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December 1964 — January 1965 3s. 6d.



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SAILPLANE AND GLIDING

OFFICIAL ORGAN OF THE BRITISH GLIDING ASSOCIATION

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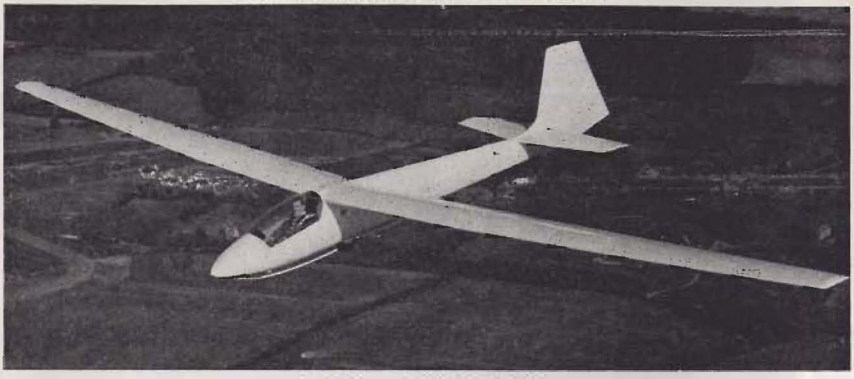
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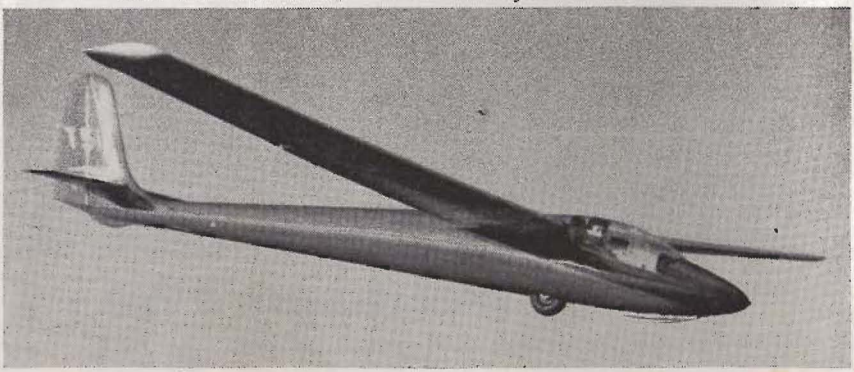
The SKYLARK 4

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1964 – 1965

IT has been a staggering year. Up to mid-June our weather was staggeringly bad, after that, staggeringly good.

During the Nationals pundits showered to the ground like leaves in Vallombrosa, and never again will any one feel secure in the cockpits of the mighty. The first fortnight of June — the fortnight which in 1965 will see the World Championships at South Cerney — was wet and windy, and the organisers' faces grew as pale as those of the pundits.

Then came the finest summer and autumn that anyone can remember. The fingers of the B.G.A. Secretariat were worn to the bone typing out Silver and Gold C's. They typed until they actually ran out of forms. A Niagara of flying-money tinkled through club tills. The faces of the Club Treasurers grew pink and smiley.

Then came the news that the Revenue had ruled we were not a Public Class. Few people would think this mattered much — it sounds rather a vulgar thing to be — but in fact it meant the end of the financial support of the Shaw Slingsby Trust. Club Treasurers' faces adopted the same ashen hue as the pundits and the World Champ. organisers'.

But Christmas is here again, and 1965 is round the corner. In the light of the yule fires Silver and Gold C's will glitter like stars on a frosty night. The mellow warmth will bring colour back into the faces of even the most deflated. In 1965 we will be hosts to the gliding world, and six short months ahead we will have our finest hours.

So to all our five thousand and more subscribers in sixty countries we wish five thousand and more times :

A Merry Christmas and a Happy New Year

1965 World Gliding Championships

FOR three weeks next year the R.A.F. airfield at South Cerney will become the home of 1,000 people, nearly 400 of them from abroad.

We want to make the championships an event really worthy of this country, and enjoyable for competitors who will have come thousands of miles to take part.

As everyone knows, the generosity of W. D. and H. O. Wills has enabled us to reduce the entry fee to competitors; the R.A.F., too, are giving us every co-operation, and, not least, 150 Gliding Club members are giving up their annual holidays to work. Nevertheless, it is going to cost a lot of money, although we hope money well spent. There will be considerable bills for printing, insurance, telephones, construction work, etc., and all the other items which are an inevitable part of the organization of a big event.

Anyone who feels that they would like to contribute to the success of the Championships, and send a cheque, should make it payable to the British Gliding Association and send it to the B.G.A. at Artillery Mansions, 75 Victoria Street, London, S.W.1.

Alternatively, construction materials — dexion, hardboard, formica, timber, strip lighting, etc., would be most welcome.

All donations will be acknowledged with grateful thanks.

Ostiv Congress 1965.—Authors preparing technological papers should send brief summaries before 31st January to A. Yates, Technical College, Bath.

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Entries for World Championships

THE following entries for the 1965 World Gliding Championships in England have been received up to the time of going to press. Countries which have also notified their intention to compete, but have not yet sent in official entries, are: Czechoslovakia, Rumania and Yugoslavia.

Country	*Open Class*	*Standard Class*	*Team Manager*
ARGENTINA	One Pilot	One pilot	—
AUSTRALIA	One Pilot	Two pilots	J. R. Muller
AUSTRIA	F. Ulbing	H. Wödl	H. Kreis
BELGIUM	H. Stouffs	M. Baeke M. Cartigny	J. Verbinnen
CANADA	W. J. Mix D. Webb	C. M. Yeates	T. R. Beasley
DENMARK	H. W. Jensen E. E. Nielsen	N. S. Sejstrup I. Braes	—
GERMANY (EAST)	—	M. Blauert B. Nolte	D. Lück
GERMANY (WEST)	R. Spänig R. Kuntz	H. Huth R. Lindner	M. Reinhard
FINLAND	S. Hamalainen	J. Horma M. Wiitanen	O. Rautio
FRANCE	One pilot	Two pilots	—
GREAT BRITAIN	J. S. Williamson H. C. N. Goodhart	A. J. Deane-Drummond G. E. Burton	P. G. Burgess
HUNGARY	K. Thuri G. Petroczy	F. Csépany	—
ICELAND	—	L. Magnusson T. Filippuson	E. Magnusson
INDIA	—	V. B. Gupta	—
IRELAND	N. W. Kearon M. Slazenger	T. W. Evans	W. A. H. Khan
ISRAEL	M. Bar D. Arber		— —
ITALY	Three Pilots—*Open and/or Standard*		—
JAPAN	—	I. Oda	—
NETHERLANDS	G. Ordelman	E. van Bree E. T. Réparon	— —
NEW ZEALAND	—	Two pilots	—
NORWAY	—	Two pilots	—
POLAND	E. Makula J. Wróblewski	J. Popiel F. Kepka	T. Rejniak
SOUTH AFRICA	E. Dommisse	M. Jackson	L. Rudnick
SWEDEN	S. Rodling	P.-A. Persson	B. Soderholm
SWITZERLAND	H. Nietlispach	M. L. Ritzi U. Bloch	K. Ruckstuhl
UNITED STATES	R. H. Johnson A. J. Smith	R. E. Schreder W. A. Scott	E. H. Butts
U.S.S.R.	M. M. Veretennikov V. I. Chuvikov	V. I. Yarushevichus O. N. Suslov	M. M. Veretennikov



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C.C.113A

The Arm-Chair Pilot

II. Portable Polars

by ANTHONY EDWARDS

IN the last article — ON THE BEST SPEED TO FLY — I considered some simple extensions to the standard theory of cross-countries, but none of these lessened the need for a compact, accurate, universal calculator.

Ideally, a cockpit calculator should be able to give quick answers to problems that could be solved with the aid of the glider's polar curve and a set of drawing instruments. In general it is required to relate the following variables: height, distance, wind strength, lift or sink, thermal strength, air speed, and cross-country speed, which are interdependent by virtue of the glider's polar. Some of these are dealt with by the best-speed-to-fly ring, and what is really needed is a supplementary calculator to deal with the glide path. Various designs are in current use*, but I hope that some of the ideas in this article will encourage a fresh look at the problem of calculator design. I want to suggest that it may be fruitful to use linkages rather than the slide-rule principle, a linkage being a collection of hinged and linked rods subtly arranged so that attached pointers indicate the values of the related variables. One way of inventing such linkages would be to take a course in nomography, but since I have not done this I have been forced to think along different lines.

The basic ingredient of a linkage calculator must be the polar itself, so the first thing to do is to conjure up a simple linkage which will trace the polar, transformed if necessary. For all practical purposes we may regard the equation $s = Av^3 + B/v$, where s is the sinking speed and v the forward velocity, as a satisfactory approximation to the polar, but I know of no linkage which will reproduce this curve. We therefore have to think of a "linkable" curve which fits this equation well enough. A parabola with its axis vertical is a natural first choice, but it turns out to be a poor fit. An ellipse with one axis vertical is much better, and — in retrospect — is the perfect curve for our purposes because we only have to stretch the forward-velocity scale by the appropriate factor in order to achieve a circle, which is the simplest of all "linkable" curves.

The required stretch may be found as follows. Consider the transformation $v = ku$ of $s = Av^3 + B/v$, and choose that value of k which makes dr/du (the rate of change of the radius of curvature of the new polar (s, u) with u) zero at the value of v for which the most accurate approximation is required. In this region the new polar will thus be approximated by a circle, and hence the old polar (s, v) by an ellipse. It is easily found that the radius of the circle, r, is given by

$$\frac{(1 + (3Ak^3u^2 - B/ku^2)^2)^{3/2}}{6Ak^3u + 2B/ku^3}$$

and that k^2 is

$$\frac{v^4(Av^4 - B)}{(Av^4 + B)\,(3Av^4 - B)\,(15Av^4 + B)}$$

where u is v/k and v is the chosen velocity.

For illustration, let us take A to be 3.7×10^{-6} and B to be 82, which gives a best gliding angle of nearly 1 in 29 at about 40 knots, and a minimum sink of 2.1 f.p.s. at 33 knots. We would like the approximation to be particularly good in the region 35 to 75 knots, so we choose v equal to 90 f.p.s., or just over 53 knots, whence k^2 is 13.5 and r is 37.7 f.p.s. on the scale of the sinking speed. The co-ordinates of the centre of the circle are easily found to be 39.8 f.p.s. sink and 51.1 f.p.s. forward velocity.

The excellence of this approximation is shown in the table.

*I must apologize for the lack of references to other people's calculators, particularly to those described in earlier numbers of SAILPLANE AND GLIDING. This is due to the lamentable lack of back numbers on the boat on which I am travelling. The mid-Atlantic environment must also be blamed for any errors and omissions in the ensuing argument.

Table

Comparison of "circular" polar and that given by $s = Av^3 + B/v$

airspeed knots	*sink calculated from* (1) *circle*	(2) *equation in f.p.s.*
35.5	2.165	2.166
41.4	2.441	2.441
47.3	2.919	2.919
53.2	3.608	3.608
59.2	4.520	4.520
65.1	5.672	5.670
71.1	7.091	7.077
77.0	8.812	8.760

The end of a rod hinged at the centre of curvature and of length r will thus trace the polar very accurately, and since this has been achieved by choosing the relative scales of the axes carefully rather than by making some non-linear transformation, all the familiar geometrical properties of the polar hold.

This is the basis of the two Portable Polars to be described.

Mark I is simply a piece of paper marked out as in Figure 1, together with a transparent ruler of width r. The origin of the glide chart is at the centre of curvature of the polar (which does not itself appear), and the "conditions" part of the chart is correctly placed relative to the centre of curvature, and correctly scaled according to the above considerations. When the r-wide ruler is placed as shown, with the bottom edge passing through the centre of curvature and the top edge through the "conditions" point, it is clear that the top edge is tangent to the imaginary polar, and that it thus specifies the glide ratio at the best-gliding-angle speed for the set conditions. But the two edges are parallel, and since the bottom edge passes through a fixed point (the centre of curvature) this point may be used as the origin of a straightforward glide chart of height versus distance. Furthermore, every glide ratio corresponds to a particular best speed, so that a speed scale can be added. The determination of the glide-chart scales and velocities is very simple. The device will do everything that can be done by drawing tangents to a polar, and its main illustration is thus that it only indicates the glide path if the *best* speed is chosen, whereas in practice one may want to fly faster when one has height to spare, and to know the corresponding glide path. To achieve this it is necessary to link the "conditions" point to the point on the polar corresponding to the chosen speed, and to measure the gradient of the link. The Mark II fully-automatic Portable Polar is designed to do this (see Figure 2).

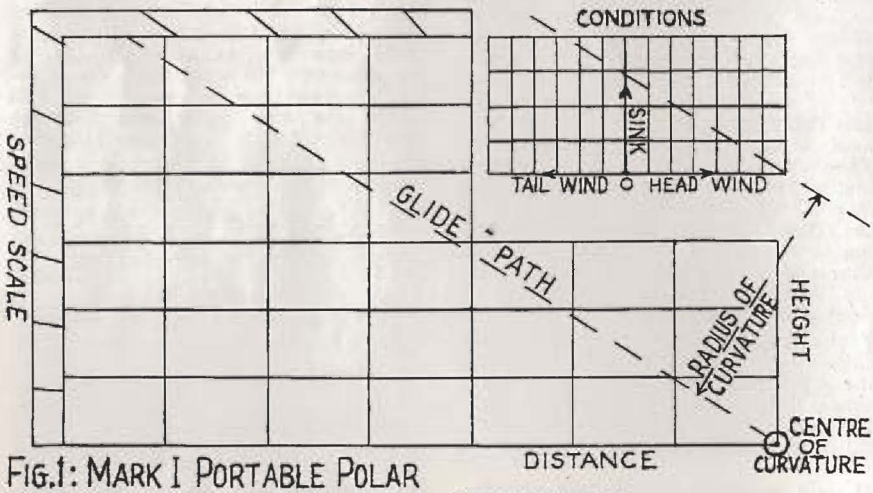


FIG.1: MARK I PORTABLE POLAR

The workings of the parallelogram linkage should be sufficiently obvious to anyone who has followed the argument this far! When the speed is chosen

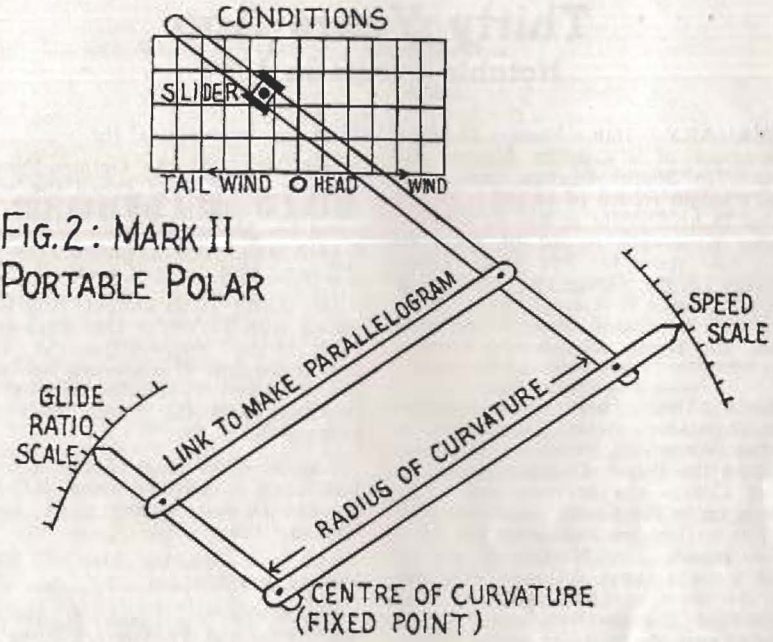


FIG. 2: MARK II PORTABLE POLAR

so that the parallelogram becomes a rectangle, the long "conditions" rod is tangent to the polar, and the linkage is in the "best gliding angle" configuration for the set conditions (as the Mark I Portable Polar always is). The links could be geared to pointers for a *de luxe* model — in fact there is no end to the elegance that could be added by a competent watchmaker. A glide chart itself could, of course, be incorporated, as in the Mark I.

The design is not copyright, and if anybody starts a Mark II production line, I would be glad to receive a free sample. My Mark II has never progressed beyond the Meccano stage. The design shown in Figure 2 is schematic only, and the would-be constructor will find that there are several practical difficulties to overcome.

U.K. RECORDS HOMOLOGATED

200-KM. TRIANGLE SPEED.—John Firth in Skylark 3F on 20th August, 1964: Cambridge - Market Harborough - Dunstable-Cambridge. Distance 215 km. (134.4 miles); time, 3 hr. 5 sec. Speed, 44.66 m.p.h.

TWO-SEATER 100-KM. TRIANGLE SPEED.—Gordon Camp and Delphine Gray-Fisk in Eagle on 21st August, 1964: Dunstable - Steeple Morden - Twinwood Farm-Dunstable. Distance, 101 km.; time, 1 hr. 36 min. 20 sec. Speed, 39.3 m.p.h.

WOMEN'S 200-KM. TRIANGLE SPEED.—Anne Burns in Standard Austria on 22nd August, 1964: Lasham-Devizes-Witney-Lasham. Distance, 205.5 km.; time, 2 hr. 58 min. Speed, 43.04 m.p.h.

GOAL AND RETURN.—John Williamson in Olympia 419 on 30th August, 1964: Upavon - Swinderby - Upavon. Distance, 274 statute miles.

Thirty Years Ago

Notable events in 1934

FEBRUARY 16th.—Heini Dittmar, member of a German Soaring expedition to South America, put up a world's height record of 14,137 ft. (4,350 metres) in his Condor at Rio de Janeiro, beating Kronfeld's record of 8,494 ft. which had stood for five years. Other members of the expedition, which was led by Professor W. Georgii, were: Wolf Hirth with Moazagotl, Peter Riedel with Fafnir, and Hanna Reitsch with Grunau Baby.

March 18th.—Three cross-countries from Dunstable: Sebert Humphries, in Crested Wren, 19½ miles to Hertford, equalling the British Distance record set up by Collins the previous year. Eric Collins, up in the Kassel two-seater with W. Exner (London representative of a Berlin paper), saw Humphries go off under a cloud street, followed him, and went 46 miles to Little Waltham near Chelmsford—2 miles less than the then world's two-seater distance record (Burzlauer, Duisburg to Eindhoven, 1933). Later in the afternoon, Philip Wills flew the club Professor 56 miles to Latchingdon in Essex, putting up a British distance record, beating Kronfeld's U.K. record of 50 miles from Firle to Portsdown in 1930, and getting height and distance towards Silver C. First multiple cross-country day in Britain.

April 22nd.—Eric Collins flew his newly-acquired Rhönadler from Dunstable to Rayleigh, Eessex, 52 miles, climbing about 4,500 ft. Having done his five hours two days earlier, he thus became the first British Silver C pilot, obtaining No. 26 in the international list.

May 20th-21st.—Soaring expedition to Prestatyn with Espin Hardwick's Falcon 2 and Editor's Blue Wren. Pilots: Hardwick, Slingsby, Dewsbery and Testar.

July 7th.—Meeting held in Glasgow to establish the Scottish Gliding Union.

July 14th.—Philip Wills flew five hours at Dunstable in Scud 2, becoming Britain's second Silver C pilot and No. 45 in the international list.

July 26th.—At the German National Contests, Wolf Hirth raised the world's distance record to 219 miles (352 km.), flying his Moazagotl from Wasserkuppe to Görlitz. Previous record, 169 miles (272 km.) by Günther Groenhoff in 1931.

July 27th.—Heini Dittmar beat Hirth's record with 233 miles (365 km.) in Sao Paulo from Wasserkuppe to Liban, Czechoslovakia. This meeting was visited one week-end by Dudley Hiscox, Jack Dewsbery and the Editor in a hired Leopard Moth.

August.—Ownership of THE SAILPLANE & GLIDER transferred from B.G.A. to H. O. Davies, secretary of London Gliding Club.

This year also, the American journal *Soaring* was founded.

August 4th-6th.—Inaugural meeting of recently-formed Yorkshire Gliding Club at Sutton Bank. Jack Dewsbery flew Blue Wren 37 miles without barograph.

August 5th.—Eric Collins raised British distance record to 98½ miles with flight in Rhönadler from Dunstable to Holkham Bay on Norfolk coast.

August 11th.—First flights at Long Mynd in Espin Hardwick's Falcon 2 by him, Slingsby and Testar, preliminary to formation of Midland Gliding Club.

September 1st-9th.—National Contest at Sutton Bank. On 4th, first British thunderstorm flights by G. Mungo Buxton, Jack Dewsbery and Eric Collins; Buxton, in Scud 2 without parachute or blind flying instruments, climbed 7,970 ft. inside cloud: British height record. On 8th, John Laver of Dorset Club raised the British duration record to 12 hrs. 21 mins. in Club's Dorsling (modified Prüfling).

December 26th.—Midland Gliding Club's first flying meeting opened at Handsworth with ground-hop in a Dagling by the undersigned.

A. E. S.

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THE KRONFELD CLUB

74 BASEMENT ECCLESTON SQUARE · SW1

WEDNESDAY, 4th November saw the opening of the Club's Seventh Annual Aviation Art Exhibition by Bill Bedford. It will remain open to the public until 28th November—weekdays 6 p.m. to 11 p.m.; Wednesdays from noon and Saturdays from 3 p.m. to 6 p.m. It is the biggest exhibition so far, with entries in every aviation subject and medium. If you want to get a gliding picture for your home, now is your chance. The results of the competition are given briefly at the end of this article and a full report will appear in the February issue.

Wednesday, 14th October, was the Club's A.G.M. when both the Secretary and Chairman reported a satisfactory year. Tribute was paid to all those members who had worked so hard on the new premises. Mike Gee, in explaining the Club accounts and budget for 1965, underlined the importance of increasing the utilisation of the new premises and the number of members if the Club was to remain solvent with all its increased commitments in the coming year. Lots were drawn to find who of those who had loaned money to the Club should be repaid £10. Five £10 lots are to be repaid this year.

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The Annual Dinner and Party afterwards was most successful although numbers were very considerably down on last year. Y. C. B.

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

Nov. 25. Moon Photographs and Astro-Biology, by Dr. A. E. Slater.
Dec. 2. Film: "Whispering Wings".
" 9. Gliding in Poland, by T. Jerzycki.
" 16. Flying with John Furlong in the Meta-Sokol.
" 23. Grand Christmas Party.
" 30. Buster Keaton film: "The General".
Jan. 6. Debate: Proposed by Godfrey Lee "That the Rules Governing the design of Standard Class Sailplanes be Changed". Opposed by Lorne Welch.
" 13. "Lighter Than Air." Ballooning and Airships by Dixie Kidd.
" 20. 1965 World Gliding Championship: Ann Welch and her team of organizers.
" 27. Hawker P1127 Strike Fighter, by Bill Bedford.

ART EXHIBITION PRIZE WINNERS

Overall Winner

Margaret Kahn (Challenge Trophy).

Oil Paintings

Gliders. 1st, Margaret Kahn. Commended, V. H. Veevers, A. Speechley.

Powered aircraft. 1st, J. Palmer.

Water Colours, Goucha, Poster

1st, J. Palmer. Commended, V. H. Veevers. Best first entry, M. Cole.

Line, Pencil, Crayon, Pastel, etc.

Commended, N. Hoad.

Professionals

1st, G. Davison Coulson. Commended, E. Cooper.

Throw away the Slide Rule

by C. E. WALLINGTON

IN the World Gliding Championships in Argentina it was possible for a competing pilot to get more points by landing just short of a goal at the end of the race than by completing the race. In a 100-km. race in the 1963 British Championships the distance covered could have been worth nothing for the first 10 km., 800 points for the next 89.999 . . . km. and 200 points for the last inch. In the World Championships in Germany the final results could have been radically altered by a fortuitous flight of an outsider in the championship stakes.

These are some of the anomalies thrown up by the championship marking systems under which we have suffered. Many years ago the basis of the present system was sound enough, partly because limitations in aircraft performance and championship organization were more restrictive than the marking system. But as these operational restrictions have been reduced, the risk of the potential anomalies occurring has increased. In recent years the basic system has been amended bit by bit. But these amendments are not enough; they merely botch up a system that is out-of-date.

Further botching with its complications may well be needed as competitions become even keener and tougher. The scorer's task will become more arduous and mystical. But the main danger is that the system will become too critical a factor in the problem of task-setting.

The principal factors in the task-setting problem should be safety, the law and the need for adequate competition. But at present the task-setter also has to make difficult decisions on whether or not a contest will be fair, and in making such decisions he is caught between the out-dated marking system and the margin of error which must be allowed for in the meteorologist's very detailed forecasts.

Many a potentially interesting task has to be ruled out because of the risk of an unfair contest. For example, suppose a route from A to C via B is ideal from the safety, legal and other operational aspects but the wind or weather becomes much more favourable beyond B. Then the task would probably not be set if it were predicted that only a few pilots would reach B and that they would then streak on easily towards C. Points gained beyond B would be a bonus presented by the task setter and meteorologist. But how is "much more favourable" defined or even predicted in these days when a mere few hundred feet increase in the depth of thermals or the formation of thermal streets can change despair to delight in the pilot's eye?

However, if the task-setter and meteorologist are too cautious, the weight given to the fairness factor may lead to a task that proves to be too easy,

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frustrating or even impossible. For example, if the first leg of an out-and-return race is set with the wind in the interests of fair competition, only a slight increase in the wind may make it difficult or impossible for pilots who have drifted downwind (intentionally or otherwise) to return to the starting gate to make a correct crossing of the starting line. Of course, the task-setter and meteorologist must shoulder the blame if a task does not turn out to be satisfactory, but the point being made here is that the marking system is having an increasing and undue influence in the decisions that must be made.

Even when the forecast is perfectly accurate and the task is well chosen, a contest can easily become unfair. Such unfairness is usually due to the natural variations of soaring conditions in time and space, and its effects are magnified by the marking system.

The principle of a new system

A new system should be introduced wherein the basic principle should be that the difference in marks between two pilots should be related to the number of pilots whose performances are between those of the two pilots in question. Suppose a pilot lands at distance, x, on a free distance day and another pilot attains a greater distance, y. If a number of pilots land at distances between x and y, it should be inferred that there must have been ample opportunities for the pilot at x to have gone further. Therefore, his marks should be well below that of the pilot at y. If, on the other hand, no one had landed between x and y it is assumed (as it must be) that the two pilots are of comparable skill, then it should be inferred either that the pilot at y has probably had some luck to enable him to bridge the gap between x and y or that the pilot at x has had bad luck; therefore the difference in marks between the two pilots should be small.

This principle may well raise a protest that a pilot who makes a spectacular flight does not get a just reward. But the object of a contest is merely to win. The margin by which a win is achieved should be rewarded by publicity or special commendation, but it should be irrelevant as far as the contest is concerned. Many years ago, the basis of the present marking system was very useful because it highlighted the tremendous difference between a few top-class pilots and the rest, and such a sharp focus on the top pilots was good for the growing sport. But today there is so little to choose between many top-class pilots that an element of luck must be inferred if one of them makes an unusual flight compared with the others.

The possibility of luck is recognised in the present marking system by the rule that a contest day is one on which at least a specified percentage of competing pilots fly the "qualifying distance" known as "2X" (decided by the task-setter). This rule itself implies that, if less than the specified percentage fly the required distance, any flights exceeding 2X must be considered lucky rather than meritorious. The basis of this rule is sound, but it applies only to luck in about the first X miles of the course. Furthermore, the maximum points awarded increases in steps as the percentage of pilots exceeding 2X increases. This is much better than the 1,000 points or nothing of a few years ago, but still short of the ideal of a continuous increase of maximum points with increasing percentage past 2X.

This problem of luck is more serious when it allows the difference between two pilots' marks to be unduly influenced by a third pilot. Suppose two good pilots make moderate flights to distances not much beyond the minimum scoring distance. If all of the other competitors make flights of similar distances, the

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difference between the points of the two good pilots may amount to several hundred. But suppose one of the other pilots has a piece of luck that enables him to fly a long distance, very much further than the two good pilots. The difference between the points of the two good pilots will be reduced to perhaps a few tens of points. This effect is quite anomalous in a system in which championship points are formed by addition of daily points.

A Practical Marking System

The simplest way of putting the principle just outlined into practice would be to award marks according to placings; the first, second and third pilots would get 1, 2 and 3 points, and so on. All those who failed to fly the qualifying distance would receive one point less than the number of pilots that qualified. For example, if 20 pilots competed and only 15 exceeded the qualifying distance, then the 15 would get from 1 to 15 points and the remaining five would each get 16 points. In this system the points value of a contest day increases steadily with the number of pilots who exceed the qualifying distance; there are no sudden and arbitrary steps as in the present system. If only one pilot exceeded the qualifying distance he would be only one point better off than his rivals. Probably he had some luck, but he would deserve a point at least.

The difference between the marks awarded to two pilots can still be influenced by a third pilot, but in the right sense. If the third pilot lands between the two pilots he will increase the separation in their marks — rightly so, because he has demonstrated that the difference between their performances may not have been quite so much due to luck. If the third pilot lands outside the zone between the other two, he has no effect on the difference between their marks — again rightly so, because if he has not reached this zone the inference should be that the further pilot of the two has had good luck, and if the third pilot goes beyond the zone the inference should be that the pilot down at the beginning of the zone has had some bad luck.

Obviously in this system a championship would be won by the pilot with the least points. There would be no need to make the minimum scoring distance distinct from the minimum qualifying distance. A minimum scoring distance would suffice.

Racing Marks

Races could be marked on the same basis. The fastest pilot to complete the course would get one point; the second, two points; and so on. Pilots who failed to reach the goal would receive marks according to their placings along the course, the scale being a continuation from that applied to those who completed the course. For example, suppose 20 pilots compete, 5 finish the course, 10 fly more than the minimum scoring distance but do not reach the goal and 5 fail to reach the minimum scoring distance. In the placing system, the 5 successful pilots would receive between 1 and 5 points according to the order of their flight times. The next 10 pilots would get between 6 and 15, and the 5 unsuccessful pilots would each get 16 points.

Another cry of protest may be raised: what about extra points for speed? But how should speed be rated? The v^2/V^2 in the present marking system is quite subjective, although it smacks of aerodynamics. There is no objective method of relating speed to distance. Therefore, we may as well adopt the simplest possible system.

The new system described does put an obvious premium on speed, and would encourage pilots to get to the goal just as much as the present system does.

Pilot-Selected Goal

This is another task in which the premium awarded for reaching a selected goal has to be assessed subjectively. There are several possible systems, one of which is as follows. The first places on a contest day go to pilots who reach their goals, the placings being according to the order of the distances of these goals. The remaining places are awarded according to distances flown. Table I shows the points that would be awarded to a hypothetical contest between seven pilots.

Table I

Pilot	*Distance of goal*	*Distance flown*	*Points*
A	80 miles	Reaches goal	1
B	70 miles	Reaches goal	2
C	60 miles	Reaches goal	3
D	90 miles	80 miles	4
E	65 miles	70 miles } These two fly	5
F	50 miles	60 miles } beyond their goal	6
G	60 miles	50 miles	7

At first sight it may appear that the system would encourage pilots to select easy goals rather than be ambitious, but such a view would be by no means acceptable at the beginning of the day's contest. A pilot does not know in advance what other pilots' selections will be.

Test of the Placing System

In order to test the system I am advocating, I have applied it to World Championships (Open Class) and British National Championships (League 1) over the past four years. The placing system would have produced the same British Champions. Only minor changes of a place or two here and there would have occurred in the next four or five places in each of the Nationals, but further down the list some individuals would have gained or lost several places, although the general order would have been more or less the same. To illustrate the similarities and differences, here is a list of the actual placings compared with those that would have been awarded on the daily placing system (Table II).

Table II

ASTON DOWN, 1961

Final Placing on Daily Points System	*Final Placing on new Daily Placing System*
1	1
2	2
3	3
4	5
5	6
6	4
7	8
8	7
9	11
10	17
11	15
12	10
13	12
14	13
15	9
16	22
17	16
18	14
19	21
20	20
21	18
22	26
23	27
24	25
25	19
26	23
27	29
28	34
29	24
30	28
31	31
32	32
33	36
34	30
35	32
36	36
37	37
38	39
39	38

In the comparative lists:

7 places are unchanged by the new system

11 places are changed by only one place

5 places are changed by two places
4 places are changed by three places
5 places are changed by four places
1 place is changed by five places
4 places are changed by six places
1 place is changed by seven places

Two noticeable changes are the promotion of the 15th to the 9th and the relegation of the 10th to the 17th place. To examine the cause of the changes let us compare the daily placings of the two pilots concerned. Here they are:

Table III

Pilot	Actual Place	Daily Placing 1st	2nd	3rd	4th	5th	6th	7th	8th day	New Placing
"A"	10th	11	4	26	22	23	29	17	15	17th
"B"	15th	8	3	10	28	38	6	11	12	9th

It is apparent that pilot "B" had one mediocre day and a very poor day which lost him many marks on the daily points system. But his achievement on the other days was fairly good. He beat pilot "A" on six days out of eight, and doesn't this suggest that he deserved a better final placing than that of pilot "A"?

Further study of the differences between the points and placing results show that these differences are mainly associated with the heavy penalty inflicted by the present system on one or two poor days in an otherwise good record.

The daily placing system applied to the World Championships would have produced a different Champion in 1960. The first four places would have been 4th, 1st, 2nd, 3rd. But if we recall the narrow margins of points between the four leading pilots this is not surprising.

In general the changes in World Championship placings would have been of the same character but usually less than those for the National Championships. Indeed, the system applied to the Championships in Argentina would have produced remarkably little change. Here (Table IV) are the lists with actuals in column (1) and the daily placing system positions in column (2).

Table IV

(1)	(2)	(1)	(2)
1	1	13	13
2	2	14	15
3	3	15	14
4	4	16	17
5	6	17	16
6	5	18	18
7	7	19	20
8	8	20	19
9	10	21	21
10	9	22	22
11	12	23	23
12	11	24	24
		25	25

The close agreement between the two lists is to be expected if one considers that in generally good competition conditions, the higher the standard of the competition, the smaller the differences there should be in results obtained by reasonably logical systems.

Of course, any system will have difficulties. In the daily placing system a rule would have to be included to allow two pilots who land very close to each other, say in the same or a neighbouring field, to have the same placing. But this is a minor snag.

The risk of two pilots having equal totals at the end of a Championship must also be faced, as the placing system deals in tens rather than thousands of points. But the necessary rule would be obvious; if two pilots have accumulated equal placing marks by the end of a Championship the winner of the two will be decided by their best days; for example, if pilot A had a first on one day and pilot B had no first places, pilot A would have the place above B in the final placings. If A had a 2nd and a 4th, while B had a 2nd and a 5th, A would again be the winner. This would be a further incentive for a pilot to go all out for a win on every day rather than be content to maintain a steady position.

Thus, during the past few years I have come to regard the present scoring system as inadequate and quite unnecessarily complicated. Let us throw out the slide rule in competition scoring. A simple daily placing system would be quite adequate. Looking at points and placings in the present and the proposed new system I have no doubt that the results of the two methods are very highly correlated. Therefore, let us use the simpler system. It would allow more flexibility in task-setting. It would produce keener competition. A day's results would be available much more quickly than they are at present, and this would be particularly welcome at World Championships — and points could even be calculated by pilots or crew members without special training.

Memories of the Stone Age of Gliding

by SUZI LIPPENS

YESTERDAY evening, at precisely 11 p.m. as the Dover-Ostend Car-Ferry began unloading its cargo of cars of all shapes and sizes, I suddenly felt thirty years younger. Thirty-three to be quite honest.

For there I was, having received a signal from Billy Kronfeld — my godson, by the way — saying he would be passing through Ostend at that moment, on that day, 14th August, 1964, on his way with three other gliding friends to Braunschweig with a huge trailer containing a Dart; there I was, as I was saying at the beginning of this explanatory sentence, exactly as I was 33 years ago, coping, then, with Robert Kronfeld's glider through frontiers. Then, as now, gliders and their trailers create pandemonium in the minds of Custom officials.

"*Planeur*? *Connais pas*," said the French customs people when Robert Kronfeld's Wien arrived at the Belgo-French frontier, in 1931. Luckily, my father, being then Minister of Transport, was as keen as I was to help our friend Kronfeld to win the "Daily Mail's" £1,000 prize for the first glider to cross the Channel from France to England and back on the same day.

My father, being one of those six-foot-four Forces of Nature for whom obstacles did not exist, said what had to be said to the French Customs and, rather startled, they let our little procession through. My father and myself in our two-seater open Chrysler — another souvenir of long ago (and it had one of those wonderful things called a dickey, which was a seat where a sullen-looking downward-closing boot is now to be found in all two-seaters) followed by Kronfeld and his aide, Herr Weichell, in their car, pulling the huge trailer of those days behind them.

(When I saw the wonderful little — well, little may not be the word, but neat surely is — trailer of the Dart yesterday and thought of the trailer of Billy's father . . . well, let us leave it at that.)

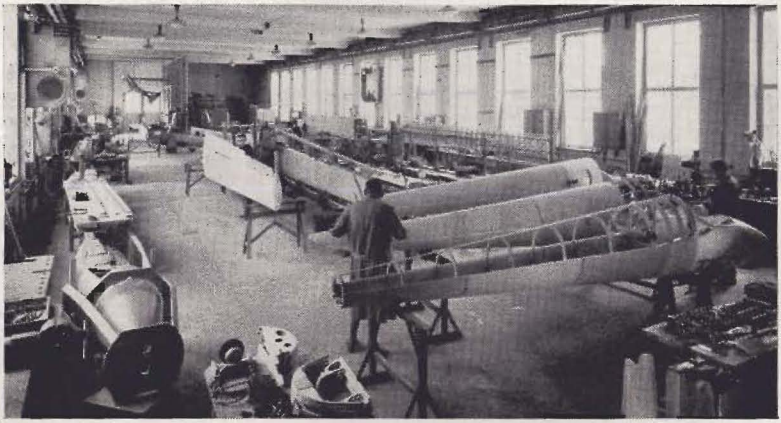
I have forgotten all details of that memorable 22nd June, 1931, save our quickly rigging up Wien as we had arrived late at St. Inglevert aerodrome, near Calais, from where the two-way flight was to be tried. We had to do this all the more quickly as Hans Krause, the German gliding pilot, was already there waiting to start in the Falke glider entered by Messrs. Lyons and Co. Kronfeld started shortly after Krause, and, due to a cloud-bank over the Channel, never saw his rival again; one reason for this was that Krause had been obliged to release because his towing-pilot had got him into a slip-stream from which he thought it highly advisable to get out of quickly.

Kronfeld was very surprised to find that, on landing near the Duke of York's Military School near Dover, a spot he thought might be easy to take off from for the return journey, he had landed on the very spot where the Krause Welcoming Committee was waiting . . . not for him, but for his rival!

At St. Inglevert we had heard that Kronfeld had landed in England and taken off again, but I shall never forget suddenly hearing, in the dark, the soft silk-tearing sound of Wien coming in, the aerodrome lit up by the car's headlights.

Then the cheers of the little crowd which had gathered, and Kronfeld refusing the champagne and drinking a large tumbler of milk while everyone was toasting him in something definitely stronger . . . all these souvenirs came back last night, seeing his son through Ostend Customs with his glider, a son who resembles him so much, with that unperturbable calm and great sense of humour.

After 40 minutes waiting for the Ostend Customs to decide under what classification a glider-trailer plus its contents was to be placed in the Book of Words, we were told all would be quite in order if we could produce 10 francs to pay for the form. Well, for the equivalent of 1s. 6d. I spent a wonderful time speaking with this new generation of gliding pilots, feeling 33 years younger.



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The Shaw Slingsby Trust

THERE is sad news about the Trust. After some 17 years of operation, first of the Kemsley Flying Trust and then of the S.S.T., the Revenue has now ruled that it cannot continue, on highly technical legal grounds. So it must be first dismantled, and then wound up.

It will take some time to do this, but all Clubs and individuals concerned are being kept in the picture. It is a bad blow for the British gliding movement, but we can only make the best of it.

One of the major steps is for the Trust to dispose of its ownership of Slingsby Sailplanes, and negotiations are going on to this end. Although the design and manufacture of gliders will remain a major interest, there is little doubt that the firm will have to diversify.

Fred Slingsby has retired as Managing Director and accepted the position of Vice-Chairman. The post has been undertaken by Peter Street, known to all gliding people as the owner of Peak Sailplanes. John Reussner has been appointed as Sales Director, Bill Slater as Technical Director.

V.H.F. Frequency for Ground-to-ground Use

THE Ministry of Aviation has allotted 121.65 Mcs. for use at gliding clubs for ground-to-ground use.

This frequency is in the internationally agreed ground control band and is not for air-to-ground or ground-to-air use. On the ground it is only available for purposes immediately connected with the ground control of aircraft, e.g., communication between winch, launch point, aero-tow point, and (if it exists) a central control point.

If the frequency is used in a glider installation, the equipment must be approved by A.R.B. Ground-based equipment must conform to the current I.T.U. regulations with regard to frequency tolerance, spurious emissions and output power. Receivers should be capable of operating in a 50-Kcs. channel spacing environment. A G.P.O. licence is required in the normal way.

Since this frequency is available to all gliding sites, it is faintly possible that there may be interference between clubs. This should be borne in mind in planning the use to be made of this new facility.

H. C. N. G.

Emergency Type Parachute Assemblies
Lifting of Nylon Canopies

THE Services have recently imposed a 10-year life on emergency parachutes and are currently withdrawing from service, nylon canopies which have natural fibre tape and stitching (i.e. linen and cotton). This is principally because of the high forward speeds at which ejection may occur from present-day aircraft.

As glider parachutes are used very infrequently and the speed of bale-out is low, this specific life for nylon canopies is not applicable to glider type parachutes. The only requirement is that during inspection it should be ensured that the parachute is serviceable.

For Service Unit packing, glider parachutes (Canopy Type 124 Mk. 1 and Mk. 1A) should be treated for lifing and servicing to the same standard as X Type Reserve Parachutes.

The above information is in accordance with the procedure adopted by the Services and published in AP.1182A Second Edition.

J. W. LEACH,
for Technical Committee, B.G.A.

The United States Nationals

NEBRASKA Soaring Association organized this year's U.S. Soaring Championships at an old Army Air Base 8 miles N.W. of McCook, Nebraska. The Nebraska Soaring Association was founded two years ago with four members. It now has six members, whose organizing duties were distributed as follows:—

Dr. Donald Morgan, Contest Manager.
Leonard Boyd, Registrar.
Milton Johnson, Flight Operations Director.
John Herrman, Chief Starter.
John Altberg, job not stated.
Dr. Bruce Snyder, Publicity Director.

The Soaring Society of America contributed Ed Butts as Task-setter and Bertha Ryan as Chief Scorer. Ted Lange, Chief Meteorologist, was assisted by Charles Chappell, from Kansas City.

The weather was described as "unpredictable", and W. "Gus" Briegleb said: "You could rarely depend on the same conditions for more than half an hour; one moment you may shoot up at 1,000 f.p.m. and the next you are 'scratching' in a weak broken lift." The winds and weather were not "strong", and this worked to the benefit of such sailplanes as the Skylarks and Ka-6's. There were 48 entries.

Tuesday, 30th June

Goal-and-Return Benkleman, 98 miles, completed by 22 pilots. Best speeds were:—

Pilot	*Sailplane*	*m.p.h.*
Ben Greene	St. Austria	38.34
A. J. Smith	Sisu 1A	37.67
Dick Johnson	Skylark 4	35.96
Rudy Mozer	Ka-6CR	35.74

Well-known pilots who did not finish the course were John Ryan (Sisu), George Moffatt (HP-8), Stan Smith (HP-10), Dick Schreder (HP-11A), Bill Ivans (Sisu), Paul Bikle (Prue Standard) and Al Parker (Sisu).

Wednesday, 1st July

Out-and-Return Searle, 161 miles, then out on a free option leg. John Ryan went furthest to Lamar, Colo., but A. J. Smith reached top place overall and remained there for 5 of the 9 contest days. Best distances:—

Pilot	*Sailplane*	*Miles*
John Ryan	Sisu 1	348.5
A. J. Smith	Sisu 1A	335.5
Bruce Beebe	Ka-6CR	326
Rudy Mozer	Ka-6CR	317
Dick Johnson	Skylark 4	308
Paul Pallmer	1-23H	302
Graham Thomson	Ka-6CR	300

Thursday, 2nd July

Goal-and-Return Imperial, Kansas, 103 miles. A good day for the Sisu. Best speeds:—

Pilot	*Sailplane*	*m.p.h.*
John Ryan	Sisu 1	64.15
Bill Ivans	Sisu 1A	55.76
Ben Greene	Std. Austria	54.01
A. J. Smith	Sisu 1A	51.93
Wallace Scott	Ka-6CR	49.91
Gleb Derujinsky	Sisu 1A	47.17

Scenes at the diagonal finish line: Mozer stopped a few yards short; Karlovich thought he had rolled across it in his Skylark 4 and pulled out the brakes, but he hadn't; Mears crossed it in the wrong direction. Ben Greene climbed to 13,000 ft. after turning and made a straight glide home.

Friday, 3rd July

Free Distance was set because one such task was compulsory and the weather was deteriorating. The choice was between using a following wind to go north in indifferent weather, or making for better weather to the south, which could only be reached after crossing a long gap. Few pilots made really long distances. Of those who went north, Thomson (Ka-6CR) made 195.5 miles, Scott (Ka-6CR) 188.5, and Johnson (Skylark 4) 273 miles. Flying southwards, A. J. Smith (Sisu 1A) made the day's longest distance, 282.5 miles, Bob Semans (1-23H) 281, Moffat (HP-8) 277.5, Ivans (Sisu 1A) 216.5, and McClanahan (1-23H) 193.5 miles.

Sunday, 5th July

A Goal-and-Return of 67 miles was completed by 41 pilots. The three fastest each flew a Sisu 1A: A. J. Smith at 55.83, Dean Svec at 54.21 and Bill Ivans at 51.59 m.p.h. Dick Johnson came 9th with 873 points.

Monday, 6th July

Task: a 212½-mile triangle via Imperial and Goodland, then a free option leg. Many were trapped on the second leg and a thunderstorm sat over Goodland for a while, though 19 pilots passed it eventually. Only two got back by reaching 10,000 ft. in "what appeared to be a form of wave lift": Bernie Carris (Schweizer 2-32) landed back at McCook and Rudy Mozer (Ka-6CR) went another 2½ miles along the free option leg, so won the day.

Leading overall positions by now were: A. J. Smith, 5,190 pts.; Dick Johnson, 5,095; Wallace Scott, 4,958.

Tuesday, 7th July

Goal-and-Return Lexington, 118 miles, followed by distance along a set line. In poor weather Ross Briegleb (BG-12B) won the day with 53 miles. Johnson, by flying 52 miles, took the overall lead from A. J. Smith (40 miles).

Wednesday, 8th July

Goal-and-Return Benkelman again, 98 miles. Best speeds:—

Pilot	*Sailplane*	*m.p.h.*
John Ryan	Sisu 1	49.27
Bill Ivans	Sisu 1A	44.86
Dick Schreder	HP-11A	44.13

Thursday, 9th July

Poor soaring conditions again for the final day: 103-mile Goal-and-Return to Imperial followed by free option leg. Best distances:—

Pilot	*Sailplane*	*Miles*
Bud Mears	Prue Std.	155.5
Bob Hupe	Ka-6CR	143
Rudy Mozer	Ka-6CR	143
Wallace Scott	Ka-6CR	142.5
Dick Johnson	Skylark 4	
A. J. Smith	Sisu 1A	134

At the Awards Banquet next day, Richard H. Johnson, 1964 National Champion, received the Richard du Pont Memorial Trophy and $200; Wallace A. Scott, Standard Class Champion, the Soaring Society of America Trophy; and many other awards were made, both for the contest and for outstanding feats of the year.

During the Contest there were no accidents, but one incident when Giles Gianelloni in a Skylark 4 and John Bierens in a Ka-6 brushed wings when circling in a thermal; the wings were damaged but both landed safely.

EDITORIAL NOTE.—We were unable to report this meeting in the last issue as the daily score sheets, which should have arrived at the time of the Post

How to get "SAILPLANE AND GLIDING"

"Sailplane and Gliding" can be obtained in the U.K. at all Gliding Clubs, or send 24s. (post incl.) for an Annual Subscription to: The British Gliding Association, 75 Victoria Street, London, S.W.1. Single copies and most back issues are also available, price 4s. (post incl.). Enquiries regarding bulk orders of 12 or more copies, at wholesale prices, should be made to The British Gliding Association.

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Office strike, were never delivered. The above account is condensed from *Soaring*.

UNITED STATES CHAMPIONSHIPS
30th June — 9th July, 1964
Final Positions

No.	*Pilot*	*Sailplane*	*Total Points*
1.	Johnson	Skylark 4	7801
2.	Scott	Ka-6CR*	7679
3.	Smith, A. J.	Sisu 1A	7637
4.	Hupe	Ka-6CR*	6764
5.	Thompson	Ka-6CR*	6640
6.	Mozer	Ka-6CR*	6444
7.	Briegleb, R.	BG-12B	6304
8.	Mears	Prue Standard*	6178
9.	Moore	1-21	6074
10.	Beebe	Ka-6CR*	6061
11.	Svec	Sisu 1A	6058
12.	Klemmedson	MG-23	5999
13.	Ivans	Sisu 1A	5936
14.	Semans	1-23H	5833
15.	Ryan	Sisu 1A	5785
16.	Derujinsky	Sisu 1A	5766
17.	Carris	2-32	5695
18.	Cannon	1-23H-15*	5473
19.	Greene	Std. Austria*	5392
20.	Briegleb, W.	BG-12B	5347
21.	Alleman	Ka-6CR*	5290
22.	Gertsen	Ka-6CR*	5200
23.	Karlovic	Skylark 4	5006
24.	Bierens	Ka-6CR*	4941
25.	Moffat	HP-8	4939
26.	McClanahan	1-23H-15*	4888
27.	Schweizer	2-32	4651
28.	Pallmer	1-23H	4572
29.	Slack	Lo-150	4537
30.	Schreder	HP-11A	4385
31.	Bikle	Prue Standard*	4342
32.	Hunter	1-23G	4139
33.	Mullen	Super Prue Std.*	4058
34.	Lincoln	1-23D	3984
35.	Emons	HP-10	3936
36.	McNay	T-Bird	3723
37.	Gianelloni	Skylark 4	3473
38.	Parker	Sisu 1A	3272
39.	Audette	1-23G	3184
40.	Brittingham	1-26	2512
41.	Smith, S.	HP-10	2425
42.	Coder	Std. Austria*	2424
43.	Chase	Std. Austria	2054
44.	Gehrlein	Mod. 1-26	2043
45.	Brown	Zugvogel 3	
46.	Coverdale	HP-11	1981
47.	Kelsey	Prue II	1854
48.	May	Fauvette*	1216

*Standard Class

Instructional Lectures for Soaring Pilots

IN response to many requests the Kronfeld Club is again running a series of 12 Instructional Lectures on Mondays at 8 p.m., starting on 4th January and continuing until 28th April. All the Lecturers will be experts in their own field and three new titles have been added to the list this year: "Sea Breeze Fronts", "Flying for Speed" and "Wave Soaring". These three, plus the two lectures on advanced meteorology, should be of particular interest to the more advanced pilot, whilst those on Elementary Met., the Technique of Soaring, Away Landings and Map Reading have been designed to appeal particularly to pilots who have just reached or hope to reach the soaring stage next year.

The fees for attending the lectures are 4s. per lecture, with attractive special rate for four or more lectures booked in advance and for Kronfeld members. Registration forms from Kronfeld Club, 74 Basement, Eccleston Square, S.W.1.

Programme: Mondays at 8 p.m.

Jan. 4. & 18. Elementary Meteorology, by Mike Garrod, meteorologist and glider pilot.
„ 25. & Feb. 1. The Theory and Technique of Soaring, by Derek Piggott, Britain's best-known instructor.
Feb. 15. Navigation and Map Reading, by John Neilan.
„ 22. U.K. Airspace — Organization and Regulation, by Captain H. C. N. Goodhart, R.N.
Mar. 1. Away Landings, by Lorne Welch.
„ 22. Sea Breeze Fronts, by John Fielden.
„ 29. Flying for Speed, by Ian Strachan.
April 5. & 12. Advanced Meteorology, by C. E. Wallington, National and World Champs. forecaster.
, 28. Wave Soaring.

The Pulley Launch

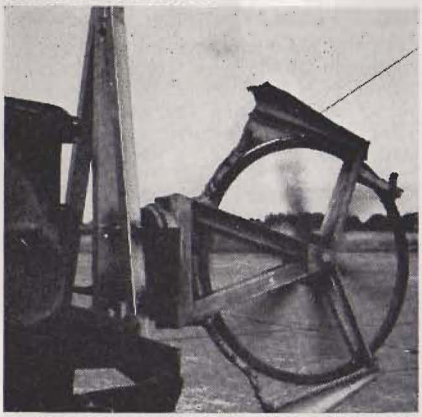
by JOHN BYRNE
Dublin Gliding Club

THE pulley launch is based on the idea that it is bad engineering to wind cable on to a drum without good reason, when that same cable is immediately required to be unwound again. Imagine a winch in which only one turn is taken round the drum and the ensuing wire is given a particularly fast retrieve. Given a paved runway, the retrieving vehicle can provide all the power, and only a fairlead pulley or system of pulleys is required at the "winch" end.

First experiments in 1960 were typically frustrating: cables jumping groove, launches faster than they were high, overflying of pulley with cable falling in a heap, poor communications, a certain scepticism, the sad winding up by hand of 6,000 feet of wire at the day's end. Following a mention in SAILPLANE AND GLIDING for February, 1962, details of our early equipment and methods were sent to a number of interested groups, some of whom are now operating the system. In 1963 a revised and enlarged version replaced normal auto-tow at Dublin, and we now have enough experience (over 2,000 launches) to claim that it should be the preferred method of operation from sites with long runways.

The system inherently gives fast turn-round and can be made to yield exceptionally high launches. It has winch characteristics in that the cable feeds in to a fixed point, giving a more favourable direction of pull at the glider than does normal auto-tow. Furthermore, the opportunity exists to use lighter wire than has so far been possible with winches. Bow in the cable, caused by weight and windage, depresses the cable angle at the glider, and accounts for the failure to extend winch-runs to yield proportionate gains in height. For runways of over a mile, cable size has a marked effect on launch height.

There is a control problem. The intelligence, which should be at the pulley, has the bad vantage point of the tow-car, from which the bow in the cable, attitude of the glider, etc. cannot be seen. This is really a good thing, because the cable tension gauge, now essential, allows consistently good launching by relatively inexperienced drivers, and gives the possibility of optimising the launch for height. The glider speed, under constant tension conditions, depends on attitude and can be reduced by steepening the climb, as in a powered aircraft. This, of course, is the reverse of the normal gliding procedure where the climb is eased to reduce speed. It has proved highly workable in non-gusty conditions, provided the tension is tapered off towards the top of the launch to suit the aircraft type. (The pull which may be applied to a glider without stalling some part of it decreases as the launch proceeds.)



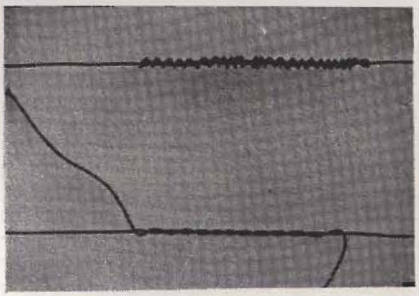
The pulley itself is a 24-inch cast steel V-pulley (Fenner-Dodge) on ball-races, suspended so that its plane of rotation can roll about a horizontal axis pointing down the runway. A truck front-hub assembly is mounted on the rear of the anchor vehicle (a pensioned-off tow-car) giving the necessary freedom to the brackets holding the pulley.

The arrangement allows one wire complete angular freedom, providing the other wire points down the runway. Ground clearance should be kept small. The groove of the pulley is machined out to remove sharp edges and accommodate cable joints. Guides positively prevent the cable from jumping the groove. They follow the pulley closely at the rear, expanding out into bell-mouthed entry/exits.

We understand that arrangements using two pulleys have been used elsewhere, making it possible to incorporate a cable guillotine.

We originally tried a pre-straightened, 14 gauge (0.08 inch), 90/105 ton/sq. inch tough manganese-steel wire, normally used for making gravel screens, and the one-foot radius of the pulley was chosen to prevent giving this wire a permanent set. The pre-straightness proved to be neither necessary nor permanent, and we did not get around to finding out whether the high abrasion resistance justified the extra cost. The wire now being used is 13 gauge (0.092 inch), 100/110 ton/sq. inch black steel spring wire supplied by the Speedwell Wire Co., Coatbridge, Lanarkshire.

In the absence of work-hardening, the minimum usable wire size is determined by the need for joints in part-worn cable to be stronger than the weak-link. The joint illustrated, which was developed with the help of a tensile testing machine, has 90% of the basic wire strength. In 14 gauge 110 ton wire, it has a 10% margin over a 1,000 lb. weak-link. The usual reef-knot fails at about half the wire strength, has poor resistance to abrasion and would need to be two gauges heavier. The new joint is



based on the principle of the splice, where a gradual transfer of tension takes place. In making the joint, the two ends of the wire are wrapped tightly around each other, for at least six full turns, to look like a piece of twisted electric flex; the loose ends are then wrapped back over the joint until they meet in the middle. The life depends on how well this outer wrapping is done, and is several times longer than the reef-knots. The joint develops no tails and rides well over the pulley. Connections to rings are similarly wrapped. The only tool required is a "vicegrip" spanner. With smaller diameter pulleys, a heavier, softer wire would be necessary. See "Solid Wire for Winch-Launching", by Alan Pratt, SAILPLANE AND GLIDING, June, 1956, where 11 s.w.g. (0.116 inch) 70/80 ton/sq. in. cast steel wire was found suitable with 4 inch dia. rollers.

Parachutes, at least 4 feet square, are attached, via spinners, to both ends of the cable. Shoddy parachutes cause trouble, especially where a glider releases under tension. Wear and tear of parachutes is fairly severe.

Alexander Schleicher

Sailplanes

6416 POPPENHAUSEN

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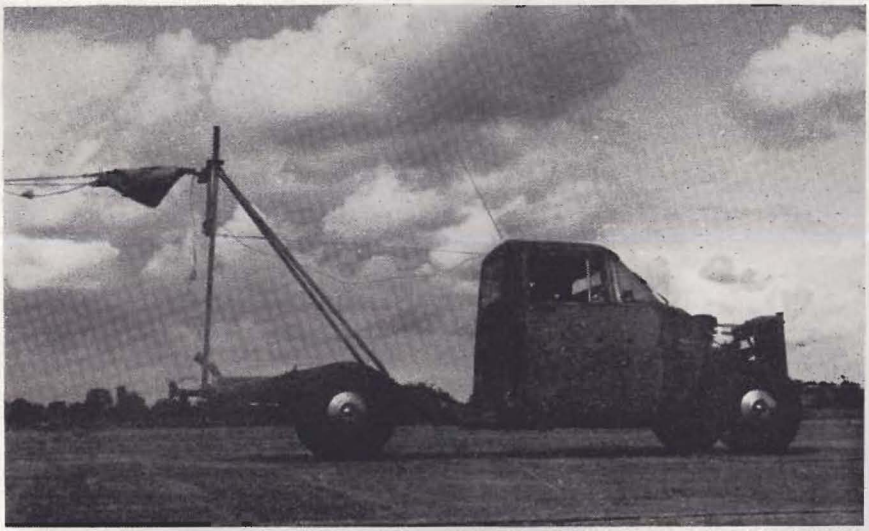
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K8B Single-seater for training and performance.

K7 "Rhönadler" Two-seater for training and performance.

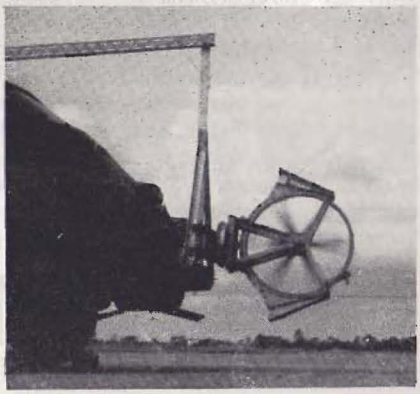


Our tow-car is a V-8 Fordomatic saloon stripped to the chassis except for the cab. To increase the weight on the rear wheels the cable attachment point is raised 5 feet above the chassis by means of a tubular steel tripod. The spring in the long cable gives a tendency for the glider to over-run, before it takes off, unless the tow-car can maintain powerful uninterrupted acceleration. The use of a car with poor power/weight ratio or manual gearbox is very inadvisable.

The cable tension indicator is a Salter 100 lb. spring-balance in the cab, actuated via a ten-to-one linkage at the tow-hook. We found it necessary to add an oil dash-pot to the spring balance, to eliminate vibration due to chassis flexing. An indicator consisting of a hydraulic cylinder and pressure gauge was described in *Soaring* for May/June, 1955. Some years ago we operated a version of it, using a brake master-cylinder and pressure gauge, and would recommend the hydraulic system as giving inherent damping.

The anchor vehicle incorporates a cable storage drum. A pre-set band brake on a free-wheel comes into action on the pay-out. The vehicle is first towed to the launching area and then, paying out cable as it goes, to the far end of the runway, where it is anchored for the day. Heavy prongs integral with the front of the tow-bar are driven into the ground at the edge of the concrete runway. The wire is threaded through the pulley at the rear. For wind-in, the vehicle "eats up" the cable as it is towed towards it, and the small winding torque required is provided by vee-pulley drive from the back wheel via a stretched pure-rubber belt.

A radio link from the take-off point to the tow-car allows the signaller/log-keeper to comment throughout the whole sequence of take-off, climb, release and





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cable drop. The pulley is left unattended. The car, starting at the pulley, keeps to one side during the early part of the launch to avoid fouling the cable running to the glider. At the top of the launch the glider releases to one side, depending on the cross-wind. The instant of release is decided by the pilot from A.S.I. and variometer indications — the car keeps pulling at this time. The tension should be taken out of the wire before release by getting the nose well down. After release, the car goes flat-out until the parachute nears the ground. A suitable parachute can be "winched" almost right down to the pulley, allowing the car to reach the launching area without stopping. If a second tow-car is available, the next launch can proceed.

Typically, we pull up to 700 lb. on our Ka-7 two-seater, and for solo machines 600 lb., tapering off to about 350 lb. at the top of the launch. The tension gauge is marked with appropriate coloured sectors. We pull less in rough weather. From a 6,000-foot runway, the 2,000-foot level is reached in winds of about 10 knots. The highest launch to date is 3,000 feet in a Kite 2.

Cable wear has not been a problem. The wire lies straight as a die under tension, and glides along without bouncing or forming flats. There is even a tendency for it to pick up a protective coat of tar from the strips which separate the sections of concrete runway. A wire should last 500 to 1,000 launches.

The writer would like to know of other people's experience so that progress may be shared. Please write to Department of Electrical Engineering, U.C.D., Upper Merrion Street, Dublin.

V.H.F. Radios for Glider Installation

by R. BRETT-KNOWLES and
P. M. TUNBRIDGE

THE value of a radio link between the pilot of a glider and his ground crew has been appreciated for a number of years, and for competition flying it can be of great importance. In the past years a wide variety of VHF transmitter-receivers have been used with varying degrees of success. They mostly suffered from the disadvantages of being rather heavy and bulky, and their battery consumption was such that they drained the aircraft 12V accumulator far quicker than any artificial horizon, or alternatively required large dry batteries. In the last year, however, a number of small, lightweight VHF radios have become available, which, being entirely transistorised, consume very little power indeed.

Three manufacturers producing suitable radios are; Ultra, Pye and Shorrock. The Ultra Electronics type 3A4 Packset and the Pye Telecommunications Bantam are both primarily portable walkie-talkie sets, but are nevertheless very suitable for installing in gliders. Shorrock Developments produce a range of radios, the TSR and TSR/1 for light aircraft or glider use, a special Glider Transceiver, and the TSR/P, a complete portable ground set. Both Pye and Ultra made sets available for the authors to test, and it was thus possible to study their performance fairly extensively.

The Pye and Ultra sets are designed to be used on up to three preset frequencies, spaced within 500 kcs., thus both could be used on the two frequencies allocated for glider communications, 130.4 Mcs. and 129.9 Mcs. However, both radios tested were only set up for use on 130.4 Mcs.

The Ultra type 3A4 Packset

The transmitter-receiver assembly weighs less than 2½ lb. and measures approximately 1¼" × 5" × 7½". It is thus

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small enough to be installed inside the cockpit where the channel selection, on-off and volume control switches are accessible to the pilot. The set has a self-contained 15V nickel-cadmium battery. This battery can be recharged overnight using a special constant current mains operated charger and gives about 8 hrs. operation, which is in general adequate.

A hand unit serves as a combined loudspeaker/microphone and is fitted with a press-to-talk changeover switch.

The receiver volume is varied in steps by a switch and an internal squelch is fitted to remove background noise in the absence of a signal. This circuit is switched out in the maximum volume position. The receiver sensitivity was measured to be approximately 3μV for 10 db S/N ratio, but some difficulty was experienced in measuring the bandwidth of the set supplied, which did not appear to be properly adjusted. The set was fitted with a 25 kcs. filter which, even had it been working correctly, might be a trifle narrow, since not all the older glider radios are capable of maintaining their frequency within this margin. Alternatively a 50 kcs. filter is obtainable. The receiver spurious responses were found to be at least 50 db down.

The transmitter power output was just over 150 mW and the modulation was very clear. No limiter is provided in the transmitter to prevent overmodulation of the signal, which could cause interference to other users of the VHF band. The transmitter stability and spurious radiation were within the G.P.O. specification for this type of equipment.

Pye Bantam type HP1/AM/N

This set is similar to the Ultra but is a little larger. Three alternative internal batteries can be fitted, seven U7 torch batteries, eight Mallory batteries, or a nickel-cadmium accumulator. The set supplied was fitted with a battery holder for the U7 cells. These were found to be very satisfactory, and to have adequate capacity for one day's operation. To use inexpensive dry batteries and to change them each day is probably the cheapest, and most convenient, arrangement for most users. The set has an internal loudspeaker, or the microphone can be used alternatively as an earphone.

The receiver has a variable volume control and also an adjustable squelch level. By careful setting of these two controls very weak signals can be received clearly, with no background hiss in the absence of a signal. The squelch control required some readjustment as freezing level was reached, or alternatively as the batteries reached the end of their life. The receiver sensitivity was such that less than 1μV was required to give a 10 db S/N ratio. The receiver bandwidth was 50 kcs. and all spurious responses were greater than 60 db down. The AGC was particularly efficient and the set did not overload or block on very strong signals.

The transmitter power output was about 300 mW, and a modulation limiter is fitted. However, this was not set up as efficiently as it might perhaps have been on the set supplied, as it limited the modulation to about 60%. When correctly set up, a limiter enables very efficient modulation to be obtained. Some trouble was experienced initially

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with the transmitter, which necessitated the return of the set to the manufacturer for maintenance, but the performance was subsequently found to be satisfactory.

Both the Pye and Ultra sets are supplied with telescopic aerials and also sockets for the connection of an external aerial. Operation of the transmitters without a suitable aerial could cause damage to the sets, and the Ultra handbook specifically warns against this danger.

During the R.A.F.G.S.A. Bicester Competition, both sets were used by R. Brett-Knowles, and ranges in excess of 30 miles were obtained. In general one might expect to obtain a range of about 25 miles at 1,000 ft. or 35 miles at 3,000 ft. to a car radio. The Pye Bantam, being more powerful, would give a slightly greater range than the Ultra.

The Shorrocks TSR models are rather larger sets, being 6" × 3⅜" × 8¾", and are designed to operate from an external 12V supply. The receiver is tuneable from 108-136 Mcs., and the sensitivity is quoted as 10μV. The receiver bandwidth is in excess of 100 kcs. and thus interference from other channels is to be expected. The 12 channel transmitter operates on any 10 Mcs. band between 108 and 136 Mcs., and the power output is quoted as being 250 mW.

The Glider Transceiver is identical except that both transmitter and receiver operate on two preset channels. In addition a crystal filter is fitted, thus giving a more reasonable receiver bandwidth. A remote control unit, loudspeaker and microphone are provided, but if the two channel capability is to be retained, the main unit, with the channel selector switch, must be accessible to the pilot.

For the satisfactory operation of any VHF radio it is essential that a suitable aerial is installed in the glider. It is also strongly recommended that the installation, and adjustment, of the radio equipment be carried out by an experienced person, since the reliability and efficiency of such equipment depends very greatly on the skill with which it has been adjusted. Satisfactory results will not, in general, be obtained by simply bolting the radio down, and plugging in an arbitrary aerial.

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Lift is Where You Find it

by KEITH EMSLIE

THE textbook "doughnut" thermal is probably the type most frequently used, coming in a wide range of sizes and strengths, but one should always be prepared to find lift conforming to other patterns. Two unusual regions of thermal lift were encountered over the Long Mynd, requiring unusual flight patterns to stay with and use the lift.

Gentle hill lift and occasional small thermals were being enjoyed, the hill alone giving only 500 ft. A narrow region of extra lift was felt in front of Pole Cottage, traversed in a few seconds, but encountered similarly on the reverse beat. It appeared to be too narrow to circle in, especially at such a low height, and short beats confirmed the narrow band of lift with the turns at both ends out of the lift area. The next move was to manœuvre into the lift, facing directly into wind and flying very slowly. This was surprisingly successful, and for fully half a minute a steady climb was achieved making slow forward progress out from the hill. As the lift finally dropped a single 360° turn was made, entering the lift area again at the original position relative to the ground. This manœuvre was repeated several times, making about 100 feet each time, climbing from 500 to 1,100 feet above the hill, which was quite good for that day.

This must have been a plume, fed continuously over several minutes from one point on the ground, resulting in a continuous band of lift about 100 feet wide across wind and 500 ft. wide into wind.

On the second occasion, 26th August,

1956, at about mid-day, a big heap cloud developed in front of the south end. Though the wind was about 10 knots on the hill, the cloud drifted eastwards only very slowly. It stretched away to the south-west for several miles, and grew to be about a mile wide, base 3,600 ft. a.s.l. Circling was not necessary because the lift was continuous, and one machine (John Knotts in an Olympia) entered the cloud in straight flight heading for Pembroke.

The Scud 3 was pleasant to fly, but not to be taken into cloud, so we headed for the south-east side, intending to fly out from under and slide back when some more lift was required. What actually happened was that the climb was continued up the side of the cloud, dodging round the sharp-edged billows but not going through them. Attention was centred on manœuvring, with the instruments ignored except to monitor the steady rise of the altimeter, reaching fully 700 feet above cloud base.

By now the view included nothing of the Mynd, so the cloud was left behind until enough height had been lost to cross under it again to get back ahead of the hill. It was still sucking steadily all over its base, the air uniformly turbulent but not uncomfortably so. It may have been significant that it was the sunny side of the cloud that worked, but unfortunately the north-west side was not explored. Certainly it was a self-stoking piece of convection of unusual size, gentleness and longevity. So if you're after those last few hundred feet for Silver C height when you're baulked by cloud base, don't despair; try the edges, and let's see how often it works.

Northern Regionals

The 1965 Northern Regional Competitions will be organized by the Doncaster Gliding Club and held on Doncaster Airfield from 4th to 11th July. All launches will be by aero-tow. A caravan site will be available.

Further particulars can be obtained from Jack Tarr, 11 Station Road, Doncaster, Yorks.

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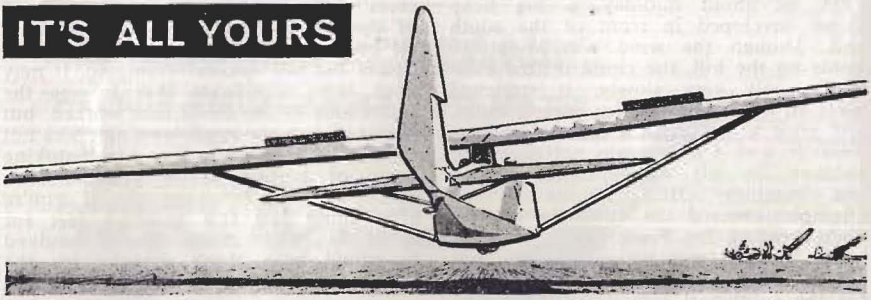
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IT'S ALL YOURS



IT is a long time since information about hard-working C.F.I.'s has been published, so to bring news up to date, here is a consolidated list of Chief Flying Instructors of civil member clubs.

Club	*C.F.I.*	*F.A.I. Badge*	*Tug Pilot*
B.E.A. Silver Wing	R. A. Neaves	Silver	Yes
Bristol	P. T. Etheridge	Silver	Yes
Cambridge University	B. Warner	Silver	Yes
Cornish	A. J. Lapham	Silver	—
Coventry	A. Cunningham	Silver	Yes
Derbyshire & Lancashire	M. Kaye	Gold	—
Devon & Somerset	S. Tolman	C	—
Imperial College	P. Minton	Gold	Yes
Kent	R. P. Hubble	Silver	Yes
London	J. Hands	Silver	—
Midland	K. R. Mansell	Silver	—
Newcastle	N. Revell	C	—
Norfolk	A. J. Podolski	Silver	Yes
Oxford	M. J. Gibons	Silver	Yes
Scottish G.U.	T. Davidson	C	—
Southdown	G. W. A. Constable	C	—
Surrey	*See Lasham*		
Yorkshire	J. C. Riddell	Gold	Yes
Aberdeen	A. McCauley	C	Yes
Avro	J. A. Knight	Silver	—
Bath	O. C. Harris	Silver	—
Blackpool & Fylde	J. S. Aked	Silver	—
Crown Agents	*See Lasham*		
College of Aeronautics	M. T. Caiger	Silver	—
Doncaster	J. A. Stirk	Silver	—
Dorset	G. Warwick	Silver	—
Dumfries	J. Steel	Silver	—
Essex	J. D. Robinson	Silver	—
East Midlands	V. C. Carr	Gold	Yes
Glasgow & West	K. G. Ross	C*	—
Halifax	A. M. Rose	C*	—
Handley Page	G. Wass	Silver	Yes
Lakes	R. Reid	Silver	—
Lasham Gliding Centre	D. G. Goddard	Silver	Yes
Norfolk & Norwich	A. H. Warminger	Gold	Yes

Northamptonshire	P. L. Bisgood	Gold	—
Northumbria	D. A. Wilson	Silver	—
Ouse	J. W. Coulsey	C	—
Perkins	J. Hulme	Silver	—
Polish A.F.G.A.	*See Lasham*		
R.A.E. Farnborough	P. E. Dale	Silver	—
South Wales	I. H. Shattock	Silver	—
Staffordshire	P. R. Bradwell	Silver	—
Swansea	D. A. Garner	C*	—
Swindon	T. G. Turner	Silver	—
Ulster & Shorts	B. Longstaff	Silver	—
West Wales	T. G. Phillips	Silver	Yes

*Provisional C.F.I. Endorsement — appointed since January, 1963.

Royal Naval G.S.A. at Dunkeswell

by LIEUT. CMDR. JOHN H. STANLEY

THE Royal Naval Gliding and Soaring Association held its second ever competition at Dunkeswell with the kind permission of the Devon and Somerset Club from Saturday, 29th August to Sunday, 6th September. The original object of the exercise was to hold another Junior Inter-Service competition or rally, but the R.A.F.G.S.A. had organised its very much larger competition much earlier and we had no entries from the other two Service Associations. So, in order to make it "a qualifier", clubs were asked if they could and would like to make up the numbers. The main object of the exercise was *to have fun*, which we certainly did. As it turned out, sixteen gliders, plus one *hors concours*, lined up in the sun on the first day to take off.

Saturday, 29th August

With a 20 knot N.N.W. wind with cumulus tops to 5,500, we cracked off in fine style. John Fielden set an out-and-return race to Lasham of 195½ miles. Colin Pennycuick flew very well indeed to cover a most creditable 183 miles, with Keith Aldridge and Humphrey Dimock hot on his tail with 170 miles each and Nigel Stevenson with 168 miles. D. Holding made 147 miles. John Fielden was task-setting, amongst everything else, getting the met. from Wally Wallington over the phone (what better combination?), and the results showed the excellence of the task-setting on this day. Wally turned up later in the day by car, as did John Williamson (by Olympia 419 from Upavon) to see how we were getting on. John Willy was seen later by retrieve crews near Stonehenge on his way back to Upavon.

Sunday, 30th August

Wind was a 15-knot N.E. with blue thermals to 3,500 ft. above sea level. The task was another out-and-return race to Keevil. Once again this proved splendid task-setting and seven competitors completed the course of 120 miles. Colin Pennycuick led the field once again. Results in order of points (Malpas and Holding had 10% handicap):—

Pilot	*Sailplane*	*m.p.h.*
C. Pennycuick	Ka-6	34.6
H. Dimock	Skylark 4	28
B. Malpas	Sky	23.3
C. Wills	Skylark 3	26.5
K. Aldridge	Austria	24.7
D. Holding	Skylark 2	18.2
P. Pozerskis	Skylark 4	21.2

Monday, 31st August

We wondered what sort of competition we were in for when on the third consecutive day a task was set in a 15-knot S.E. wind with blue thermals to 3,300 ft. above sea level. The task was a race to Davidstow Moor. Only one competitor was to get there and yet again it was Colin Pennycuick! Chris

Wills and Ray Foot were about the right distance but Chris was on the north coast and Ray was some way south having used weak wave. Unfortunately it was a No-Contest Day as not enough exceeded 2X.

On Tuesday and Wednesday the inversion was either at 1,200 or 500 ft. above sea level which, with the airfield being at 850 ft., made things rather impossible. But the weather was gorgeous, the sun shone the whole day and there was none of the normal gloom on non-flying days at this competition! People swam and sunned, etc., etc.

Thursday, 3rd September

The inversion was reported by test flight to be about 1,200 ft. above the site, so it was decided to give aero-tow launches to 1,000 ft. and make X = 10. Thermals were also reported as weak but, with the Tigers bobbing up and down like yo-yos to get the gliders off on their first launch, all were very soon in the sky and floating in about two thermals. We were using the "launch in the order of the day when it gets soarable" method of launching and John Fielden's "go-time" was exactly right. Soon the sky was clear of gliders and, with a free distance task, the trailers were off. Bill Malpas won the day, hardly needing his 10% bonus by going 53 miles. Ray Foot in his Skylark 3 going one further mile. Holding went 50, C. Wills 49½ and Trott 49 miles. This was to prove the last contest day, unfortunately.

Friday and Saturday were days filled with haze, the first day with an inversion at 2,300 ft. a.s.l. and the second with a similar inversion. Free distance was set on both days but they both had to be scrubbed.

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Sunday, 6th September

Cumulus with tops to 6,000 ft. were forecast in a 15-knot north westerly wind and wave between 4,000 and 8,000 ft. was also forecast. A race to Lasham was set and soon the rain was pouring down. Colin Pennycuick decided to have a tow as it was raining; people shook their heads but were soon lining the balcony or leaping into their gliders when they saw him happily sitting on the ridge testing everything that came along for whatever he might be looking for. The very great majority of landings were short of X, except for one pilot — yes, Colin again — who went to Salisbury!

One crew reported to the spot where a telephone message had said their glider would be and were most surprised to find that the glider was certainly there, but was airborne sitting on a ridge! When the pilot eventually landed he confessed that he had written a message

on a piece of paper and had dropped it, hoping that someone would find it and pass it on.

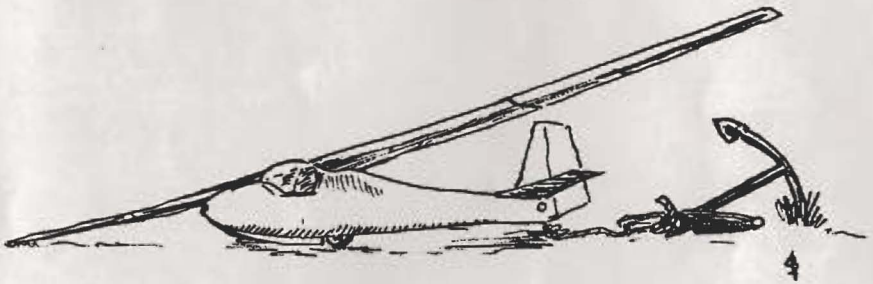
So ended a most enjoyable week. Colin in his Ka-6 showed that he was without doubt a very clear winner of the competition and Dave Holding and Bill Malpas were close behind him.

We are all very grateful to all at Dunkeswell for their very kind hospitality, to the staff for looking after us, to the tug pilots for tugging us, to our crews, to Wally the Met., but, above all, to John Fielden, without whose expert guidance, rushing about and continuous effort, the competition would probably never have got off the ground.

Final Results

Pilot(s)	*Sailplane*	*Pts.*
1. C. Pennycuick	Ka-6	2,660
2. D. Holding	Skl. 2	2,551
3. B. Malpas	Sky	2,507
4. H. Dimock	Skl. 4	2,312
5. C. Wills	Skl. 3	2,290
6. P. Pozerskis	Skl. 4	1,943
7. R. Foot	Skl. 3	1,927
8. K. Aldridge and D. Corrick	Austria	1,733
9. R. Trott and J. Hancock	Skl. 3	1,571
10. J. N. Stevenson and J. H. Stanley	Skl. 3	1,550
11. M. Seth-Smith	Oly. 463	1,340
12. R. Jones	Oly. 2	989
13. K. Moreton and J. Collins	Skl. 2	587
14. S. B. Wills	Oly. 463	522
15. E. Basham	Oly. 2	438
16. E. Robinson and A. Williams	Oly. 2	202
17. A. M. Wray	Swallow	0

Sky and Skylark 2 had 10% bonus.
Olympia 2 and Swallow had 20% bonus.
A. M. Wray flew *hors concours*.



"Phoebus"

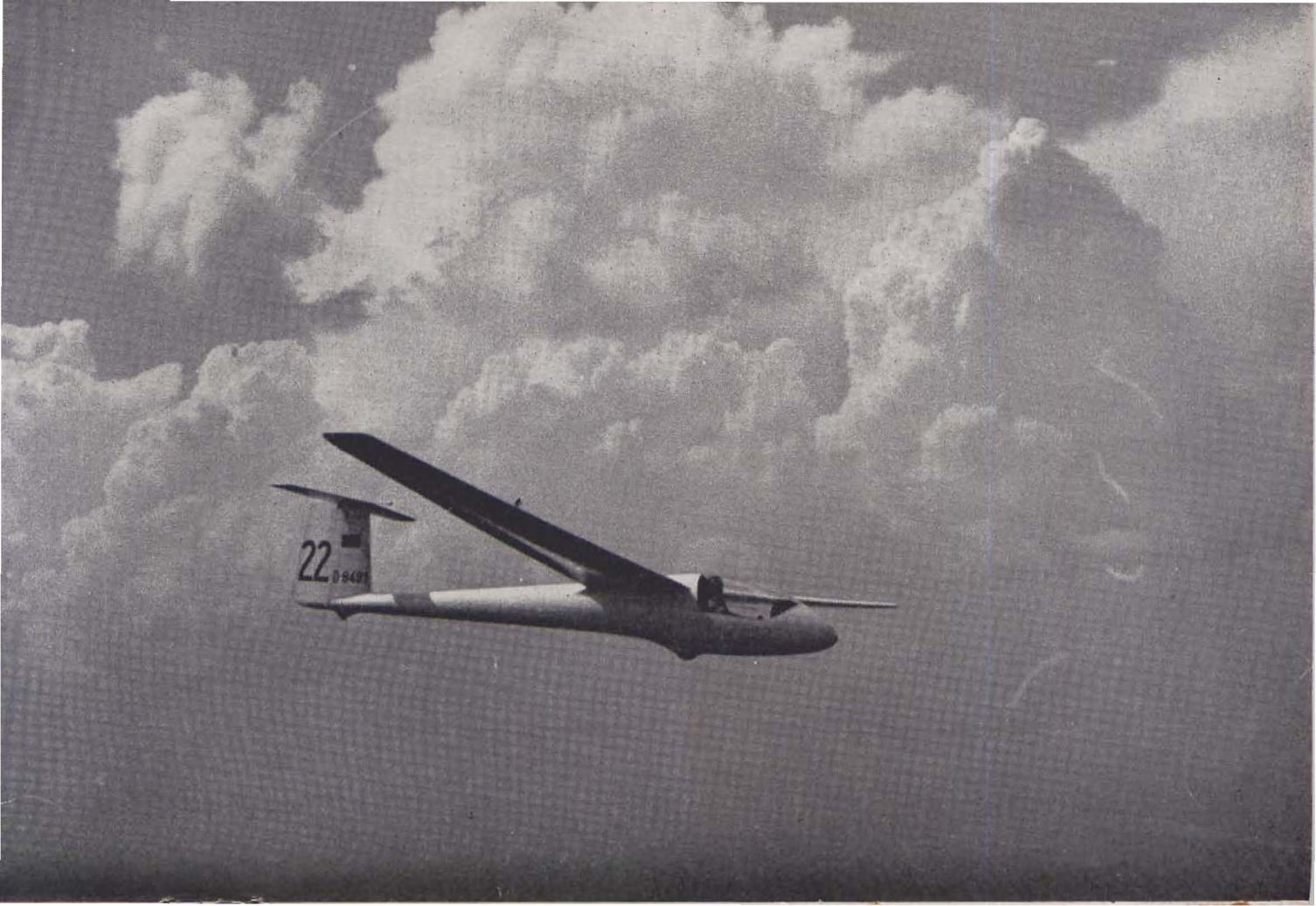
An All-Plastic Standard Class Sailplane

THE Phoebus is a further development of the all-plastic Phoenix (described in SAILPLANE & GLIDING for August, 1958). The main improvements are: better high-speed performance, simplified control mechanism, a stronger skin reduces sensitivity to gusts, and all-moving tail surfaces have been introduced as a result of tests.

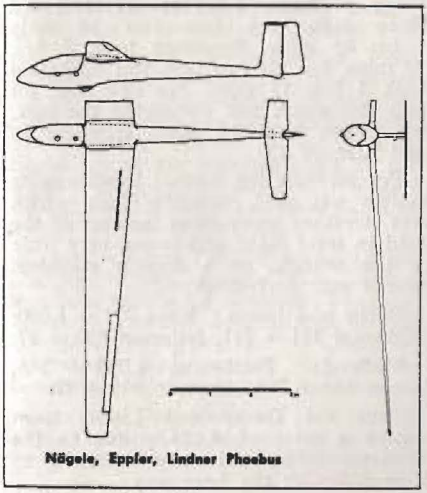
The machine is a joint design by H. Nägle, R. Lindner and R. Eppler, in co-operation with the Bölkow firm of Ottobrunn near Munich, which is now producing the machine in series at a price of 17,400 DM (approx. £1,560).

Data

Span, 15 m. (49 ft. 2½ in.).
Wing area, 13.16 sq. m. (142 sq. ft.).
Aspect ratio, 17.1.
Length, 7.1 m. (23 ft. 3½ in.).
Fuselage height, 0.85 m. (2 ft. 9½ in.)
Weight of wing, 120 kg. (265 lb.).
Fuselage, tail and instruments, 100 kg. (220 lb.).
Max. all-up weight, 350 kg. (772 lb.).
Max. wing loading. 26.5 kg./sq.m.


22
D-9491

(5.43 lb./sq.ft.).
Load factor, 6; safety, 2.
Min. speed, 60 km./h. (32.4 kt.).
Min. sink, ca. 0.65 m./s. (2 ft. 2 in./sec.).
Max. glide ratio, ca. 37 at 90 km./h. (49 kt.).
Speed at 1 m/s. sink, ca. 115 km./h. (62 kt.).
Speed at 2 m/s. sink, ca. 160 km./h. (86 kt.).
Roll from 45° bank to 45° opposite bank at 85 km./h. (46 kt.), ca. 3.5 sec.



Nägele, Eppler, Lindner Phoebus

Further particulars

Owing to increased torsional stiffness, the wing does not bend down at high speed like that of the Phoenix. The strengthened wing allows a speed of 200 km./h. (108 kt.) in gusty weather. This has been achieved with an insignificant increase in wing weight.

The lowering of the fuselage nose to improve visibility has brought no increase in drag, because the whole forward portion of the fuselage has proved to have laminar flow. Shortly after the onset of turbulent boundary flow the fuselage cross-section is rigorously contracted, in accordance with F.X. Wortmann's findings.

With the well-tried T-form tail, a new feature is the continuation of the fuselage shell into the rudder fin. The adoption of an all-moving elevator reduces drag, weight and expense, and its high position avoids the downflow from the wing.

On opposite page: The Phoebus in flight.

From their New Address 8b Prima Road, London, S.W.9, Rika and Godfrey Harwood send Christmas Greetings and Best Wishes for 1965 to all their Gliding Friends

In the design of the Phoebus special attention has been given to improving the high-speed performance. Laminar flow is obtained over 80 per cent of the upper wing surface and 60 per cent of the lower surface. Compared with the Phoenix, the impairment of performance in circling and slow flight is insignificant. The maximum lift coefficient and stalling behaviour remain as good as before.

Good manoeuvrability has also received special attention. The ailerons are large and have a very big range of movement; the large rudder facilitates sideslip; the elevator has been enlarged while keeping the drag low, since it is all-moving without the usual gap. In consequence the permitted c.g. range is from 45 per cent to 20 per cent of the wing chord.

The above particulars are condensed from the description sent by the Bölkow firm.

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Camphill takes the Beer Tray

by PETER O'DONALD

THERE is a long-standing rivalry between the Midland and the Derbyshire and Lancashire Gliding Clubs depending upon the possession of a silver beer tray. It is usually competed for at the Long Mynd Easter Rally. But this year the trophy stayed at the Long Mynd by default of the weather, which was too bad for competition flying.

On Saturday and Sunday, 22nd and 23rd August, we therefore organized a soaring match between the two clubs. Derby and Lancs. were represented by Mick Kaye in his Dart, Brian Jefferson in his Skylark 3 and Harry Midwood in his Oly. 460. For the Midland Club, Ric Prestwich was flying his Skylark 4, Charles Green his 460 and John Brenner the club Olympia 2B.

Saturday

A 15-knot westerly wind was blowing, and good cumulus with strong thermals under them soon developed over the Mynd. Away to the east, however, there were only blue thermals, and later all cumulus disappeared but strong blue thermals persisted until late afternoon. The task was an out-and-return of 117 miles to Wellesbourne Mountford airfield, just beyond Stratford. The first leg was almost down wind, the second into wind. Prestwich did the fastest time of 3 hrs. 45 mins., followed by Kaye, who took 5 minutes longer. Jefferson took 4 hrs. 10 mins. and Midwood 4 hrs. 45 mins. Green couldn't quite reach the airfield on his final glide because of the Mynd lee wave, and landed on the east slope of the Mynd. John Brenner did remarkably well in the club Olympia to get back as far as Clee Hill against the wind, which had increased to 20 knots.

Sunday

In the early morning a 20-knots S.S.W. wind under an approaching warm front was condensing into cloud on the Long Mynd. By midday it had lifted and broken cumulus had developed under high cirrus. At medium altitudes wave clouds had formed and the thermals were broken and very rough indeed — presumably they were mixed up with rotors.

Once found, the waves gave lift to 7,000-8,500 feet a.s.l. and several club pilots and three competitors used them. The task was two laps of the triangle Mynd-Montgomery-Clun-Mynd, one lap being 33 miles. Kaye in his Dart did three laps, the last two in only 1 hr. 45 mins. Prestwich took 2 hrs. 30 mins. for his two laps and Midwood took 3 hrs. 15 mins. No one else got into the waves and completed the task, but Green made 28 miles, Jefferson 16 and Brenner 12.

For marking the normal handicapping system was used, with the Dart, which was streaking away from the rest of the field in level flight and losing very little in the soaring, as a scratch machine. Marks were as follows:

Derby and Lancs.: Kaye 971 + 1,000, Midwood 811 + 711, Jefferson 873 + 87.

Midland: Prestwich 1,000 + 746, Green 364 + 201, Brenner 335 + 78.

Thus the Derby and Lancs. team scored a total of 4,453 points to the Midland 2,724 and they returned to Camphill with the beer tray.

One possibility arising out of this rally has occurred to me — that of holding a gliding competition as a series of twosomes. Dart would be competing against Dart, Skylark 4 against Skylark 4 and 460 against 460. The winning club would then be the one that won most of the twosomes. At any rate it would eliminate the need to apply the arbitrary handicapping system.

LONG MYND EASTER RALLY

THE Midland Gliding Club will be holding its usual Easter Rally from Good Friday to Easter Tuesday, 16th to 20th April inclusive. It will be a Qualifying Competition. Entry forms and Regulations are obtainable from Mr. P. O'Donald, 3 Fron Ogwen, Tregarth, Bangor, Caernarvonshire.

Obituary

PETER LANYON

PETER LANYON died in hospital on 31st Aug., four days after an accident in the Dunkeswell Skylark. A member of the Cornish Club, he was 46.

He was a well known artist, whose work has been exhibited in many parts of Europe and North and South America. He was best known for his landscapes, and gliding had some influence on his work; one painting, bought by the Tate, was entitled "Thermal".

At Perranporth, he soloed in 1960, flew his C the following year and Silver C duration in 1962. He was a member of the Kite syndicate and spent many hours helping rebuild it when first bought, taking the fuselage home to his St. Ives studio. He admired this old glider's graceful form and flew his first cross-country in it last year.

Anyone meeting Peter was won by his great charm and sense of fun, which made him such good company. He gave a great deal of his valuable time to the Cornish Club, serving on the Committee, helping with repairs, and was a resourceful and sympathetic retriever.

The great sympathy of his many friends, both inside and outside gliding, goes to his widow and six children.

J. E. K.

ALTHOUGH rightly famous for his work, Peter was above all an enthusiast; a person who got the most out of life in anything that he did, and to talk to him about painting, gliding, new ideas, or his native Cornwall, was always stimulating and amusing.

Soon after obtaining his C certificate, he bought a share in a Kirby Kite, which he loved to soar above the cliffs. His delight in gliding was very great, but it was not just for the flying that he loved it. To him the glider was a superb instrument for seeing what was all around him, its colour, shape and proportion. In the last few years, his paintings have been influenced by the sense of space which is inseparable from flying, as those who have seen his painting "Thermal" in the Tate Gallery will know.

Abstract painting is not always understood, but Peter's work was sincere and beautiful. His purpose was to translate landscape, particularly that of Cornwall, into a language of colour, and it was the colour of the sea, sand and sky that he completely understood, and could reproduce with such clarity and power.

Although only 46, Peter had had his work exhibited in many countries, and he also did a great deal to encourage and help young artists. He will be badly missed. To his wife, Sheila, and their six children, we can only send our sympathy.

A. W.

BOOK REVIEW

Halfway to Heaven, by FRED HOINVILLE. Published by Angus and Robertson Ltd., London. Price 21s.

THIS interesting book describes the varied flying experiences of Fred Hoinville, the famous Australian pilot who gained the first Australian Gold C and was the first Australian commercial skywriter. Before his death in 1959 while testing a new powered glider, he was noted for his brilliant aerobatic displays and his fine gliding record flights. He describes, among many other fascinating things, encounters with sharks and porpoises while surf-riding, a 500-mile aero-tow to deliver a Grunau Baby to another club, and the intricate skywriting methods which he perfected.

There are amusing anecdotes of club and international gliding, and items of meteorological interest, such as his descriptions of a major wave system near Sydney which he explored, and of once finding a large thermal at 10,000 feet above a



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deep inversion. He also tells of how he sometimes slope-soared up the sides of big cumulus clouds in his famous Tiger Moth "Brolga". In chapter 8, there is a hair-raising description of how to lose control of a sailplane if you venture into cloud without proper instruments and training — all prospective cloud fliers should read this, although it may alarm the more timid! His account of his attempts to teach himself aerobatics in a plane he subsequently discovered was only stressed for level flight also contains a valuable lesson. The book ends on a sad and slightly sentimental note as he tells of the death of his little son, Ricky, from leukemia.

Altogether this book is a good memorial to a brilliant pilot and a fine person.

B. KIRK.

The Woolacombe Bird, by ANN WELCH, illustrated by JOSEPH ACHESON. Published 1964 by Jonathan Cape, London. Price 16s. (Also obtainable from B.G.A. Office: postage extra).

HERE at last is a book for all those children whom one would like to see grow up with a "gliding" mentality, or possibly even become glider pilots themselves.

Mrs. Welch sets this adventure in the West Country during Armada year, although it cannot be said to be an "historical" novel in the usual sense. The joy of this book is that it conveys the author's enthusiasm for the open air, and for those people who get on and do things in spite of the prejudices of others. The development of the plot passes my test for an adventure story — I was thoroughly objectionable to anyone who interrupted my reading — and at the finish still had that feeling that it could have happened.

The Woolacombe Bird can be thoroughly recommended as a present for nieces, nephews and god-children, after you have read it yourself! Now Mrs. Welch has written a book for 10 year olds and under, can we expect a competitor for Winnie the Pooh? I hope so.

PAUL MINTON.

Octave Chanute: A Bibliography, by PEARL I. YOUNG. Published 1963 by Edward L. Sterne, 2949 Balboa Street, San Francisco 21, Calif., U.S.A.

ONLY 250 copies of this valuable booklet were printed for sale. No doubt because of this the price in England is £2 10s., if obtainable. Pearl Young had a grant from the American Philosophical Society, and used it since 1947 to pursue her research "in libraries and archives from Paris to San Francisco."

A short biography begins the book. Born in Paris in 1832, six years before his father emigrated to America, Chanute became a naturalized American in 1854 and took up the profession of railway engineer. He began collecting information on aeronautics in 1857; but, the author says, "finding himself neglecting both his family and professional duties for the new hobby, he resolutely filed the aeronautical material away for 14 years". Then, at the age of 64, Chanute began the famous series of gliding experiments over sand dunes on the shore of Lake Michigan near Chicago. He collected three young men to do the flying, as take-offs and landings were done with the legs, but nevertheless he conscientiously tried out each new model or modification himself before allowing others to fly it. For the first experiments he took along six pairs of wings to be tried out in different arrangements; oddly enough, they found the machine flew best with two pairs in front and four behind.

The bibliography is in three sections: Writings and Printed Speeches, Notebooks and Diaries (including press cuttings and photographs), and writings about Chanute by others (this does not include a biography of him in SAILPLANE AND GLIDING on the centenary of his birth). It is to be hoped that Pearl Young will now use this material to write a full-length biography.

A.E.S.

CORRESPONDENCE

REVIVE THE WINCH!

Dear Sir,

I'm sure everyone must agree that the majority of the gliding clubs in the U.K. will continue to use the motor winch for many years to come. Therefore I think we must obtain the best from the equipment in use. There are a number of factors which enter into a successful winch launch. They are all obvious. However, I believe that more height could be gained from winch-launching. This would suit everyone from the pupil under instruction to the pundit who wants to soar, or attempt a cross-country.

The question which must be answered satisfactorily is: can more height be gained from a winch launch safely? Some clubs may have very long sites where they could use enough cable to launch a glider to a height of 2,000 ft., say. Can we devise a useful formula which could be used to calculate:

(a) the safe weight of cable a glider would be expected to carry during a launch to a height of 2,000 ft.?

(b) the minimum power required at the winch to give such a launch?

Perhaps such useful information would guide gliding clubs who are anxious to obtain more height from winch-launching.

Having spent considerable time "at the winch" myself, I feel that better heights could be obtained by experimenting a little. The first factor (assuming the winch develops enough power) is to lengthen the launch cable. Every 10 yards the winch is moved away from the launch point gives another 10 feet of height. This might just be the extra height one needs to contact the lift from that cloud as it passes overhead!

Revive the winch!

Dumfries and District Gliding Club PENSATOR

DON'T THROW AWAY THE WINCH

Dear Sir,

The recent correspondence (Goodhart and Riddell *et. al.*) on this subject is tending to converge to the view that winches are likely to remain a part of the gliding scene for some time to come. Having arrived at this conclusion it would be sensible to look round to see where these winches are to be found. Two sources only appear to exist:— (1) second-hand Wild winches of the well-known A.T.C. pattern which are occasionally available when released; (2) home-made devices of varying types, age and efficiency. Our Club started with one of type 2 and I am sorry to say, in the absence of any type 1, we are about to add another unique example to type 2. Since the demand for winches is steady, albeit small, it would be a good policy to evolve a standard design and try thereby to reduce the costs by making in quantity what is presently being made as one-offs. It should be possible to design, using standard lorry and car parts, and arrive at a solution which should not cost more than £500. Such a winch would be a sturdy, simple machine, devoid of complex pay-on gear, with as large a drum and feed rollers as can be accommodated to allow piano wire to be used. A suitable power unit might be the ex-Govt. Ford V-8 engine which is still available in reasonable quantity.

To do all this requires a measure of co-ordination, and it should not be beyond the wit of the B.G.A. to set up a design group to get this project moving. There is no shortage of experience in the field — if anything there are probably too many experts on winch design; the problem would be to keep the team down to a workable number. A good start might be to survey all the clubs currently using winches to find out:—

1. How many winches they own.
2. Type 1 or type 2?
3. Source of these and who designed them.
4. How much they cost to maintain and repair per annum.
4. How much they are prepared to spend on a really good reliable winch.

This constitutes the market research stage of the operation — essential if the project is to start along the right track. With this information a clear picture of the types now in use would emerge and also the approximate price to be aimed at.

With the design work done, careful costing must follow to determine whether the price can be met without compromise on quality. This stage will also indicate the minimum economic quantity to manufacture, and orders would have to be obtained to cover this. Who knows, we might even export them! I expect that groans of protest will be heard in the land when the price is announced, but even if it were £1,000 it would be worth it for a really good item. I think Riddell's comment on training times for P.P.L. vs. winch drivers is the crucial point here; some clubs just would not get off the ground if they had to aero-tow because there were no winches. I simply refuse to believe that with the wealth of talent in the British gliding movement we cannot have the best winches in the world. We ought to start right away.

Staffordshire Gliding Club ALISTAIR WRIGHT

THE 20 PER CENT RULE

Dear Sir,

I suggest that the "20% rule" for a contest day be dropped. When one flies a fair distance and returns to discover that one has won a no-contest day, it is rather annoying — the first time. When this happens again it is intensely frustrating. Our aircraft has had this doubtful privilege four times in the past two years. The pilot who does win a poor day would feel far happier with some marks to show for it, however few.

At present, the number of gliders to fly further than 2X miles determines whether a day is a contest (the 20% rule); and the number to fly further than X miles determines the maximum daily points in the event of a contest.

I suggest that the maximum daily points be proportional to the number of gliders to fly further than X miles, and that a contest occurs when at least one glider does this. This method is simple, and, unlike the present one, continuous. I feel that the discontinuity at 20% in the present system is bad, and must be eliminated.

With the proposed method, the marks obtained on a poor day would certainly not enable a pilot to walk away with the competition, and they would make ample allowance for the tendency, often overrated, of poor days to be fluky days. I would like to see this proposal adopted for the coming season. I wish to fly, to be encouraged to fly, and to score points for flying. I do not wish to hang around praying for a day to be, or not to be, scrubbed. I am sure that this is how other competition pilots feel.

Coventry Gliding Club M. J. SMITH

TASK WEEKS AT DUNKESWELL

Dear Sir,

The following extract from an article by F. Jaques and G. Chard appeared in the magazine "Lasham and Gliding" referring to our "Task Weeks". We think it would be of interest to your readers.

"'Task Weeks' organised at Dunkeswell (by the Devon and Somerset Gliding Club) are specifically for League 4 pilots; no pundits need apply. They are intended to be gliding holidays with a competitive element added. Thus there is no limit to the tasks that can be attempted, and retrieving is part of the fun instead of being a tedious fumble.

"We have been to two such weeks, both run by John Fielden, who gives a full briefing each morning on weather conditions, sets the task, and then advises on how to make the best use of the day. Each evening there is an 'inquest' on the day's flying, and an analysis of mistakes, etc., again with John in the chair. The tasks we have tried have varied from short races and free distance on poor days, to 300-km. goal flights on cracking ones. (We didn't do anything like 300 km., but that is a mere detail).

"Also available in season at Dunkeswell are hill-soaring on local ridges and on the cliffs between Sidmouth and Lyme Regis, sea breezes, and lee waves. We have tried all these except the waves.

"Altogether an enjoyable and instructive way of spending a holiday."

We shall probably be running three or four such Task Weeks in the coming year. Details will appear in advertisements in your pages.

Devon & Somerset Gliding Club. F. J. M. BUSTARD.
Hon. Course Secretary.

A GUIDE TO CLOUD-FLYING

Dear Sir,

I agree with Dr. James (October, p. 389). Dual instruction *is* dull when compared with self-tuition and especially when the dual is dispensed by a timorous instructor.

Solo training in the immediate post-war years was great fun, full of adventure, providing endless opportunities for bravura performances by the unskilled. There was something savagely satisfying about crunching one's way out of the wreckage of an unsuccessful low hop. The spirit amongst trainees was tremendous, as survivors of this era will testify. I remember one occasion when a club member, after coming unstuck teaching himself a turn, insisted on flying the spare Dagling, despite a broken leg.

When I joined the Royal Air Force I was obliged to fly with many timorous instructors. They continually prevented me from *killing* myself and were completely lacking in press-on spirit. I was determined never to be labelled timorous should I ever become a flying instructor. That I was successful can be seen from the photograph published in the October issue. The unshaven thug with brawl-flattened nose could never be timorous, not even in the Doctor's formidable presence. Broad arrows on the flying suit would have completed the picture.

Now, nobody flies with me, pupils are scared stiff of me. However, there is one compensation — they call me TIGER! GRR!

Upavon, Wilts. DOUGLAS BRIDSON

Dear Sir,

Dr. Brennig James is obviously a very experienced glider pilot with much cloud-flying experience and we are pleased to hear his views. However, I personally feel that he could, by encouraging the use of theory, lead us more on the right lines. After all, experienced chaps like himself are responsible for consolidating past theories and having informed the rest of us where the dangers lay. But can one truly decry *any* form of cloud-flying experience? He hits the nail on the head in my case, as I have only 130 hours' cloud flying in gliders — but I have formed the concrete opinion that the pilot knows pretty well what kind of cloud he is in and would be wise to use his parachute accordingly.

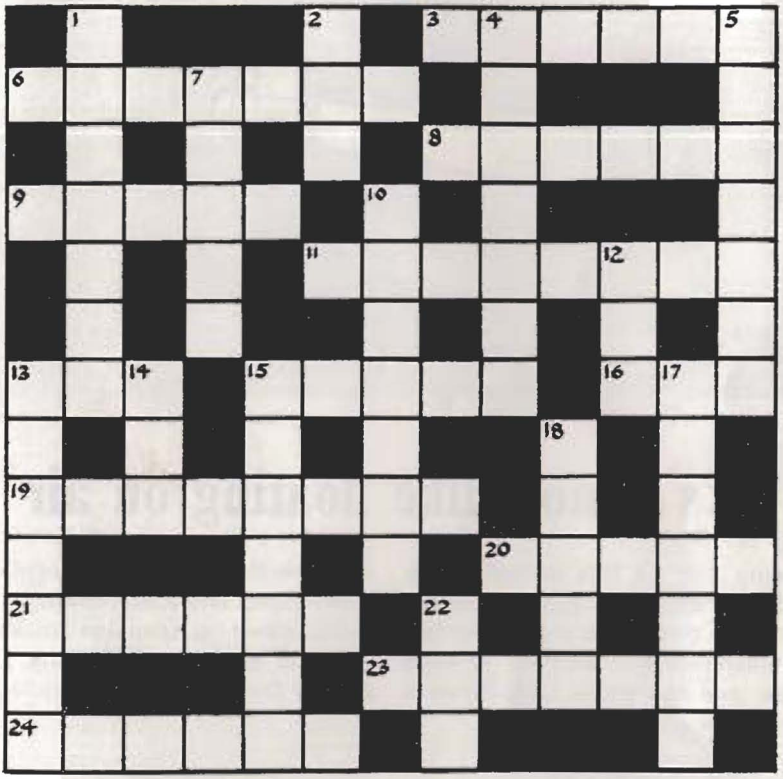
Little is lost by not having seen lightning in cloud, but what club member wishes to trust to luck? Perhaps a quick look into a cine projector, while trying to read a book, would prove a more convincing experiment as to the result of ability to interpret instruments.

Gliding would be a dull sport without differing points of view but let us not "knock" any reasoned approach.

R.A.F. Khormaksar, Aden MIKE JOHNSON

1964 Christmas Crossword

by GORDON CAMP



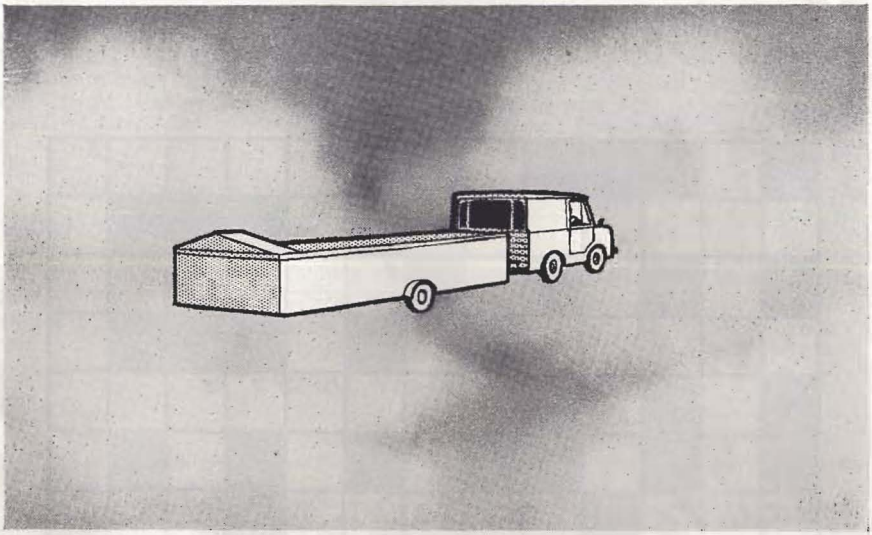
ACROSS

3 Familiar version of twin-seater (3,-3).
6 Pre-war counterpart of "take up slack" (3, 4).
8 Convenient method of connection (3,-3).
9 Aerobatic manoeuvre, often precarious (5).
11 A member in the fuselage! (8).
13 Nevertheless this sailplane is sometimes on the ground! (3).
15 and 18 **Down.** Performance graph (5, 5).
16 Means of communication across field (3).
19 Discreditable manoeuvres (3, 5).
20 Deflection of ailerons relative to trailing edge (5).
21 Elevator combining function of 23 **Across** (6).
23 Control for 10 **Down** (7).
24 Visible condensations in the sky (6).

DOWN

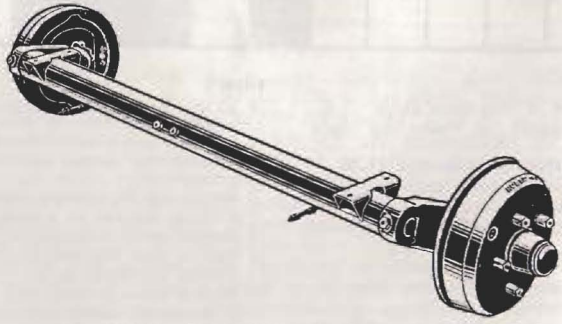
1 At this point in the take-off, does the control column come away in your hand? (7).
2 Auxiliary aerodynamic control surface (3).
4 Machine for getting wash-out? On Monday perhaps! (7).
5 Special nut for securing mainplanes? (7).
7 Glide at the end of a race (5).
10 Motion about Longitudinal Axis (7).
12 Part of wing structure (3).
13 Gliding Certificate (6, 1).
14 Motion about Normal Axis (3).
15 A sometimes violent oscillatory motion (7).
17 Confuse a tow out for a launch (7).
18 (See 15 **Across**).
22 Assemble a glider (3).

The solution will be given in our February, 1965 issue.



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GOAL DIAMOND

No.	Name	Club	1964	No.	Name	Club	1964
2/169	A. Smallwood	Yorkshire	28.8	2/171	K. V. Newholm	Laarbruch	29.8
2/170	F. A. Plumb	R.A.F.G.S.A. Centre	20.8	2/172	K. C. Morgan	E. Midlands	30.8

GOLD C COMPLETE

No.	Name	Club	1964	No.	Name	Club	1964
125	C. J. Pennycuick	Cambridge	9.8	127	P. E. Dawson	East Anglian	21.8
126	D. V. Zotov	Army	5.9				

GOLD C HEIGHT LEGS

Name	Club	1964
J. E. Morris	East Anglian	22.8

GOLD C DISTANCE LEGS

Name	Club	1964	Name	Club	1964
A. Smallwood	Yorkshire	28.8	K. V. Newholm	Laarbruch	29.8
F. A. Plumb	R.A.F.G.S.A. Centre	20.8			

SILVER C CERTIFICATES

No.	Name	Club or School	No.	Name	Club or School
1457	G. F. Brook	Derby and Lancs.	1495	C. Banks	Yorkshire
1458	J. A. Knight	Avro	1496	W. G. Scull	Avro
1459	D. I. Nickolls	N.A.E. Aero Club	1497	G. H. Potter	633 G.S.
1460	N. J. MacLeod	663 G.S.	1498	P. O. Gray	Perkins
1461	Joy Taylor	Oxford	1499	E. W. C. Hayman	Cornish
1462	W. Marshall	E. Midlands	1500	G. M. Farquar	Condor
1463	H. Grimes	Bristol	1501	A. S. Hillman	Surrey
1464	C. H. Gardner	Devon and Somerset	1502	K. W. P. Riley	R.A.E.
1465	R. A. Brew	Aldershot	1503	J. G. Smith	Scottish
1466	T. Webb	Scottish	1504	R. W. Swanton	Moonrakers
1467	M. B. Webster	Bristol	1505	A. Dicker	Phoenix
1468	R. N. Whittenbury	No. 1 G. Centre	1506	J. W. Hawkins	Surrey
1469	I. Vesty	E. Midlands	1507	K. G. Guest	Laarbruch
1470	A. Brier	Doncaster	1508	A. A. Cummings	East Anglian
1471	W. Andrew	Bicester	1509	S. G. Hope	Chilterns
1472	R. F. Martin	Moonrakers	1510	B. A. Pickers	East Midlands
1473	D. D. Twigg	Phoenix	1511	J. E. Morris	East Anglian
1474	M. Ruhl	Coventry	1512	R. J. Lyndon	Chilterns
1475	D. W. Lilburn	Newcastle	1513	J. E. Kenny	Cornish
1476	T. Dent	London	1514	G. A. Newbery	Newcastle
1477	C. R. Paul	London	1515	A. McMillan	R.A.F.G.S.A. Bicester
1478	L. E. Frank	Coventry	1516	J. F. Lawn	Fenland
1479	J. Collins	Portsmouth	1517	J. H. Schooling	Southern Command
1480	V. Shaer	London	1518	W. E. Sheppard	West Wales
1481	W. W. McIntyre	Bannerdown	1519	R. J. Parsons	Bristol
1482	A. S. Johnson	643 G.S.	1520	G. A. H. Wilkins	R.A.F.G.S.A. Centre
1483	K. W. Morton	Portsmouth	1521	E. H. A. Norman	Moonrakers
1484	L. A. Speechley	Oxford	1522	J. H. Whitney	Nimbus
1485	H. D. Campbell	Bicester	1523	T. J. Slack	Fenland
1486	J. J. Wilks	Surrey	1524	K. M. Plummer	Oxford
1487	T. R. B. Threlfall	London	1525	A. J. R. Deacon	Silver Wing
1488	J. G. Wild	E. Midlands	1526	C. G. Wilson	Lakes
1489	E. W. Dodd	Lakes	1527	D. J. Westerside	Doncaster
1490	C. Dews	London	1528	A. C. Dacombe	Surrey
1491	D. G. Cooper	Norfolk	1529	T. E. Riddihough	Empire Test Pilots
1492	K. N. Harris	Oxford	1530	E. C. Neighbour	Derby and Lancs
1493	K. Lillywhite	London	1531	S. M. C. Manson	Chilterns
1494	R. C. Hastings	N.A.F.	1532	D. A. J. Oxley	R.A.F.G.S.A. Centre
			1533	R. A. Barrett	Four Counties

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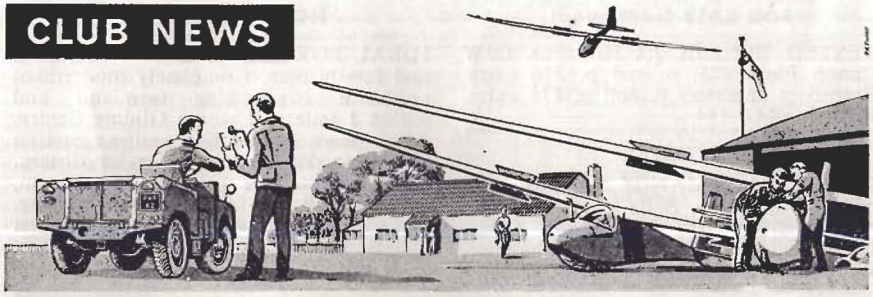
WESTERN REGIONALS

WINNERS of the Regional Contests at Dunkeswell, of which a partial report appeared in our last issue (p. 376), were Peter Martin and Charles Simpson, of the Leicester Club, sharing a Skylark 4. They rose to this position on the last day when Peter Martin reached his pilot-selected goal at Odiham, winning the day with a very handsome margin. John Brenner and Siegfrid Neumann, of Cambridge, with an Olympia 2, who were previously in the lead, finished second, and Peter Ibberson, with a Skylark 3, third.

On the Free Distance day, 26th July, the longest distance, 80 miles to Southampton in a Skylark 4, was flown by Mike Smith, of Coventry, not his partner, D. J. Cunningham, as stated in our account.

We have still not received the table of final results.

CLUB NEWS



YOUR Editor paid a most pleasant visit to the West Wales Club at Withybush Airfield, near Haverfordwest. They have a really luxurious clubhouse by English standards and the club is ideal for family holidays, being only a few miles from beautiful beaches. They are holding courses, I understand, next year, and these should be really worthwhile.

A very merry Christmas and New Year to all our readers and contributors.

Copy for inclusion in the February issue, typed double spaced on foolscap, should reach me at 14 Little Brownings, London, S.E.23, not later than Wednesday, 9th December.

YVONNE BONHAM, *Club News Editor.*

AVRO

OUR first two-seater syndicate has been formed, six members having bought a Kranich, which they hope to have airworthy soon. They claim it is the only aircraft in our fleet with a "walk round" interior. We hope to use it on Woodford "Open Day" to help with passenger flying.

The club distance record has been well and truly shattered by Bill Scull, with 103 miles from Camphill to Cambridge.

On the training side we are pleased to see a member of the fair sex gracing our skies; Mary Sidebotham flew solo on a "Dawn Patrol" recently.

The Tutor is airworthy again, several keen types having slaved away, undaunted by the many setbacks, to produce what is now a splendid aircraft.

J. A. K.

BATH (Keevil)

AFTER putting in a very exhausting 15 months as our first C.F.I., Gordon Mealing has had to relinquish the post owing to pressure of business. In his place we have been very fortunate in obtaining Owen Harris to carry on this demanding position. We wish Owen every success and hope he will be with us for many years to come. At a liquid party in the clubhouse Gordon was presented with a tankard and made our first life member as a token of the club's appreciation.

Ted Elliot took the Swallow to Lasham to get his Silver height and distance and then had an aero-tow back home—very convenient.

Bill Davis attempted to fly the Swallow back from our week's camp at Nympsfield, but had to land at Colerne only a few miles short of his intended goal. He gained his Silver height leg *en route*. Our thanks are due to the Bristol Club for making us feel so welcome.

A syndicate Olympia has joined us, and Bill Hole acquired his C on its first full day with the Club. Our T-31 is now back from modification and helped to boost our launches to the season's best of 102 in one day.

K. N. S.

BLACKPOOL & FYLDE

IT was mentioned in the last issue of Club News that we have been exceedingly fortunate this last summer in that every week-end has been flyable since the end of May, and we have continually endeavoured to take full advantage of the good soaring conditions at Samlesbury Airfield, our summer gliding site.

Several very creditable gains of height were made in September in the Club Olympia 2B, notably by John Gibson and Keith Emslie. Unfortunately neither pilot required his Height Leg.

It is opportune at this period of the year to express our appreciation once again to the English Electric Aircraft Division for the continued availability of their excellent airfield at week-ends, and we are grateful also to assistant instructor Ivor Stretch for his efforts in this direction.

The recording of members' first solos is always a pleasure, so this month we must congratulate Derek Raymond and 16-year-old schoolboy Richard Aldous on qualifying for their B Certificate. If the present weather continues a little longer, they could easily obtain C endorsements.

A very enjoyable Farmhouse Supper and Dance was held at the Clubhouse on 18th September and its success was due to the efforts of committee member Rex Harrison and his wife Win. Our British United Airways members brought along an excellent band.

The usual alternate Thursday night dances are continuing to be well supported. We are hoping to resume the instructive fortnightly lectures and film shows which were held on Thursday nights throughout last winter, and a cordial invitation is extended to all.

J. S. A.

BRISTOL

WE now have a magnificent new bar trophy since Ron Lewis managed to shake off the Tiger's prop early in August! Fortunately, since this incident the weather has been kind and on at least four days, from 60 to 80 launches have been made from the winches averaging over an hour per flight.

During this period seven solos, seven C certificates and 18 Silver legs have been flown. Four Silver C's have been completed and there has been a considerable increase in cross-country mileage.

Back from jungle-hopping in Laos has come Jim Stuart, and congratulations to Ann (née Wales) and Mark Westwood on going "dual".

Roll on the day when the Tiger takes the air again and the three new aspirants to fly it finally get checked out by Collier, and some of the winter evenings are rent with the harmonious tones of the Nympsfield choir, in their inimitable versions of seasonable carols.

R. G.

CORNISH

THE death of Peter Lanyon, following a gliding accident, is reported with the greatest regret. He is sadly missed by his many friends, and any other news there is to report now seems of little importance; but, for the record, here it is.

Soaring has been rather concentrated into short periods of intense activity, and we were fortunate to have Eric Richards staying on the airfield during August and giving many aero-tows.

On 20th August Geoff Horler flew the Skylark 4 the 52 km. from Perranporth to Davidstow without fuss for his Silver distance. Two days later the sky looked promising, and George Collins and Alan Davie in Skylark 4's took early launches with longer distances in mind. However, convection on track did not develop as promised. Alan had to land early and George, finding his speed too low for 500 km., flew a 171-km. triangle, Perran-Davidstow-Plymouth-Perran. Meanwhile, John Kenny took 4 hr. 30 min. to plod

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the Kite 1 77 km. to Plymouth to complete his Silver C.

Next day the wind was south-west and fresher, and the Skylarks were out again, but lowering cloud stopped George and Alan passing Bodmin Moor. Chairman Ernie Hayman in the Oly, however, did a rapid 55-min. "milk-run" to Davidstow, thus completing his Silver C. It was hard-earned, as he has very nearly made it several times before. Jane Pollard, in the Swallow, also made a good, safe first cross-country this day.

In the 5-hr. department, J. Oxley, on a course, flew the Tutor for 5 hr. 40 min. The next burst of activity was on 6th September, when Frank Brown (Swallow), Doug Reynolds (Olympia) and T. McDonald (Meise) sat out their time.

Once again we would like to wish all our gliding friends a happy Christmas and all success in 1965.

J. E. K.

COVENTRY

TOWARDS the end of September, the Club held a week's camp at Husbands Bosworth. Since none of the Club facilities had been put up then it was very much "camping". However, a good time was had by all and a fair bit of flying done.

At the time of writing, the state of our site is as follows: Preparation work is commencing on the hangar, although nothing is up yet. Members are occupied in the erection of a "prefab" to serve as a temporary clubhouse until our proper buildings make their appearance. The building of the hangar door has reached the stage where the final work awaits the completion of the hangar. Also, we have now obtained water, at the second attempt with a bore hole on our property.

On the flying side, the recent visit to Coventry of the entire East Midlands Club, with both club and private machines, got two of their members Silver C durations in thermals, as well as some cross-country flying. John Large, visiting Camphill with Lou Glover, did a five-hour flight in wave, with the latter's Viking. The most outstanding recent cross-country was Michael Hunt's 300-km. triangle attempt; unfortunately he landed eight miles short, but the flight was none the less creditable.

Now that the overhaul season approaches, the workshop has a strange shape in it. One of the Club tugs is being prepared for a complete respray, and should look very handsome next season.

L. E. A.

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A QUIET time for Camphill, with dual instruction severely restricted by spar modifications and breakages to our T-31 fleet. The mirage of three serviceable training two-seaters remains tantalisingly out of reach.

At least the soaring pilots have continued to enjoy a good time. Bill Skull completed his Silver C flying the Avro Club's Skylark 2 on a 110-mile cross-country, whilst an airborne invasion from Sutton Bank made us realise we might have missed something. October 10th produced unexpected 6-knot thermals with towering cumulus which enabled the Dart to complete a 60-mile out-and-return in 2 hours.

Since our private owners now own 14 aircraft, there is no longer room to winter the trailers in the hangar. Calcula-

tions indicate that at our present rate one's trailer will blow away once every six years. Not wishing to be first for "blast-off", all syndicates have been busy digging-in for the coming winter.

On the social scene we welcome a new resident Steward and Stewardess, Mr. and Mrs. Birch. We hope they will have a long and happy time at Camphill.

An improvement which we have long hoped for now seems less of a pipe-dream: Mains water is coming to Camphill and eventually we should be able to have a first-class ablutions block.

D. M. K.

DONCASTER

THE summer has been the best we've known since flying started here in 1960 and has resulted in far too many C's and Silver C legs to mention pilots by name.

The second Gold C has started here with Peter Grime (of whom Philip Wills once said "Who?") going to 10,900 ft. off a low winch launch and returning wearing a piece of instant ice.

The fleet has been increased by a grant-aided Swallow, which shoots away on every opportunity—so much so that we have members who've never seen it. Your scribe has been ordered to report that, having pinched the maiden cross-country, he landed it in the muddiest field in Lincolnshire and required a crawler tractor to extricate it. The welcome was the best yet. Before sitting down to an enormous meal in the farmhouse I was asked, "Care for a beer?" "I'd love one." "Which do you prefer? Whitbread Tankard or Red Barrel?" The location of this place is top secret.

The T-31 has been sold to the Swansea Club; we wish them all the best with our old faithful and assure them it will soar. A chequered history has the T-31, half-built in Scotland, completed and first flown in England, now operating in Wales.

It looks as if we may get the Northerns here next year. I think most of them were impressed on August Bank Holiday, but if Mike Bird should come he'll have a red face all week. "The art of Coarse gliding" indeed—he was talking about it. I recognised at least six members.

M. C. U.

GLASGOW & WEST OF SCOTLAND

WE have been offered the use till the end of the year of a flying field used by a local power Club at Strathaven, Lanarkshire, to accelerate our training programme. As most clubs know, it is not an easy task to move training equipment quickly, but a number of our more dedicated members did very well to carry it out in one day with flying commencing the following one.

We still retain our former site at Balgair Moor, Fintry, as we have an excellent slope to soar, but feel that we must take every opportunity to help our trainees progress to solo standard. From the short time we have been training at the new site, a number of the pupils have been heard to say that they feel they are progressing more quickly than previously.

Not only have we had a change in site lately but a change in C.F.I. Dr. Angus McDonald, who has been with us since the Club started, has taken leave of us for hotter climes, namely Australia, and we should like to thank him for all his work with the Club in an often difficult job. We wish him and his family every success "down under".

Into his place we are pleased to welcome one of our own Instructors, Mr. Gerhardt Ross, who has kindly agreed to take this post. Gerhardt has been instructing for many years and we know that he will fill the vacancy admirably.

T. J. G.

KENT

MAY we draw your attention to the film "Moll Flanders", now being made in Kent. It features Kim Novak by courtesy of the film company, and the T-21 and Skylark 2 by courtesy of the Kent Gliding Club.

The film people were slightly peeved by the appearance of 20th-century gliders in an 18th-century film when outdoor shots were made at Charing Church at the bottom of our ridge. We offered to fly the T-31 instead, as this was our oldest glider, but they felt that it was not old enough!

This happened during the last of our summer courses, and our many custo-

mers have now all gone home expressing their satisfaction.

Numerous Club members have achieved solos, C flights, and 5 hours, and a new milk run has been set up to Rochester Bridge. Times for this 40-mile out-and-return started at 3½ hours and came steadily down with each attempt until the record now stands at 59 min.

There have been several expeditions to other sites with club and syndicate aircraft, reports of which are still coming in.

Socially we have held a barbecue which was highly successful, and our annual dinner comes quite shortly, long before you read these words.

F. M. K.

LAKES

WE go to press with much to report, and a remorseless space limit in which to say it.

Firstly, our congratulations to Ernie Dodd and Gerry Wilson on gaining their Silver C's whilst on a flying holiday at Lasham last August. Apart from the satisfaction of their achievements, their holiday was made even more enjoyable by the hospitality and assistance they received from their hosts.

We were delighted to welcome Bill Wills and his wife and David Darbyshire at Walney. Bill certainly set the pace with a 13,500 ft. flight into one of Ireleth's thunderheads on his first day.

Reg Wolff has scored his "five hours" over Ireleth. Ron Hawkes and John Head have both made flights to qualify for their C certificates, the latter within two days of being passed out on the Olympia. Peter Craven, Peter Thomas and Jill Redshaw have also attained Olympia status. Incidentally, this young lady's flying is creating quite an impression in the Club. Good luck, Jill!

With all this activity the Olympia is becoming over-worked, and the day is fast approaching when the addition to our fleet of another high-performance plane will become a necessity. Meanwhile, promotions to the Tutor Brigade continue, and new members swell the waiting list for the T-21 Howard Woods and Jack Paley have both passed the 1,000 launch milestone, thanks in no small part to the sterling work they have put in as instructors.

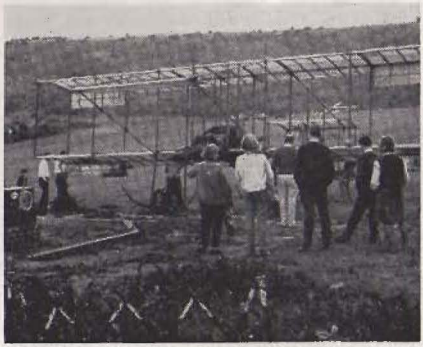
Our six courses this year have been an outstanding success. Apart from the high standard of flying, it has been encouraging to welcome so many course members on return visits. Our thanks for all the hard work of organisation is due to Edna and Matthew Hall. We hope the results have been adequate reward for all their efforts.

The sudden death of Eric Dixon early in September has been the one jarring note in the year's events. Our sympathy goes out to his bereaved parents.

F. G. R.

LONDON

ON 2nd September we were invaded by a German on a Bristol Box Kite. After we had recovered from the attack we found it was that famous actor Derek Piggott who is starring in the 20th-Century Fox film "Those Magnificent Men and their Flying Machines".



Complete with German uniform he was making one of several refuelling stops on his way to Booker from Skegness! Since that date Derek has flown in twice more with the Box Kite and once with an Eardley Billings, sometimes accompanied by a Tiger Moth flown by Delly Grey-Fisk who is getting hours in for her commercial licence. Delly was in the back seat of the Eagle when Gordon Camp did a 100-km. triangle at 39 m.p.h., which beats the British National record subject to confirmation. Unfortunately we won't see our hard-working Gazette editor around the club for some time, as Gordon has joined the R.A.F. as a technical officer.

Signs of winter approaching—on Sunday morning, 4th October, an easterly

wind and a low inversion and a mass of gliders at vast heights above the haze. Yes, wave, stirred by our hill. I hope this winter more people with high-performance gliders will be up earlier to experiment with this strange wave system. Jim Wingett, instructing on a course the week before, reached 2,400 feet in a T-21. Low down he found lift almost over the hill, but higher up the lift was at angle of 60° to the hill three miles away.

As the last soaring days of the year get closer, the "Battle of the Plate" has become fiercer. In one period of ten days there were six flights between Dunstable and Lasham, but now at last I think the plate will remain here until the end of the year, at which time it goes back to the neutral territory of the Kronfeld Club. There are more cross-countries being organised between clubs, and at the moment there is a stuffed platypus in the bar that was "won" from Nympsfield, and also a cup at Derby and Lancs to be flown for.

At the time this goes into print we shall have had our Bonfire party, and maybe put some of our rockets into orbit with the Russians, but if you missed our November celebrations make sure that you come to our fabulous Christmas party on 19th December.

J. C.

MIDLAND

NOW that winter is upon us, it is interesting to note that during the past year there has been a definite increase in the use of the Club premises. That more members have stayed overnight is in no small way due to the new bunkhouses. We now have mains electricity which no doubt will bring many creature comforts.

We congratulate the Derby and Lancashire team of Mike Kaye, Brian Jefferson and Harry Midwood, who proved too strong for our team of Ric Prestwich, Charles Green and John Brenner, and consequently our Inter-Club Trophy, the Beer Tray, is now at Camphill.

Recently we have been visited by several old friends, including Doc Butler home for a few weeks from California.

Ric Prestwich, flying his Skylark 4, reached 14,500 ft. a.s.l. in a wave over Wenlock Edge in September.

On 14th November we held our Trogs Party which was greatly enjoyed by everyone present. The new King Trog was enthroned with all the traditional ceremony.

This year has seen an increase in the number of privately owned machines on the Mynd, there now being two Skylark 4's, two 460's, a Dart and an Olympia. It seems probable that 1965 will see further additions to this aspect of the Club.

Our annual Christmas Feast will be held on Sunday, 20th December.

We wish all gliding types a Merry Christmas and a highly soarable New Year.

K. R. M.

NEWCASTLE

THE end of the thermal season also brings the end of our financial year, and is the time for taking stock of the year's events. The weatherman has been reasonably kind to us and we finished the year with rather more than 2,800 launches which, though short of our target 3,000, is still a record at Carlton and has done something to make up for last year.

Albert Newbery rounded off the thermal season with a goal flight of 45 miles to Carnaby for his Silver C distance (our 15th Silver leg in the year), and Messrs. Tony Deaves and Mike Zammett have both flown their C. It looks as though the Tutor will be very busy on soaring days this winter!

The social season got under way with a party at the Club in November to mark Guy Fawkes night and to inaugurate our diesel electric generator. The coming of electricity to Carlton should make life much more pleasant this winter. Other social events planned so far are the Annual Dinner in December and a film show in January.

Members are now being kept in touch with current events by the introduction of a newsletter which is to be circulated every two months, the object being to maintain contact with our not so regular members, and to promote a flow of ideas between the general membership and the committee.

Several of our members are already making plans for the next soaring season, and with two brand-new Skylark 4's on

the site, together with the prospect of a Dart or Olympia 460, big things are expected.

Finally, to all our friends throughout the gliding movement we wish a very happy Christmas and many soaring hours in 1965.

B. W. B.

NORTHUMBRIA

THANKS to the kindness of members of the Eagle syndicate, Club members have recently been sampling the delights of flying a high-performance glider. The Eagle, lent to the Club while there was no Club two-seater, has been responsible for breaking all previous records. Record launch height now stands at 3,100 ft. off the winch, and 15-year-old Richard Walton lifted the pupil's and Club altitude record to 5,600 ft. This was later beaten by C.F.I. Dave Wilson who managed to scrape another 700 ft.

The Ka-7 syndicate, trying hard all the time, has had one or two near misses at Silver C legs. Danny Borrits, trying for distance, was forced to land out, appropriately enough, at Settlingstones, 20 miles away.

At Sutton Bank 19-year-old Neale Lee gained his A, B and C certificates, being more successful than the two syndicates who spent a rather frustrating week of unfavourable winds at the Yorkshire Club.

The Iggle mob breathed a collective sigh of relief at the arrival on Sunday, 11th October, of the T-21 from the Long Mynd. Unfortunately the first day's flying produced no soaring flights for the "21", but a large number of members had a chance of trying the new Floatbox.

The winter's social calendar is being opened with a Hallowe'en dance which should be well supported, mainly because the organiser, Sigrid Hindmarsh, has promised a demonstration of thermalling on a broomstick! Other activities planned include film shows, barbecues and a Guy Fawkes night bonfire.

P. W. L.

NORTHAMPTONSHIRE

THIS summer has been a good one for the Club. The settling down in our new surroundings continues with the friendly and helpful co-operation of the College of Aeronautics Club and a gradual increase in membership.

Cross-country flights have been made by E. Collins and F. Rowell, who reached Leighton Buzzard and Harrington respectively.

C certificates have been obtained by J. Palmer and D. Richardson. H. Purser has gone solo and obtained his C soon afterwards, and J. Bennon went solo and obtained his C on his first solo. H. F. King gained his Silver C height over Cranfield. E. Barton and C. Letts have transferred to the Swallow.

Our chairman, Gordon Grant, and R. Thory, of the College Club, both obtained their instructor's category in August.

Having had to cancel the original arrangements for the visit of the Capstan, due to the move from Podington, we were very pleased to have the Capstan for two week-ends in August. Many members enjoyed a flight in it.

R. N. W. K.

OUSE (Rufforth)

ON reflection, this season has surpassed all others for the Club, with soaring hours well up on previous years. The coming of the Swallow proved to be a popular success, reviving enthusiasm and giving soaring experience which should prove beneficial next year. The Tutor is now in the air again, thus releasing the T-31B for its intended job of ab-initio training.

Our T-31B had never faced so many clicking shutters until Alan Park brought his "minutes-old" bride Pamela and wedding guests to the airfield straight from church to see us before going off on their honeymoon. We wish Pam and Alan every happiness.

Social Chairman, Norman Worthy, is busy with the Annual Dinner and Dance, which we hope will be a success in October, when we look forward to meeting our friends from neighbouring clubs again.

Our latest batch of solo fledgelings include Chris Lewis (another 16-year-old), John Barrett, Mike Annison and Harry Greenwood, while Gordon Magson, Colin Stanford and Tony Edwards have spread their wings to gain their C. Bob Plane and John Mawson have chalked up another cross-country each

with John claiming a Silver distance leg, although it's a near thing.

The first Silver C to be completed in the Club using a Club aircraft for every leg has been gained by Les Bellamy, who took the Swallow to Sutton Bank for a week which coincided with good west or south-westerly winds to obtain his five-hour duration leg. Keith Massey and Norman Worthy also claimed five-hour legs later the same week, with Norman doing exceptionally well under difficult conditions—a total of 21 hours flying being done in five launches. Many thanks to the staff of the Yorkshire Club for an enjoyable week.

May we finally wish all our readers and friends in the gliding movement a happy Christmas and a very soarable 1965



Ouse Gliding Club members Alan Park and Pamela Mary Sample "put their heads in the clouds" on visiting the airfield after their wedding in York.
Photo by Keith Massey

OXFORD

LIKE spring in the popular song, summer was a little late in starting, and if August had not been rather untypical, producing almost a third of our flying for the year, the furrows on our brow would have been many and deep. Fortunately August was a month for clearing up a number of Silver C's long outstanding, a process started by our Hon. Treasurer with five hours over Bicester watching the comings and goings of R.A.F.G.S.A. competitors.

Within two days Keith Plummer had temporarily abandoned the new winch to gain Silver height and duration, and a couple of weeks later Ken Harris made height and duration locally, while the Hon. Sec did duration and distance with a flight to Lasham.

By the end of the month Keith had also journeyed southwards to be escorted to his goal by Wally Kahn, and in September Gerald Weeks flew to Henlow to bring the total of Silver Badges claimed up to five. Gold height is claimed by Ian Pratt and Silver height by Barry Perkins, Ian Gordon, visiting from Derby and Lancs., and by Roger Collisson, whilst Andrew Henderson was as happy as anyone with a nicely earned A and B.

Our private owners have also been active and in August/September: Skylark 4 No. 169 flew 41 hours from 16 launches, Skylark 3F No. 168 flew 35 hours from 15 launches for 600 miles, leaving only 120 miles to make their target of 1,000 miles for the year. This syndicate has set itself tasks even on very marginal days and has tackled them with competition-type efforts. In their search for Gold and Diamonds John Adams was nearest to success with a Gold height, a flight to Dunkeswell and an out-and-return to Cambridge.

The Gull 3 continued its wanderings around the neighbouring counties with a modest 27 hours from 13 launches, and Olympia No. 170, perhaps a little tired after its battle for fame(?) at Dunstable, produced the same number of hours from just twice the number of flights.

In all, the enthusiast can feel content that much has been achieved and confident that only slightly better weather in 1965 will produce so much more.

L. A. S.

SCOTTISH

THANKS to our advanced two-seater, the training programme has taken a step forward. Most solo pilots have now converted on to the Swallows and have a C at least. The Tutors are seldom out of the hangar nowadays! In addition, many Silver legs have been flown.

Graham Smith completed his badge by doing the "milk-run" to Arbroath in the Olympia, and more recently the Oly was taken to Edzell by John McLauchlan. John's flight was made entirely in wave which he reached from Bishop Hill, and he reached 9,300 ft. towards the end of the flight. Five-hour legs have been flown by Dick Nelson (Weihe) and Bruce Marshall (Swallow), who also claims his height. Height legs have also been flown by John Wholey and Hugh Elder.

The private owners' fleet continues to expand, the latest additions being a T-49 and a Vasama, the first one in Britain. This aircraft has an exceptionally good finish, and appears to have a great potential performance. Dart owners had better look to their laurels!

Finally, best wishes to Ian Dandie and Ann Lawson on their recent marriage.

B. M.

SWINDON

AFTER five years of existence we now have the first syndicate formed within the club. This is the ex-Dunstable Grunau, which has been acquired by Messrs. Bailey & Co. A second group has formed and will be taking delivery of a Skylark 4 in the New Year.

Much aerial activity has taken place since our last appearance in these columns. The latest solos are: John Thorpe, Howard Johns, Ian Stokes, Colin Maxfield. The ladies have also had excellent results: Joan Savage, Jenny Wills and Margaret Young. Well done, girls! C's have been completed by Chris James, Joe Pippa, Dave Bailey, Howard Johns, Mike Hoffman, Bill Rawlings and Geoff Turner.

Now for the hard stuff: Malcolm Parkins and Jack Purchase both gained Silver legs—distance and height—by flying to Dunstable. Clive Castell flew to Lasham for his distance, using a cloud street all the way, and arrived at 5,000 feet.

Other cross-countries include G. Turner, 12 miles; me, 12 and 25 miles; Jack Purchase, 5 miles; George Turner, 275 yards; John Young (El Supremo), 34 miles. Chris James managed 6,000 feet in the Swallow but without barograph.

Various members have already sampled the Huish ridge, and this should prove most useful during the winter. Before the A.G.M. Stan Perry and Sam Colborne resigned from the committee, and this was a great loss for us. We are indeed indebted to the tremendous amount of work and effort they have given to the club.

D. E. S.

YORKSHIRE

SUTTON BANK has been happy to welcome many visitors at the end of the 1964 season. Members from Kent, Coventry, Doncaster, London, Cambridge, Northumbria and Lasham have been up to see us in recent weeks.

September gave us some good thermal soaring but little of the expected west wind. The Azores High has lingered longer than normal. Aero-towing has been very useful and is now an integral part of our activities. The Tiger soldiers on, and David Hill has been cleared as a Tug Pilot.

In recent weeks, several new sailplanes have come up to roost. Peter Lockwood now flies the Dart prototype. Peter Street's Oly 463 is seen in a number of different hands; Bill Waugh's Eagle is darkening our skies. More recently a brand-new shiny Blanik was delivered to the site for a syndicate formed by Eric Read and Ralph Hindle. So far little flying has been possible, but it winch-launches quite well.

The Club held a club week-end on 29th/30th August when a task was set to Camphill and back. Four people got there; Barry Goldsborough got back again in his Sky. Chris Riddell landed there, claimed the pot, and landed beside his home three-quarters of the way back in time for supper, while Chas Boyer went his Gold C distance to Stradishall. Richie Pick got to Camphill but too late to get away back. 500 miles cross-country in all.

The following day Barry Goldsborough went round the 88-mile triangle Sutton-Pateley Bridge-Pocklington and back. Ralph Stothard landed at Pocklington, while Mike Hoare took his 3F around the turning points and landed 10 miles short.

Toon Ghose, who leaves us at the end of this season, has been assistant instructor for the past 18 months. We wish him luck in his new position.

J. C. R.

SERVICE NEWS

ALDERSHOT (Odiham)

SINCE our last report we have hit a bit of bad luck. Our T-21 caught fire while in a hangar. The person who grabbed hold of a fire extinguisher and operated it must have been very quick off the mark for only the rear fuselage, tailplane, fin and rudder suffered.

We still intend to operate as much as possible through the winter on Saturdays and Sundays despite, for one reason or another, not having flown for five successive week-ends.

R. A. E. D.

BANNERDOWN (Colerne)

THIS is the first time since Bannerdown was formed that two successive newsletters have praised Weather Willie for his most welcome co-operation. Pundits and ab-initios alike have been borne aloft in ever-increasing circles and strains of "Indian Summer" have been heard overhead.

The period has produced its quota of achievements in a near-record 887 launches for 131 hours. On more than one occasion our entire fleet has been in motion; the time sheets record on several days a number of soaring flights between 18.00 and 20.00 hours and one day produced 18 hours for 42 launches.

Following a near-Gold height last period, Tug Willson made nearly 10,000 ft. on 20th September, while Brian Hunt, away at Portmoak on met. research, exceeded that height in the course of a 3-hour Sedbergh sortie and gained for himself well merited wave experience.

Just prior to his posting Roy Gaunt seemed determined to set up an endurance record. On 30th August he declared Waterbeach for Gold distance, but a few miles north of Aylesbury decided that it was not "on". With commendable consideration for the retrieve crew, he thereupon set a reciprocal and with two final thermals from Swindon and Chippenham arrived (low!) over Colerne exactly 7 hours after he had left.

Other achievements have been A and B for Mike Spencer, C's for Brian Hunt, Red Tew and John Bell, and distance

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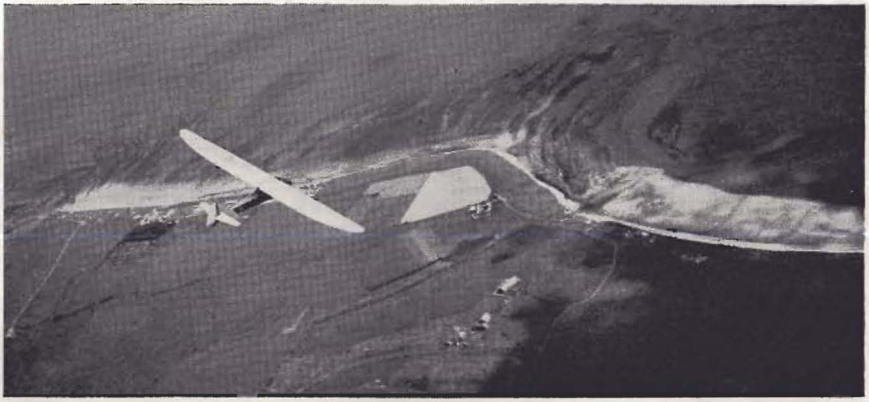


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Grunau 2B *of the Cheviots Club flies over the Northumberland coast.*

leg for Mac Macintyre who completes his Silver.

Other aerial activity has occurred on week-day evenings and in expeditions to Keevil. Battle of Britain Day, 19th September, saw an exceptionally fine ground and flying display, the latter including aerobatics by Tug Willson with passenger Pat Sassi in the Sedbergh, and by Doug Bridson in the Moonrakers' 419.

P. H.

CHEVIOTS (Acklington)

SINCE our first launch on 30th March, 1963, the Club has grown steadily and we now operate SF-26, Olympia, Grunau 2B, T-21, T-31, and Cadet 1 aircraft

This summer we explored the ridge above Chillingham Castle, near Wooller (described in Terence Horsley's book "Soaring Flight"), and our C.F.I., Norman Wilkinson, was airborne for 7½ hours in the Olympia after being towed to the ridge by F/O Bob Lightfoot flying a Chipmunk. Several other club members tried bungy launches successfully in the Grunau, and the C.F.I. landed among the Chillingham wild cattle in the T-31.

Unfortunately, we have just lost two instructors, F/Lt. Brian Shadbolt who has left the R.A.F. to fly 707's for QUANTAS, and F/O Bob Lightfoot who is posted shortly to Coltishall to fly Lightnings.

We are continuing training through the winter on the airfield, and later we hope to explore, from the Chillingham ridge, some wave formations over the Cheviot Range. If the winter is severe, we have a very nice clubhouse and bar.

R. S.

CHILTERNS (Benson)

WE have made very good use of the recent good weather by getting 10 Silver C legs, 1 C certificate and 2 A and B's. Jock Manson and Mac Macmillan were among the four who completed their Silver C, and Bill Maltby did his cross-country to Henlow, gaining his height on the way. Eddie Pratt got his height in the Grunau.

One of the solos was our C.F.I's wife, June Pickles, and we wish her and Wilf good gliding at Geilenkirchen when they go at the end of October, and we should like to thank them both for the tremendous amount of work they have put into the Club.

There have been quite a number of changes in the club lately. Jim Blundell takes over from Wilf as C.F.I. when he goes; Jock Manson is Treasurer in place of Jack Harrison who is going to Thorney Island; Bill Maltby is now Secretary, Jim Weaver Aircraft Member and Barry Nowells M.T. Member.

Jack Harrison did very well in the August Comps. at Bicester. He had our Olympia 2B and came second in League 2.

A. T. B. W.

EAST MIDLANDS (Swinderby)

THE month of August produced the Club's best results to date, flying taking place on 24 days in the month.

Chas Morgan completed his Gold C and gained Diamond Goal with a flight to Martlesham Heath via Bicester in the Skylark. Don Austin, attempting a Gold C out-and-return, came to earth four miles short of his goal! Jim Wild completed his Silver C with a duration flight in the SF-26. Barry Pickers, our youngest member at 17, flew all three legs of the Silver C in a ten-day period.

Silver distances went to Howard Cox and Barry Dobson, Silver heights to Howard Cox, Barry Dobson, Terry Carpenter and "Pat" Fenelon. C certificates to Tow Lawson, Clarry Parker, Alan Ball and Roger Allton. Five A and B certificates were also gained in this period.

At the Bicester contest, the Club was represented by Con Greaves, who did very well in League 1, flying the club's Skylark, nearly completing his Gold C, but for a maddening few miles. Paddy Hogg competed in League 2, flying an Olympia 2. Don Spottiswood attempted a Gold C out-and-return from Bicester in the Dart, landing after 140 miles.

Now that the short winter days loom closer, we are consoling ourselves with the thought of a wave expedition, planned for January, and flying a large number of circuits.

J. G. W.

EAST ANGLIAN (Waterbeach)

IT is with sincere regret that we creep back into print after a long absence from S. & G. to report that Pete Dawson, our C.F.I., has at last left us to take up the reins of the Phoenix Club at Brüggen. He came to us at Duxford some 4½ years ago when we were the bottom club in the R.A.F.G.S.A., and has left us fairly well established in the top three. Need we say more? The Club gave him a farewell dinner at the Bridge Hotel, Clayhithe, which was a great success. Jack Alcock now takes over as C.F.I. and we wish him luck with his appointment.

Before Pete left we held our Annual "Soaring Fortnight" when everyone takes leave to fly, and were lucky enough to be allowed to go back to Duxford. All the resident thermals were where we had left them and on the last four days clocked up: 1 A & B, 3 C's, 3 Silver cross-country, 3 Silver heights, 2 five-hours, and 2 Gold heights. More, in fact, than we have managed in the two soaring seasons we have been at Waterbeach.

Congratulations go to Johnny Cope for an A, B and C, Chris Boyle and Pete Fincham on their C, Dick Crabbe on height and 5 hrs., Dave Paton for height and distance, Pete Peterson—distance, Al Cummins on height and distance to complete his Silver for the second time (this time he claimed it), Pete Dawson and Jim Morris on their Gold heights.

In all we flew 750 launches and totalled over 144 hours—and all from autotows. There is no doubt that some flat sites are better than those nearby.

J. E. M.

FENLAND (Feltwell)

WE moved in July from Swanton Morley to Feltwell and since then have greatly increased our membership and had a most successful season. Feltwell is a grass airfield some 20 miles N.E. of Cambridge, and although it is just on the edge of the fens it is a good thermal site. The Club, in fact, formed at Feltwell in 1951.

Silver C's have been completed by Colin Elliott (our hard-working Technical Member), Jim Lawn and Terry Slack. Heights and Distances have been gained by Jock Eade and Ralph Lloyd. Seven C certificates have been gained since July and 12 A and B's. August was a record month with over 800 launches and better flying statistics than for the previous six months at Swanton.

Stew Mead (C.F.I.) has been very busy on the construction of our bar on the first floor of the Control Tower, overlooking the airfield. We hope to have a Grand Opening later in the year.

I. W. S.

PORTSMOUTH NAVAL

AFTER having been without a resident ground engineer for some months, we are glad to welcome Eddie Warburton to the Club. At present he does not fly, but we hope that he will take up gliding while he is with us.



Peter Goldney sends this photograph from Andover, showing (l. to r.) Dave Perry, Dick Bradley, John Phillips and Mike Turner.

There has been quite a lot of flying activity among members lately. Peter Davies got his Gold C height flying from Lee, while Alan and Brian Williams both attained Silver C distances with flights to Shoreham. On his flight Brian achieved Silver C height, but Alan had got his previously at Lasham.

Keith Morton, John Collins, Jim Gill and Mike Berridge had a week at Bicester. The two former completed their Silver C's with distance flights and the two latter achieved their Silver C heights.

The following have gone solo: Maralyn Stead, Celia Moore, Peter Stanton, Ricky Lovett, Bill Noon, Don Grant, Peter Lightburn, Andy Lavies, Basil Devenish-Meares and Wally Criddle. Peter Stanton and Andy Lavies lost very little time in getting their C durations.

If a cautionary tale be needed, there was once a C.P.O. who went for a walk across the airfield at Lee to see what was going on at the gliding club. Not only has he taken up gliding but recently he married one of our members. Congratulations to Colin and Celia Moore.

L. D. V.

SOUTHERN COMMAND (Netheravon)

AT the end of the soaring season we can look back with a considerable sense of achievement.

Club members have taken part in the Nationals and three Regional Competitions. Eleven pilots have between them covered 3,056 miles in 51 cross-country flights. Twelve Silver C legs and five C certificates have been completed.

Willy Robotham, Paul Tucker, Spike Hughes, Terry Colvert and David Powell have all been solo. John Schooling has completed the whole of his Silver C this year. Willy Robotham and David Dyke somehow managed to keep "Tea Tray" up to complete their C.

Four courses of a week each have been run, two of them for Junior Leaders' Regiments, and one for the Royal Military Academy, Sandhurst. We hope that we will be seeing some of the Junior Leaders back as adult members in due course.

Peter Hanson ran a most successful course for the R.A.S.C. Junior Leaders during the second to last week in September. In five days they did 525 launches. Coote, Williams and Ashton all went solo, and Williams and Terry Colvert both kept the Grunau up to get their C certificate.

John Evans used the Oly 419 to convey him to the London Club. Having completed some Club business, he managed to get back as far as Benson before nightfall. Perhaps it would have been quicker by car, but certainly not so pleasant.

Our new Clubroom has been completed in a very professional manner. We are very grateful to Chris Evans for looking after it.

A.N.O.N.

CRUSADERS (Cyprus)

MUCH has happened in Cyprus since our last appearance in these pages, although not so much, alas, on the flying side. Activities have been curtailed to some extent by the political situation, but we have flown on most week-ends. Our T-21 has been hangared for some time, due to defects found on the last inspection, and plywood is awaited for completion of repairs.

We also are awaiting delivery of a new "swept up" T-21 from Slingsby's. The Swallow has been frequently seen, however (against all migration laws), even soaring on the first of the winter thermals, when Al Machin did 1 hr. 30 min., drifting over the sea and making noises like a seagull.

Our residence has changed from our old canvas hangar to a new hand-built one of steel, wood and canvas. It is shaped something like an overgrown Nissen hut with a rather novel door like a roller blind. There has been great speculation as to whether our T-21 on re-assembly will pass through this orifice, but we have been assured by the designers, Harry Oxer and Don Holliday, that, according to their piece of string and prayers, it will.

Our Treasurer, Steve Saunders, has got married. Jock Hay has retired, and John Beckett, our C.F.I., is buying a new car, so at least they have been well attended. Our air member, Reg Perry, has been joined by his family and was last seen disapearing into the bundu shouting "My retrieve team", whilst our ground equipment chap, Tony Gee, is sitting watching waves form over the Troodos mountains, muttering words like "aerotows", and "if one took off from the S.B.A. and landed at Malta . . ."

To conclude, we lose Don Holliday as Officer i/c in January, and we hear that Pete Saundby arrives about that time.

J. D. B.

EAGLE (Detmold, Germany)

BY the time this is in print, our first 12 months of operation will have been successfully completed. Our Treasurer, "Moneybags" Barlass, has maintained his stony grip on the financial side, with the result that we now have a reasonable fleet. The Ka-6 so long awaited should be with us shortly.

Our first course venture was run by Peter Williams and James Adair for their Regiment, ably assisted by the more active members of the Club. One week was spent at Oerlinghausen where excellent soaring was enjoyed. Ken Ward is now known as "Noddy" for the number of circles flown in a search of five hours —keep it "up", Ken!

The instructor situation has been further aggravated by the loss of Bryan Middleton to FARELF. We were delighted that he achieved his Silver C height and



The tail end of Bryan Middleton's cross-country from Detmold to Farelf.

distance legs on his last flight with the Club—in a Grunau. Thanks for your hard work in the club, Bryan!

We are now approaching the season when the great LOMBARD bird will cry "Fog above and behind?" Ah well, there is always the bar and the company of good friends in the Detmold Gliding Club.

STOP PRESS.—Overheard on the field —German Piper driver Fritz Schuttelkorb to newly-joined British member: "Your German is fair but your English is terrible!"

T. M.

LAARBRUCH (Goch, Germany)

SINCE our last report the Ka-6 has been to Grenchen, but the weather was unkind for soaring and all that was gained was the experience of flying at a strange site and a tan at the local swimming pool.

On its return, however, two good flights were made in the Ka-6, a fast 315-km. Gold Distance and Diamond Goal to Brunswick by Ken Newholm in 3 hr. 55 min., and a 286-km. flog up the Rhine valley to Worms by Harry Orme, who is still muttering about the 4,000 ft. he burnt off to land in the middle of an air pageant. Anyway, the locals gave him a bottle of champagne and a pewter pot as consolation prizes.

The good weather also enabled John Thompson to make a 100-km. flight to Lünen and Pete Robinson 65 km. the following day, both qualifying for Silver C Distance, and Kingers Guest said goodbye with a five-hour duration flight in the Spatz to complete his Silver C.

Meanwhile, Curly Kingston (now a proud father) flew 25 km. to America, a small village in Holland, and wants to know if a flight from Germany to America in a glider qualifies for a record. Solos during the period were Mike Ferriday, Geoff Munslow and Pete Rowling; Nowell Baker, Mike Chapman and Pete also gaining their C's.

We welcome from the U.K. Chris Lister and Don Middleton, and, apart from Kingers, say goodbye to Pete Robinson, Harry Shaw and Taff Thomas who are posted to Waddington, Ballykelly, Farnborough and Upavon respectively.

The next thing we are looking forward to is the expedition to Issoire in January, hoping once more to find a Diamond-studded wave.

K. V. N.

RED HAND (Ballykelly)

THE dates of our 3rd annual wave project are: 19th December, 1964, to 3rd January, 1965. If successful, it will run on into February and perhaps until Easter. So far our plans have resulted in getting a Skylark 2, an Olympia and an Eon Baby, but still no tug aircraft or any 18-metre sailplane. If anyone knows of a source of tug aircraft, please tell the C.F.I.

We have had some changes in our committee, the main ones being: Chairman, Sqn.-Ldr. H. J. Houtheusen, D.F.C., R.A.F.; Vice-Chairman: Lt.-Col. N. Christy, T.D., W.R.A.C.; Secretary and C.F.I.: Flt.-Lt. T. J. Bradbury; Treasurer: Sgt. Alan Farmer; Technical: Tom Heaslip.

We say goodbye to all our members from 202 Squadron who have now gone across the water, and to W/O Dave Laming, our indispensable M.T. Member. This vital office is now vacant, and we hope one of the many Junior Technicians who have just joined us from R.A.F. Halton will step into this post.

T. J. B.

OVERSEAS NEWS

We would be pleased to receive news for this section from any country where soaring is done. — A. E. Slater, Overseas News Editor.

AUSTRALIA

A NEW 15-metre sailplane, the ES-60 "Boomerang", designed by Harry Schneider and produced by Edmund Schneider Ltd., of South Australia, has a two-piece wing and a fuselage based on that of the 13-metre Arrow (which flew in the last World Championships). Two Boomerangs will be flying in the next Australian National Competitions, and it is hoped to have at least one flying in the 1965 World Championships in England.—G. F. A.

Applicants for selection as pilots in the World Championship team are: Maurie Bradney from Queensland; Mer-

vyn Waghorn, Jan Coolhaas, Rupert Brown and John Blackwell from N.S.W.; Jack Iggulden, Derek Reid, Tom Thompson, Alan Patching and Wally Burgess from Victoria; Bob Rowe, Stuart Cox, Dick Deane, Malcolm Jinks, Bob Martin, Ross Isaacson, Vin Schloithe and Keith Mattner from South Australia. It is planned for all seeded pilots to fly in the same, or similar, type sailplanes during the Nationals, after which the final team will be selected. The selection committee is studying a proposal that the team should be selected by votes from the leading 10 pilots in the Nationals.

The National Competitions will be organised by the Victorian Soaring Association at Benalla from 27th or 28th December to 9th or 10th January. It is proposed that there will be two Leagues, with open and handicap events. Qualifications for League 1 will be 50 hours, 3 cross-country flights including one of Silver C distance, and 5 aero-tows. Qualifications for League 2 are similar except that 30 hours' flying is required.

Queensland Soaring Association has held its first Instructors' and Engineers' School at Kingaroy, directed by Max Howland. Eight instructors and four engineers attended. They came from three clubs, but many took the course with the intention of starting new clubs in their respective areas, so potentially six clubs were represented.

Reg Hancock of the Corangamite Soaring Club, in an Australian-built Ka-6, has made a five-hour flight for Silver C entirely in wave lift. The Editor of *Australian Gliding* believes this is the first time a wave has been used for Silver C duration—at least in Australia.

Of 46 Australian gliding clubs, 28 which submitted claims for subsidy claimed a total membership of 1,083, compared with 1,233 last year. The rest failed to lodge claims, or lodged them too late for submission, and if their last known membership is added, the total club membership in Australia is over 1,400, giving a 14% increase over the previous year. Total membership in 1953/4 was 421.

At South Australia Gliding Associations' Annual General Meeting, total flying by its 10 clubs in the past year was given as 2,204 hrs. in single-seaters and 1,607 hrs. in two-seaters. Total launches were 17,792 and 13,243 miles were flown across country. The president has presented a trophy engraved "to be collected"; any pilot flying to the "home" gliding club takes the trophy with him.—AUSTRALIAN GLIDING.

AUSTRIA

SIEGFRIED KIER, whose 517-km. triangle over the Alps was reported in the last issue, earned thereby 20,000 points towards the decentralised national contest, in which he is now leading with 44,164 points against Alf Schubert's 38,432.

Kier, Felix Murauer, Kurt Reicholf and Ernst Socatroi have earned their three-Diamond badges, bringing the number of Austrian holders to 13.

BELGIUM

MME Georgette Litt, of Royal Verviers Aviation, has beaten the National feminine distance record of 220 km. with a flight of 286 km. from Verviers to Colombey-les-Deux-Eglises (where General de Gaulle lives).—AVIASPORT.

Michel Nizet, of the same club, took part in the Yugoslav championships and finished 16th out of 23 contestants. While there, he was lent a Kosava by the Aero Club of Yugoslavia, and in this, accompanied by his fiancée, Mlle Marie-Claire Van Pelt, he put up two Belgian National two-seater records: 230-km. Goal-and-Return and 56 km./h. round a 200-km. triangle. Nizet is Belgium's youngest Gold C pilot, aged 22.

In July, 22 pilots took seven sailplanes by road from Temploux to Blois on the Loire, in France, where they put up 335 hours' flying during a 15 days' holiday.

Antwerp Club members took a Blanik, Rhönlerche and Sohaj to Zell am See, where 16 pilots did 98 hours' flying from 100 launches.

A competition at Ghent from 13th to 16th August was won by H. Drory in a Zugvogel 3 with 3,000 pts. in three contest days; followed by Dorpe (Fauvette), 2,094; Delmotte (Super-Javelot), 1,917; Mees (Ka-6B), 1,875. Contests were: out-and-return 82 km. (not completed), 98-km. triangle, and 97-km. triangle.—CONQUETE DE L'AIR.

CANADA

QUEBEC Soaring Club reports: "On 19th July, a strong northerly wind whipped up a wave over the Laurentians, complete with lenticular clouds and a beautiful roller cloud just over our field. We were unfortunate in the fact that our only runway lies east and west, and the 90 degrees crosswind considerably curtailed our possibilities. Only instructor Keith Park allowed himself to take off in these precarious conditions and soared 1 hr. 37 min. in the wave over Levis and Quebec until the wind shifted and the wave disappeared."—SOARING.

A report of the National Championships was published in our last issue. A more extensive day-by-day report can be found in *Soaring* for October. From this it appears that two days were given over to a search for Francis Popp, who had not been heard of after a flight. After an intensive search with the help of the R.C.A.F., wreckage was spotted simultaneously from the air and by a boy hunting for groundhogs. From its condition, it was surmised that the pilot had spun in at a steep angle and been killed instantly. The type of sailplane is not stated.

DENMARK

THE Nordic Contest (briefly reported in the October issue, p. 414) was the first in which all five countries co-operating in the Association of Nordic Aeroclubs took part. Only three pilots could take part from each country. As Norway and Iceland sent only one each, there were 11 in all. At the same time a Danish team contest was flown with the other 11 gliders, flown by two or three pilots each.

Although the contest overlapped the British championships, weather in Denmark was so good that no less than nine competition days were flown, the highest number ever in Denmark in a two-week period.

On May 18th the task was a 168-km. out-and-return, which no one completed in the weak conditions. Niels Sejstrup won with 128 km. May 21st was a race to Sonderborg, 92 km. still in weak conditions; only seven of 22 arrived, Wiitanen fastest (52.5 km./h.), while Sejstrup landed 150 metres from the line!

May 22nd saw a fine 100-km. triangle, completed by 19, three twice, Rodling won with 71.9 km./h.—a new Danish local record.

May 23rd had a difficult 230-km. triangle, completed by seven. Irve Silesmo of Sweden won with 47.5 km./h.

May 24th had an impossible task of a 320 km. out-and-return to Alborg, but lots of cirrus and a head wind component meant it became distance along a line, won by Rodling with 89 km. He now took the lead from Wiitanen.

On May 25th Sejstrup damaged his Ka-6 on the road, but was allowed to continue in a Morelli M-100s. It was a free distance day with a fresh easterly wind and a high cloud base. Most went to the north and landed at the coast, Didriksen in the East German Libelle won with 162 km.

On May 27th another 300 km. out-and-return to the north was tried again, and most landed near the turning point, which was placed too near the coast. Cloud base went up to 2,500 metres, which is very seldom in Denmark. P-A. Persson, Sweden, had now accustomed himself to the Vasama and won with 176 km. But Rodling was still in the lead.

On May 28th, the task-setters decided not to make a turning point too near the coast. After reaching it 84 km. to the north, the task was free distance. All went southwards again, and many flew into Germany, Silesmo farthest with 405 km. near Bremerhaven. This was the biggest day hitherto at a Danish contest: the average of all 22 gliders was 297 kilometres.

Although the pilots were tired, and some of them did not return until next morning, it was decided also to use the last possible day. So on May 29 another 100-km. triangle was flown in very fine conditions; 19 came through. Braes, who had had several bad days, won with a new Danish national and local record of 84.4 km./h.

The Danish Team Contest was a success too, many new pilots taking part for the first time (at least one on each team should *not* have flown contest before). It was won by Ib Jensen and Villy Kirk-Larsen of Birkerod on a Ka-6 with 7,254. Neither had flown in a contest

before. The contest was flown at Vandel where most Danish contests have taken place since 1951.

PER WEISHAUPT.

EAST GERMANY

BERND NOLTE, of Eisenhüttenstadt, became National Champion at the end of the Third National Championships, with 6,610.4 points. Manfred Iltzsche (Dresden) was second with 6,497.2, Klaus König (also of Dresden) third with 6,048.7, and Adolf Daumann, who had been Champion since the previous Championships four years ago, took fourth place with 5,994.6 points. Their respective ages (and total flying hours) were: 25 (650), 30 (270), 26 (280) and 41 (1,200). Daumann was in the lead for three consecutive days early in the contest.

Of 19 pilots competing, 16 flew the Libelle-Laminar type and three the Favorit, a similar standard type. The meeting, held at Schönhagen, lasted from 13th to 28th July and there were nine contest days: 146-km. goal-and-return, 156-km. ditto, 312-km. triangle, 342-km. goal-and-return, 112-km. triangle, 202-km. triangle, 202-km. goal-and-return, 312-km. triangle, 534-km. triangle, 202-km. goal-and-return.

The 534-km. triangle was completed by three pilots, but the barograph of one of them, Blauert, failed and he was allowed no points. The speeds of the other two were: Nolte, 62.5 km./h.; König, 61.8 km./h. Six other pilots exceeded 500 km. without completing the course. By far the greatest speeds were on the first contest day: Elke, 90.3 km./h. (48.7 knots); König, 87.6; Daumann, 81.0. Winning speeds on other days varied from 50.4 to 69.8 km./h.

At a regional contest held at Neustadt-Glewe in May, the 36 competitors were divided into two groups according to whether the machines they flew were laminar-flow or non-laminar. In Group I were 10 Libelle-Laminar, 2 Foka and 3 Favorit; in Group II, 5 Jaskolka, 1 Bocian, 6 Libelle and 9 Libelle-Standard. Tasks were set on five days but one proved a no-contest day.

The best performance in each group, whether speed or distance, on each of the four contest days is shown below (on the second day Group II failed to complete the course, there being a headwind of 30 km./h. on the outward leg, so they were marked for distance):

Task	*Group I (laminar)*	*Group II (non-lam.)*
100-km. Triang.	86.5 km/h	61.2 km/h
316-km. G & R	64.4 km/h	162 km
134-km. G & R	57.6 km/h	31.1 km/h
134-km. G & R	71.8 km/h	54.3 km/h

Leading total scores in Group I: Blauert, 3,406; Daumann, 3,135; König, 2,892; Iltzsche, 2,331; Nolte, 2,231.—AEROSPORT.

FINLAND

WINNER of the National Championships was J. Horma, flying a Ka-6CR.—AERO REVUE.

FRANCE

ALTITUDE flights at St. Auban during the summer included 5 Diamond and 2 Gold during the June course; 5 Diamond and 4 Gold in July; and 8 Diamond and 5 Gold in August, all on two days, the 1st and 10th. Best altitudes were: Dominique Gouzy, 8,190 m. abs. (26,870 ft.) with 7,390 m. gain (24,245 ft.) on 1st August; Jacqueline Heymes, 7,826 m. abs. with 6,930 m. gain on 10th August; Erich Lass (from Germany), 7,380 m. abs. with 6,520 m. gain on 10th August. All flew the Breguet 901 type.—AVIASPORT.

L'Association Aeronautique "Verdon-Alpilles" has been formed to revive gliding in the Marseilles region by setting up a centre in the mountains to avoid the sea breeze and provide wave and thermal soaring. The thermal ceiling is often 10,000 ft. and wave lift has been used to 23,000 ft. with lift at 7 m/sec. (14 knots).—AIR ET COSMOS.

A collision between two tugs, an MS-317 and MS-502, caused three fatalities at La Ferté Alais on 9th September. One of the victims, George Payre, was head of the laboratory of the Conservatoire des Arts et Metiers which produced the AM-56 two-seater. *Air et Cosmos* writes: "Avec lui disparaît un des trop rares chercheurs français soucieux de faire progresser la technique du planeur."

HOLLAND

AFTER our Nationals five pilots were selected for further training for the World Gliding Championships. Out of them three were chosen to represent our country: Ed van Bree (Ka-6), E. F. Réparon (Ka-6) and G. J. Ordelman (Sagitta). Reserve J. van Melzen. Two of them will fly in the Standard Class and one in the Open Class. Though the weather was not so bad this year no pilot succeeded in flying more than 500 km. The greatest distance was made by Jaap van Steinfoorn on June 25th: 411 km.

A new speed record over a triangular course of 200 km. was set several times in succession. The best speed was made by Frans Brackel who flew an Orao in Yugoslavia: 56.5 km./h. Two 300-km. triangles were completed by Rijk and Arie Breunissen respectively. The latter made the best speed (54.8 km./h.) and set a new Dutch record. Leo van Lamsweerde completed his Gold C with the distance flight (No. 43). Several pilots flew more than 300 km. too, among them Dr. J. C. H. Bernsen, who flew to Schladen, a few kilometres before the Iron Curtain, in a Grunau Baby: 317 km.

On 20th September H.R.H. Prince Bernhard paid a visit to Terlet and made a flight in a Ka-7 with C.F.I. Jan Minoli. It was his second flight in a sailplane.

W. ADRIAANSEN.



Prince Bernhard is taken for a ride.

HUNGARY

AN international contest for pilots from Eastern European countries was held at Dunakeszi, an airfield north-east of Budapest. Visiting pilots were: Manfred Blauert from East Germany with Favorit sailplane; Pelagia Majewska and Rajmund Jakol from Poland, each with a Foka; Mircea Finescu, Rumanian champion, with Foka; Ada Kasparovsky from Czechoslovakia with Orlik; Ciril Kriznar and Dimitrije Maras from Yugoslavia, each with a Meteor. Of seven Hungarian competitors, two flew the Siraly 2 type and five the Foka.

Met. conditions were poor throughout; thermals only lasted 5 or 6 hours and their average strength was 2 m/sec. Clouds could be used outside airways, but when one pilot had gone in, the next had to wait a quarter of an hour before following him.

Tasks and their winners were:

1.—195-km. Goal-and-Return: Kriznar (Yugoslavia).

2.—370-km. Triangle, not completed: Petroczi and Farkas (both Hungary) joint winners.

3.—303-km. G & R, not completed: Farkas (Hungary).

4.—192-km. Goal: Blauert (E. Germany), who was now leading overall.

5.—Goal-and-Return, not completed: Kasparovsky (Czechoslovakia), Blauert and Petroczi jointly leading overall.

6.—360-km. dog-leg Goal flight: Petroczi (Hungary), who now led overall.

7.—Twice round Goal-and-Return course of 126 km.=252 km., completed by four pilots: Maras (Yugoslavia). Petroczi still leading.

8.—336-km. Triangle: Finescu (Rumania). Blauert (E. Germany) had damaged his machine the previous day so could not fly.—AEROSPORT.

LEADING FINAL RESULTS:—

Pilot and Nation	*Sailplane*	*Pts.*
Petroczi (Hung.)	?	5,975
Finescu (Rum.)	Foka	5,964
Kasparovsky (Czech.)	Orlik	5,429
Blauert (E. Ger.)	Favorit	5,252
Majewska (Pol.)	Foka	4,985

IRELAND (Dublin)

THE recent Clonmel safari proved an enjoyable diversion for all concerned, but produced no five-hour flights. Most of our Silver C aspirants now aim to complete their big flight in wave, now that this season has started here.

Martin Mulhall, the Clonmel C.F.I., recently achieved 14,000 ft. in "our" wave, flying his own Ka-8. He was preceded by Graham Liddy and Mike Slazenger in our Ka-7 at the same height. Incidentally, his Ka-8 has delighted all pilots who, through his generosity, have sampled its handling and performance.

Other clubs who use a car-and-pulley launching system, as we do, may be interested to hear that our Secretary, Gerry Connolly, recently received a 3,400-ft. launch in a 20-knot wind, off a 6,000-ft. runway, while flying our Ka-7 solo. Howzat for 9's? (Of course, aerotow remains the ultimate!)

The C. of A. overhaul for the Bergfalke is now well under way, and we have decided to build our own trailer for the Ka-7. The Tutor is getting a new C. of A. to be ready for next season's first solos, and we have ordered a new Ka-7, and two Ka-6's.

Our preparations for the World Championships are well in hand. Transport, radio, teams and aircraft have already been arranged. An Appeal Committee has been formed to raise the necessary finance, with Captain J. C. Kelly-Rogers, O.B.E., F.R.Ae.S., as President, and six distinguished Vice-Presidents. Also, one very welcome item of interest emerged from the welter of activity. The pilots selected to fly have agreed to be responsible for organising our own National Competition afterwards—a noble gesture! It also seems the fairest way to give some Competition experience to those other members who must be left behind.

We were recently privileged to see a 16-mm. film on gliding, produced at the London Gliding Club by Ken Murphy, of Telefis Eireann (one of our new members), and approved by Ann Welch. This excellent "short", entitled "Silent Flight", should help the gliding movement in this country a lot, if Ken realises his ambition to have it shown on TV here.

C. G.

ITALY

WINNER of the National Championships, held from 2nd to 12th August at Rieti, was a German visitor, Rolf Spänig, flying a Zugvogel (not Ka-6 as originally intended). Leading Italian pilot was Leonardo Brigliadori, who took second place with an M-100s, the type flown by most of the Italians. Three Skylarks took part: Antonio Ferrari came seventh with a Skylark 3, Giorgio Orsi 19th with a Skylark 3F, and Adele Orsi 20th with a Skylark 4, among a total of 35 competitors. Rudolf Seiler from Switzerland was fifth with a Ka-6, Mariano Gorzelak of Poland 30th with a Foka, and the expected Yugoslav pilot did not turn up. There were seven contest days:

August 2nd, 102-km. Triangle.—Poor met. conditions, with a high overcast over the second leg; Ferrari (Skylark 3) did best, followed by Vergani, Manzoni and Brigliadori; G. Orsi and Huber were not recognised at the turning-point.

August 4th, flight to Monte Petrano then Free Distance.—Spänig won (taking the overall lead), followed by Ferrari and Bertoli (M-100s); Gorzelak came 18th and Seiler 20th. Cumulus and strong wind.

August 5th, Goal-and-Return Assisi 147 km.—Post-frontal air mass. Course completed by 18; best speeds, Spänig 58.1 km./h., Pronzati (M-100s) 54.7 km./h., followed by Vergani, Ferrari, Brigliadori, etc. Seiler (Ka-6) averaged 48.9 km./h.

August 6th, 204-km. Triangle.—Completed by 27 pilots. Spänig won at 73 km./h., followed by Pronzati at 65 km./h., who thereby took the Italian 200-km. Triangle record from Vergani. Adele Orsi set up an Italian feminine record of 57.98 km./h. in her Skylark 4, and Seiler beat the Swiss national record with 62.2 km./h. Leading overall were Spänig, then Vergani, then Ferrari.

August 7th, Free Distance.—Best performances: Brigliadori (M-100s) 392.5 km., Spänig 354, Seiler 325, Pronzati 303. Ferrari came 9th, and sank to 5th place overall.

August 10th, 142.6-km. Triangle.—Conditions were difficult, especially on the second leg (Foligno-Todi). Spänig did best, followed by Vergani and Brigliadori.

August 11th, Free Distance.—Post-frontal air mass and N.W. wind. The report does not state who won.—VOLO.

Leading final results (Spänig is from Germany, Seiler from Switzerland):—

Pilot	*Sailplane*	*Points*
R. Spänig	Zugvogel	6,454
L. Brigliadori	M-100s	5,847
W. Vergani	M-100s	5,801
A. Pronzati	M-100s	5,767
R. Seiler	Ka-6	5,370
F. Lamera	M-100s	5,078
A. Ferrari	Skylark 3B	4,967
U. Bertoli	M-100s	4,847
G. Perotti	Passero	4,515

At the OSTIV Research Centre at Varese, the Italian Air Force has established a permanent weather station, with Plinio Rovesti in charge. A course on weather forecasting for soaring flight is to be held in Autumn, 1965; meteorological experts are invited to attend.—AERO REVUE.

NEW ZEALAND (Otago)

THE Otago Gliding Club is probably the most southerly club in the world (46° S.). Being in New Zealand it must be further away from Kirbymoorside than any other club in the world, and we wonder whether in having a round half dozen of Slingsby machines we have not got more than any other club in the Southern Hemisphere.

From left to right in the photograph these are:—

1. Slingsby Prefect. This was the second machine to be imported into New Zealand and the first into the South Island. The machine was originally owned by Dick Georgeson and held many records when the air of New Zealand was first being explored. It is now fitted with oxygen and radio and has flown above 20,000 ft.

2. A syndicate-owned Skylark 2B, which it is hoped to replace with a Dart in the near future.

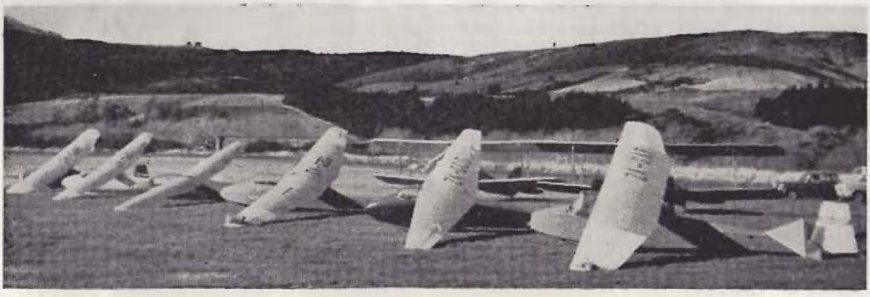
3. A syndicate-owned Skylark 4. This machine is the latest to be acquired by club members and was assembled by Sailplane Services—a Christchurch firm specialising in the construction of Slingsby Sailplanes from kit sets.

4. A syndicate-owned Eagle which was imported fully made about six years ago. Many New Zealanders have had their introduction to soaring in this machine.

5. A Club-built and owned Swallow. Eighteen months of work went into rendering this machine three-dimensional from a kit set. Thousands of cups of tea and coffee were drunk whilst her constructors discussed the quickest way of building her.

6. A Club T-31. Most of our members have learnt to fly in this machine. Originally imported from the Yorkshire Gliding Club in 1954, she had no spoilers or canopy. However, instructing at 12,000 ft. with teeth chattering and no very satisfactory way of getting down soon compelled us to fit these important adjuncts. This machine has now done 1,000 hours' flying and has often soared over 10,000 ft.

All launching is by Tiger Moth and many members have never had a winch launch. The Club normally operates at week-ends from Taieri aerodrome a few miles from Dunedin—the Edinburgh of the south. In the summer we hold a camp at Queenstown—a place of great natural beauty. From the aerodrome we can soar on the hills in any wind direc-



tion. But there is little to beat soaring on the Remarkables—a long range of mountains rising to over 7,000 ft. facing the prevailing westerlies. In front of this range "hill"-soaring from 6,000 to 10,000 ft. is usual. From these heights waves are often contacted.

P. K. RENSHAW.

POLAND

ADELA DANKOWSKA has beaten the feminine world's record for goal flight with 625 km. (388 miles) from Krosno Odrzanskie to Hrubieszow. Previous record 608 km.

The Polish national distance record has been raised by Henryk Lisiecki, a 3-Diamond pilot, to 740 km. (460 miles), flying a Foka from Grodek to Nichel near Treuenbrietzen. Previous record about 725 km.

The new Zefir 3 is undergoing tests. Compared with the Zefir 2, it has alterations to both the wing and the fuselage. —AEROSPORT.

SOUTH AFRICA

UNDER construction by Performance Sailplanes at Activia Park, Germiston, Transvaal, is the BJ-3, a development of the famous BJ-2 in which E. Dommisse won the last national championships. Compared with the latter, the BJ-3, being of metal, has an even thinner wing—12% thickness as against 18% for the wooden BJ-2. The wing is in three parts. Its metal structure is covered with plastic foam and glass resin to achieve perfect form. Fowler flaps will be bigger than in the "2" (36.5% of chord in centre section). The best gliding ratio is expected to be 40 at 130 km./h. (70 kt.), 30 at 135 km./h. and 20 at 235 km./h. Permitted max. speed, 280 km./h. (151 kt.). Take-off speed, 55 km./h. (30 kt.) with flaps at 30°. It will have brakes and probably a braking parachute.

Span, 16.1 m. (52 ft. 10 in.).

Aspect ratio, 20.

Empty weight (estim.), 432 kg. (952 lb.).

All-up wing-loading, 40 kg./sq.m. (8.2 lb./sq.ft.).

Wing profile in central part (over 6.51 m.), NACA 66,212; at tips, NACA 0090-64 a-0.8.

Mr. Van Gemert, who gives the above particulars, states that it is not yet certain whether the machine will be finished in time for next year's World Championships.—AVIASPORT.

E. "Boet" Dommisse has been awarded the Kimberley Cup for the fastest 300-km. triangle flown in S. Africa by a S. African during the year ended 14th January.—AUSTRALIAN GLIDING.

SWITZERLAND

AT a meeting held at Grenchen during the "watchmakers' holiday" period, the national feminine goal-and-return record changed hands twice. Frau Irene Müller's long-standing record of 261 km. was beaten by Frau Margrit Sallaz with 284 km. to Col de la Faucille and back. Six days later, Irene beat this with 310 km. to Roche Franche and back in a Weihe built by her husband. But Margrit equalled this performance next day.

A gliding site has been established at Winterthur.—AERO REVUE.

UNITED STATES

FOR the first time, the United States has been crossed from east to west by a sailplane. It was not a succession of soaring flights, however, but an aero-tow all the way. The occasion was the delivery of a new Schweizer 2-32 from the factory at Elmira, New York, to Sky-Sailing Airport, a full-time commercial soaring operation in the San Francisco area. Les Arnold, owner of Sky-Sailing and one of his pilots, flew back to Elmira in a 150-h.p. Cub, and towed the new ship the 2,400 airline miles to the west coast. It took five days for the return trip, and Les is quoted as saying that once was enough. Despite the length of the flight, it set no distance record for the U.S. In 1931, Frank Hawks, famous speed flier, was towed from San Diego, California, to New York City in a Franklin Eaglet. The sailplane now hangs in the Smithsonian Museum in Washington, D.C. Your correspondent once flew over 200 miles on aero-tow in a leaky two-place trainer in the winter, and envies no one who sets out on a long tow. Of course, the Schweizer 2-32 is a veritable Cadillac of sailplanes, and its flying tail and excellent trim control together with its spaci-

ous cockpit make it as comfortable a sailplane as you will be likely to find.

In common with other national soaring organisations, the Soaring Society of America is faced every two years with financing the expenses for the U.S.A. international team. There is a sizeable body of opinion among S.S.A. members that while international competitions are fine from a national prestige standpoint, their contribution to the promotion of soaring in the U.S.A. is nil. For this reason, all financing of U.S. international teams is handled completely separately from normal S.S.A. funds. S.S.A. is operating on a bare break-even financial basis for its normal activities, which is an additional reason for this practice. Sizeable contributions used to be obtained from the aircraft industry, for this purpose, but this source of support has almost completely dried up in recent years.

In most countries soaring activities are carried out under the auspices of private clubs or government organisations, with a scattering of individual fliers. One of the interesting aspects of the continuing growth of soaring in the U.S.A. is the flourishing of commercial activities relating to soaring. Perhaps flourishing is not quite the right word, since this might imply a certain financial healthfulness which is not often associated with soaring enterprises. Proliferation is a better word. Ten years ago there were two full-time commercial soaring operations where one could get a tow or lessons. Today there are 29 listed in the current S.S.A. directory. Some of these are operating as an adjunct to power flying schools, but a number of them are solely devoted to soaring.

Another commercial aspect of soaring is the construction of sailplanes. There are four sailplane manufacturers in the U.S.A., but not one is supporting its principals solely by this means. In the east, sailplanes are only an estimated 10 per cent of the business of the Schweizer Aircraft Company, although the three Schweizer brothers undoubtedly spend more than half of their time on the soaring side of the business. The Sisu operation, which consisted of the designer Len Nemi and a few helpers, has now been taken over by a larger non-aviation organisation where the manufacture is continuing under Nemi's direction. In the western U.S., the Sailplane Corporation of America, producer of the BG-12, is a part of Gus Breigleb's operation of El Mirage airfield as a soaring site, and a few miles away, Irv Prue makes the Prue Standard in a shed in the back of his house during the daytime, but works the night shift at Lockheed to keep the wolf from the door.

Within the past few months, an optimistic venture has been started by Diamond pilot John Ryan. It is a company devoted exclusively to handling accessories for sailplanes. He has lined up a formidable array of products, including radios, oxygen, instruments, etc., and since he carries in stock both domestic and foreign products, this will be a great service to U.S. soaring pilots.

HARNER SELVIDGE.

U.S.S.R.

THE KAI-14, designed by M. P. Simonov, which is expected to be the Standard Class Soviet entry in the World Championships, is an all-metal type like the KAI-19 already described.

Span, 15 m. (49 ft. 2½ in.).

Flying weight, 260 kg. (573 lb.).

Best gliding ratio, 39 at 84 km./h. (45 kt.).

Min. sink, 0.6 m/s. (2 ft./sec.) at 78 km./h. (42 kt.).

Max. permitted speed, 250 km./h. (135 kt.).

Correction: In the description of the KAI-19 (October issue, p. 383), the best circling speed at 45° bank, 78 km./h., is 42 knots, not 145.

WEST GERMANY

MUTUAL agreement with Switzerland on regulations for crossing the intervening frontier by sailplane, in either direction, has been reached between the authorities concerned in both countries, after three years' exchange of correspondence. The German Aero Club has received the full regulations from the Federal Minister of Transport, and the following is a summary:—

Sailplane flights for sporting or scientific purposes need neither start nor land at Customs airports. This concession does not apply to aero-towed flights across the frontier. Forms, valid on the day of issue only, will be available at

the starting site and must be completed in triplicate, on white, yellow and blue paper, respectively, and signed by the pilot and by the official in charge at the site (*Flugleiter*). The yellow one is left at the starting site and the blue one is handed over on landing. No dutiable goods may be carried, except instruments, etc., needed to carry out the flight. The pilot must have on board his gliding certificate, passport or evidence of identity, sailplane documents including C. of A., logbook, and maps covering the whole route showing controlled and forbidden zones. On landing, the pilot must inform the nearest police station.

Similar arrangements may soon be concluded with France and Denmark.—AEROKURIER.

During the Alpine Soaring Week at Unterwössen, 104 contest flights were made, covering 21,700 km. Longest distance was 515 km. to Mittersill via Payerbach, and 13 flights were made round a 300-km. triangle via Böckstein and Aigen.—AUSTROFLUG.

Statistics of gliding accidents in 1961 and 1962 have been analysed. In 1961 there were 107 with 8 fatalities, 15 sailplanes written off and 88 badly damaged. In 1962, 77 with 11 fatalities, 17 write-offs, 52 badly damaged. Among the causes were, in the two years respectively: heavy landings, 5, 4; undershoots, 13, 9; overshoots, 2, 1; collisions with aircraft in flight, 4, 2; ditto on ground, 2, 0; collisions with other objects, 9,9; stalls, 16, 14; damage to structure (*Flugwerk*) in flight, 4, 4; obligatory forced landing, 27, 30. In another analysis the blame is on: technical insufficiencies in aircraft, 2, 4; pilot's fault, 95, 62; other causes, 1, 6. Stage of flight when it happened: in flight, 10, 11; launch, 12, 13; landing or approach, 85, 53.—DER FLIEGER.

From 20th to 26th September the German international team carried out a training course at Oerlinghausen under the direction of Manfred Reinhardt, the team manager.

At the Hornberg centre in Swabia (founded in 1933 by Wolf Hirth as the first gliding school to teach high-performance soaring), many new buildings have recently been put up: "a beautiful foyer, a bright lecture room, a pleasant recreation room, a small breakfast room, an office for the C.F.I. with view of take-off run, and, on the first floor, 22 rooms with running water to accommodate 38 pupils, with showers, etc."—AEROKURIER.

YUGOSLAVIA

WINNER of this year's national championships was K. Korpar.

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