was a bit above our financial means. We now have news of a Grunau with spoilers allocated to us, so our Silver C distance aspirants can now land away from the airfield.

This year, the vast majority of our members had no previous experience, so the accent was on training. Twenty-one have been trained to solo stage, nine of them having qualified for their C. Next year we have great plans to branch out and join the soaring and cross-country fraternity.

Other clubs will probably realise that Wattisham is ideally situated for Gold or Diamond C distances when the "milk-run" north-easterlies prevail. We will be pleased to provide hangarage and accommodation for anyone wishing to start from Wattisham next season. L.A.B.

SURREY

ONE syndicate at Lasham, namely 68, refused to acknowledge that summer ended on 4th October, the time when the rest of Britain returned to G.M.T. On 25th October, which was a clear day with the odd blue thermals, Ron Willbie was launched in 68 and just disappeared. Later we found he had landed near Horsham, a distance of 32 miles.

Saturday, 7th November was the day for celebrating Guy Fawkes and quite a number produced large, multi-stage rockets. These were fired with some trepidation from the peri-track with the majority of onlookers safely behind the tea wagon. Unfortunately fog prevented our expert, Frank Kinder, from producing his, but these appeared a fortnight later and showed us just what experts could do.

During November we were visited by members of the Frensham Pond Sailing Club who desired to try their hands at gliding. Most of the members enjoyed their flights enough to partake of a second. This visit of the Sailing Club was returned with a visit by gliding types to try their skill at sailing. The day chosen was rather wet and some of the more nervous were given life jackets, just in case. The first race had a competent sailing member at the helm and finished without mishap. The second race required a gliding member to be skipper. It was quite amusing to watch how application of the rudder in a gliding sense tended to do the opposite to what was expected. There were two near capsizes.

The 21st Dinner Party held at the Eccleston Hotel was very well attended. The newer members had some difficulty in understanding the cartoons on the menu which referred to a bygone age, but were obviously enjoyed by those who remembered "Hasty Pud" and the "Snake Pit".

C.J.W.

TAUNTON VALE

NINETEEN FIFTY-NINE has proved a very successful year for us. We have doubled our number of launches to 3,000 and have set a target of 5,000 for 1960. Seven members gained their C's against only one in 1958 and we have increased our membership to 60.

Peter Berriman obtained his B.G.A. Instructors Category in June whilst at Lasham, and also managed to get to 14,000 ft. in a Skylark on the same day. Unfortunately the barograph did not register, so he could not claim the height gain.

The Swallow has been kept very busy since its arrival and the syndicate are generously allowing the more experienced club members to fly it. Everyone is very impressed with its performance and it is the only aircraft in which we can get out to our westerly ridge. To date no one has been able to soar the ridge for any length of time, as only when a very strong wind is blowing can one soar at a safe height. A bungy has just been acquired and we intend to use it on the Blackdown Hills where there is about six miles of soarable hill, in a N.W. wind. Given the right conditions our first five-hour legs should be possible from here.

So far, we have done no cross-country flying from Dunkeswell, but with the Swallow and its trailer now available many members will have their first chance for cross countries. Recently, selected pilots have been encouraged to do simulated field landings in a corner of the airfield and much confidence and experience has been gained. Also the B.G.A. Travelling Circus is visiting us late in January with an Eagle. Aerotowing will be available and as many members as possible will be given aerotows, cloud or blind flying and other advanced nstruction. In the evening talks covering all

aspects of cross-country flying and advanced soaring will be given together with accompanying slides. We feel the idea of the "circus" is a very good one and all members should gain benefit from the visit, especially the aspiring Silver C pilots.

We have already arranged six courses for the coming summer and intend to run more if instructors can be found. Our membership has increased during 1959 but with our recent advertising and press reports we hope that 1960 will be a record year for new membership. S.P.B.

YORKSHIRE

THIS is the period of reassessment, and preparation for the coming year's flying. We have had a good season with plenty of thermals, several cross-countries of note and some very welcome visitors from Derby and Lancs, and of course Philip Wills' arrival which did us all a world of good on 1st August.

The best waves this year were on 27th September when Keith Moorey rose to 7,200 a.s.l. in his elegant Kite 2. Henry Doktor and Frank Bainbridge were not far behind at 6,200 a.s.l. Bad light stopped further efforts. The sky was full of waves and it should have been possible to get up wind to the Lakes Club.

For the future we are intending to soar the Helm wind in the spring. This has long fascinated our C.F.I. and he intends to take a winch and his Skylark I on this expedition.

We have had a change in administration. Chris Riddell has resigned as Secretary and remains C.F.I. He did both jobs for a year and it speeded his typing up no end but he got too little flying. Jock White has taken over the Secretaryship. Jock has recently come south from the S.G.U. country and was running his own group on the West Coast before his firm moved him to Wakefield. He finished off his Silver with us this summer, a process he began at Cambridge nine years ago.

Henry Doktor has been seen in the Workshop recently. We now have our second Tutor with spoilers and it also has a canopy. He is also putting a canopy on one of our T-21s. This will be a great help and we are planning to sort out our instrument flying. With three instructors qualified instrument ratings some time ago, we hope to be able to start some thorough advanced training and with our hill we should be able to fill a long-felt need. J.C.R.

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