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SAILPLANE AND GLIDING

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Editor: Alan E. Slater, M.A., F.R.Met.S.

Assistant Editor and Production Manager: Rika Harwood

Club News Editor: Yvonne Bonham, 14, Little Brownings, Sydenham Rise, London, S.E.23

Advertising: Peggy Miéville, 3 Cork Street, London, W.1 (Tel.: REGent 5301)

Magazine Committee: Philip Wills (Chairman), Godfrey Harwood, Walter Kahn

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Cover Photograph.—*Soaring over the Southern Alps, New Zealand. (Photo by Guy Mannering).*

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— 1961 —

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World's Biggest Gliding Contest

FROM the 13th to the 22nd of May, every British gliding enthusiast will be at Lasham, either in body or spirit. Between noon on the 13th, when the Championships are due to be opened by the Minister of Aviation, Mr. Thorneycroft, and the afternoon of the 22nd, when our new President, Lord Brabazon, will present the prizes, the great questions will be decided. Is Smith, or is he not, a better pilot than Jones? Which is the better sailplane, the Olympia 419 or the Skylark 3? Does the latest gadget give one an advantage over the rest? Do hearts of oak still beat in the breasts of retrieving teams? Does the new handicapping system work; ditto Ann Welch's crystal ball: stands Lasham where it did, secure in our hearts for ever?

It seems clear that we shall break our own record, and that the 1961 Nationals will again be the largest gliding meeting which the world has yet seen.

At 10 a.m. on Friday, 19th May, our Patron, H.R.H. the Duke of Edinburgh, is to honour us with a visit, arriving by helicopter. During the course of the meeting, many other distinguished people will also look in. They will find a height of enthusiasm, a single-mindedness of purpose, an intensity of friendly competition, a spirit of adventure, and an integrity which makes the British gliding movement a model for the world. For we have done all this ourselves, without costing anyone else a penny.

We welcome all our visitors; we hope they will like what they see.

A New Flying Trust

A NEW fund has been created by the Society of British Aircraft Constructors, in association with Shell Mex and B.P., Ltd., to help private flying. It is intended to replace the Kemsley Flying Trust, which is no longer able to make loans, and its primary purpose is to make available to flying and gliding clubs and similar organisations long-term loans at low interest rates for the purchase of aircraft and essential equipment, and for the provision of essential facilities.

The Fund of £100,000, which will be subscribed to by Members of the Society and by Shell Mex & B.P., will be dispensed on terms which differ little from those of the Kemsley Flying Trust, and which have worked so well over the fourteen years during which it operated.

A Committee of Administrators has been appointed. They will meet every month for the purpose of considering applications for loans, and enquiries regarding applications are to be addressed to the Secretary of the Fund, Mr. Basil Meads, at 20a, Grove Street, Wilmslow, Cheshire.

National Championships 1961

by Ann Welch

THE 1961 National Championships are being held at Lasham from 13th to 22nd May. Up to the closing date on 27th March, 112 entries had arrived for the *absolute maximum* number of 100 places, and the very great problem of sorting was begun. Such a big entry list creates several problems, even provided that the site and surrounding countryside are suitable. These include:—

LAUNCHING.—Getting 100 gliders off precisely to time at 1½-minute intervals will take 2½ hours. Since the Championships are divided into two Leagues which are marked differently, this does not mean that the first glider will have 2½ hours advantage over the last to be launched; but it does impose a considerable strain on the launching organisation, particularly as regards tugs. It is firstly vital to have an adequate ratio of tugs to gliders. Theoretically it would seem necessary to have only a small reserve, provided that the turn-round time of each tug is not greater than the launching interval multiplied by the number of tugs. In other words, the first tug must be ready to tow again without a gap of greater than 1½ minutes being created. In practice, what happens with a lengthy take-off period is that tugs run short of fuel, and pilots get tired. There must, therefore, be enough tugs so that they can all be taken out of the system in rotation for refuelling and change of pilots. In addition, of course, there is the real risk of increasing unserviceability towards the end of intensive competitions. A rough but good working ratio is 1 tug to 5 gliders, and the size of the entry is dependent on this being realised.

WEATHER.—This is, naturally, quite an imponderable. Luck with the weather means that 100 gliders can have satisfactory flying; but poor weather, particularly the sort that perks up only for one or more short periods, may mean that even one League, if it is large, will be frustrated, as there are too many gliders to get away in the good spell. It is, of course, helpful if the two Leagues are of different size.

SAFETY.—The biggest worry is the risk of collision. Unfortunately there is simply no information, statistically or otherwise, to which one can refer for guidance on the number of gliders it is safe to fly together. In World and National Championships varying between 50 and 80 gliders there has never been a collision. On the other hand, it only requires two gliders to have one. Obviously the chance of random collision must increase as the number of gliders increases, but actual collisions between gliders have always occurred when there have been relatively few of them in the vicinity, or even with the only other glider in the air at the time. In big competitions, the risk of collision is a real one, and pilots are fully aware of it and take extra precautions; nevertheless, it is difficult, even impossible, to know, from the point of view of safety in this respect, what is a safe maximum number.

In accepting or refusing entries, I am sure that one of the most important qualifications to be considered is experience of flying in big competitions. Those, however good as soaring pilots, who have not previously flown in company with more than a few other gliders, are at a disadvantage, and this could become dangerous if combined with a not very great experience of cross-country flying and all that this involves. Weather permitting, the tasks set will aim at separating the two Leagues to the maximum extent in both

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time and space. But if there is poor weather for several days on end, this intention may be difficult to achieve.

NON-FLYING WEATHER.—This is always a lurking problem. In the past we have been lucky, but the thought of nearly 500 competitors squelching about in mud for 10 days is almost too awful to contemplate. It is only to be hoped that everyone brings plenty of good books as a precaution.

This year there are to be some differences in the scope and scoring of the Championships. First of all, there will be no longer just one National Champion, but two, the Open Class Champion and the Standard Class Champion. They will both be drawn from the League 1 final placings, one being the winner, and the other having to obtain 80% of the marks to become a Champion. If, as it the more likely, an Open Class glider wins, then the highest Standard Class glider must obtain at least 80% of its marks. In this way it does not matter how many Open Class gliders are above it in placing, nor even if it is the only Standard Class glider in League 1, since the glider is not having to beat others of its class so much as achieve a suitably high score. The 20% latitude it is allowed could be likened to a handicap bonus of this value in respect of its span restriction. There are, in fact, a number of Standard Class aircraft in League 1, and a most interesting contest among them should result. League 1 will be marked as a single group, and then a second list made, by separating out the Standard Class scores.

The main differences in the marking system are that the maximum value of a contest day has been changed from 100 to 1,000 points, and that the value of a day will vary and be dependent on the number of pilots who score on that day. If fewer than 20% score, then the day will be void; if 20% only score, the maximum points available for the winner will be 200. If 60% or more score, the day will be valued at 1,000 points. In between, the value will increase in direct proportion. The object of varying the maximum number of points is in order to reduce the element of luck on marginal days. On those days in which the opportunity to get away is either small, or less than expected from the forecast, a situation can arise in which only a relatively small number of pilots do so because they were lucky in being in the right place following an unforeseeably fortunate launch time. These pilots may well be those who, in the normal course of events, would be well down the list. If they can pick up 1,000 points, while other and better but less lucky pilots achieve zero, they could reach an unassailable position and win even though their subsequent flying was only mediocre. With the reduced maximum value for poor days, this is not likely to happen. At the time of writing it looks as though the new system will be having a trial run at the Easter Rally at Swanton Morley, and it will be interesting to see its effect.

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The objects, as far as task-setting is concerned, for the two Leagues will be the same as previously. League 1 will be given tasks of World Championship standard whenever possible, and League 2 opportunities for Gold and Diamond flights, or, if the weather is not this good, then, I hope, plenty of both speed and distance flying. I hope, too, that the weather will allow the establishment of a big task/little task rhythm in each League, so that one League has an early briefing and a big task followed the next day by late briefing and a small task, while the other League does the opposite. In this way it is possible, once again weather permitting, to get the maximum flying for everyone, without undue fatigue of pilots and crews.

I think that this may have to be the last National Championships in England that it is possible to enter without flying in qualifying competitions. Looking at the vast sheaf of entry forms, perhaps the most stimulating thing is the numbers of really fine gliders that have been acquired by our non-subsidised, private enterprise, nearly all voluntary movement.

FRED SLINGSBY

FRED Slingsby must be one of the most widely loved people in the world. The reason is simple: apart from being a most likeable man, his talents have led him into founding in this country, and bringing to success, a firm whose products have given immense pleasure to thousands of people in a quarter of the countries of the globe.

In the First World War he served in the Royal Flying Corps as a gunner and once had to land his aircraft when his pilot had been killed, for which feat he was awarded the M.M. The war over, he joined the family business at Cambridge, but after a few years the individualism which is the core of his personality decided him to set up a small business on his own at Scarborough, mainly to make and sell furniture.

But all his life he has fizzed with ideas. Scarborough lives by its holiday-makers, and the City Fathers were always looking round for attractions. In one of the parks is a large ornamental lake. Sling had the idea of making a fleet of wooden model ships and staging mock naval battles. The battleship was large enough to fit over the upper half of a man standing in the middle of the shallow lake. The operator (Sling), by means of large numbers of wires and fireworks, was able to stage the most realistic and bloodthirsty frays, with ships finally blowing up and sinking all over the place. It was a glorious success.

In 1930 came an explosive rash of gliding clubs, equipped with Primary gliders and no knowledge whatsoever as to how to operate them. Few clubs survived: those that did generally owed it to having attracted at the start some outstandingly dogged character. In February of that year Sling started the Yorkshire Club, one of the parents of the present major club, owning for all time the beautiful site at Sutton Bank.

The B.G.A. had invited Kronfeld and Magersuppe to give demonstrations in the south of England; when these were over, the Yorkshire Club invited them to Scarborough. During his demonstration Magersuppe wrecked his Professor in the sea. The Club retained him as instructor at £10 a week, and during this time Sling and he explored Sutton Bank and gave a soaring display there in 1931.

During this year Sling built himself a



Falke, a German strutted single-seater with swept-back wings and marked stability characteristics. On its second flight it was stalled and smashed by a club helper. Unperturbed, Sling repaired it and entered it in the B.G.A. meeting at Balsdean in 1931, at Ireleth (Furness) in 1932 and at Huish in 1933. At the Ireleth contest the Falke won several prizes, one when flown across country by Mungo Buxton. It was also seen and loved by Espin Hardwick, who persuaded Sling to build him one. This was delivered in 1933, and Sling soared it at a site Espin had in the meantime found called the Long Mynd.

This was the spring-time of British gliding: acorns were planted which blossomed into sturdy oaks in the future years. Within two years Sling's enthusiasm had met that of Hardwick and Buxton (who then fired me); he had started the chain which led to the Yorkshire Club at Sutton Bank, whilst Espin had done the same with the Midland Club and the Mynd; and he himself had half-unwittingly started on the road which led to Slingsby Sailplanes.

When in 1934 Mungo Buxton started to design Hjordis, the first British high-performance sailplane, and asked me to

share it with him, we both agreed to ask Sling to build it.

On one of our visits to Scarborough to watch its progress, we all by chance met Major J. E. D. Shaw, and from this stemmed the establishment at Kirbymoorside, where he lived, of Slingsby, Russell & Brown, and then Slingsby Sailplanes. Sling became Managing Director of a firm owned by a wealthy man, a local landowner with many and sudden enthusiasms, and a finger in a great many peculiar pies. It would have been all too easy to stray from the path he had set himself and to have diverted his and his company's energies into the many side-tracks which were pressed on him from time to time. But he stuck to his purpose with a dogged tenacity and integrity which won him the admiration and affection of Shaw and his associates, and after Shaw died in 1955 they agreed at Sling's request with the plan to bring the Company into the orbit of the newly-created Shaw-Slingsby Trust which, as a Charity, now ensures that its profits will go to the permanent support of the British gliding movement.

Since nearly everyone who reads these lines will know him, it seems unnecessary to describe him—his large kindness, his quirk of dry humour, his fund of common-sense which has acted as a beacon in the world of gliding which is full of theories and ideas ranging from the sublime to the ridiculous. His make-up includes strands of artistic sensibilities and sensitivities which contrast surprisingly with his down-to-earth approaches to the problems of the business.

He has had much to do with the development of Kirbymoorside from a remote rural village on the edge of the moors to a small but thriving industrial community, for Slingsby Sailplanes is probably the largest employer in the district, and many folk have worked with him all their lives.

A trip to Kirby, a taste of the hospitality and kindness of Fred and Fluff, his wife, a visit to the works and all the beautiful aircraft taking shape inside them, is one of the special pleasures the gliding fraternity is heir to.

For thirty years he has worked single-mindedly to express himself and for our enjoyment and now he has given his life-work to us. Small wonder he has won the respect, admiration and affection of gliding folk the world over.

PHILIP WILLS.

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WORLD'S HEIGHT RECORD

by Paul Bikle

On 25th February Paul F. Bikle, flying a Schweizer 1-23E sailplane from Mojave in California, reached 46,267 ft. absolute altitude in a wave, beating the previous single-seater record of 42,100 ft. set up in 1950 by W. B. Ivans at Bishop, 150 miles to the north. After an aerotow to 10,000 ft., Mr. Bikle sank to 3,964 ft. a.s.l. (1,560 ft. above ground) before making his big climb, so his gain of height, 42,303 ft., constitutes another world record, beating both S. H. Georgeson's 34,000 ft. climb in New Zealand last December and S. Jozefczak's 35,760 ft. climb in Poland in January (described in this issue). In reply to our request for more details, Mr. Bikle has kindly sent the following letter.

In response to your question about the type of lift used at low altitude, I am not certain that it should be described as wave lift, but it was definitely associated with the wave. The lift was marked by a band of dust rising from the ground similar to, but not as spectacular as, the condition seen in the Owens Valley. The ground elevation in the valley under the point where I contacted this lift was about 1,900 to 2,000 feet, so that my height above the ground was about 2,000 feet. This was not in the Owens Valley but almost at the extreme southern end of the Sierra Mountains.

The mountains in this area are not characterised by the smooth slopes of those farther north, but are broken with many valleys and canyons. Nor are the peaks as high. Although there are a number of peaks over 8,000 feet, I would estimate the average height of the mountains to be nearer 6,000 or 7,000 feet. I have reference to the general area west of a line running north from Mojave to Inyokern. One would not normally suspect that this would be a particularly good area to try for maximum altitude. However, two years ago, Mancuso had reached an altitude of 37,000 feet even farther south over Mojave at the extreme end of the mountains.

Even though the wind was from the west at all altitudes, the primary lenticular formation was aligned almost N.E.-S.W. at an angle of perhaps 30° to the local mountain ranges. The lenticular was also quite far back from the highest peaks (about 25 miles) and was very wide (about 15 to 20 miles). I made no meteorological measurements, but Harold Klieforth tells me that data he has gathered show nothing unusual in the way of winds, except that the velocity remained high to altitudes well above 50,000 feet instead of falling off rapidly above 40,000 feet as is usually the case.

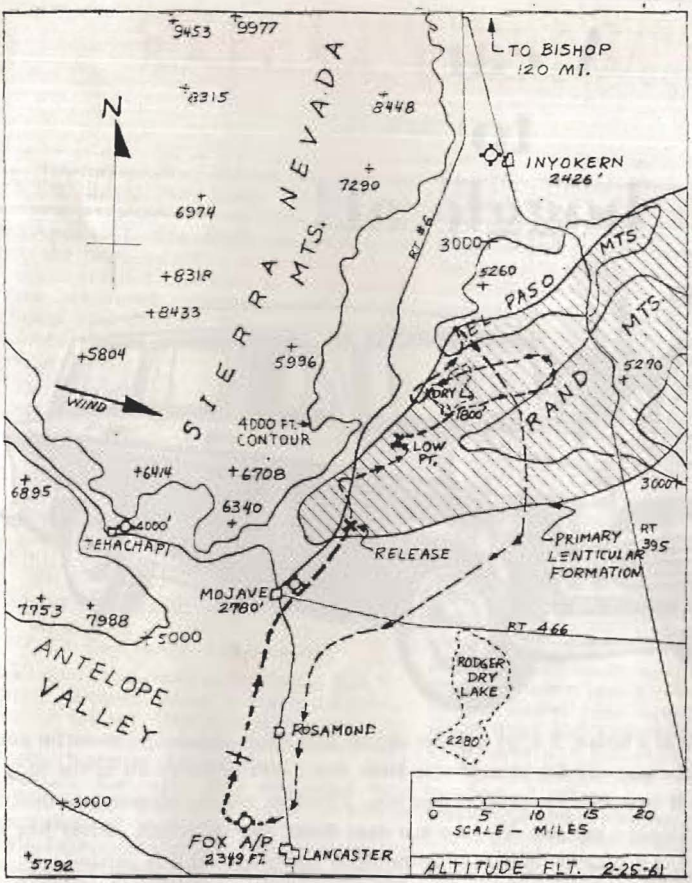
Examination of the barogram did not show unusually high rates of climb, the maximum being about 2,000 ft./min. I have experienced much better conditions at moderate altitudes near 30,000 feet while flying from Bishop.

My oxygen equipment was quite similar to that used by most of the others flying in the wave including Ivans, Edgar and Betsy Woodward on their altitude flights. It was a low-pressure system using a pressure demand mask and regulator such as those used by fighter pilots at the end of World War II. I had no pressure suit. Yes, I have had considerable altitude experience while flying in service aircraft and have had ample opportunity to test myself in altitude chambers. Although it is not desirable to try to fly at these heights without a pressure suit or cabin, I did not detect any particular difficulty from this source. Actually, I was so cold (minus 65°C. outside air temperature) that I could not pay attention to anything else.

* * *

In addition to the above, we are indebted to Mr. Lloyd Licher, of the Soaring Society of America, for the accompanying map and for a preview of an article by Mr. Bikle to be published in Soaring, *from which the following additional information has been condensed:—*

On the day of the flight, lenticular cloud development to the north at noon had spread to the Mojave area by 2 p.m. when a large, sharply defined lenticular could be seen about 25 miles N.E. of Fox Airport, near Lancaster, Mr. Bikle's home. He took off at 2.55 p.m., released in lift below the southern end of the lenticular, and worked north, gaining 500-600 ft./min. He then encountered sink, but noticed sand rising from the ground near a dry lake, and reached it at about 2,500 ft. above the ground, though still in sink.



Horizontal projection of Paul Bikle's course. Vertically he rose nearly 9 miles, which is half an inch above the surface of this map.

While looking for a landing area, he encountered extreme turbulence and then got into steady lift of approaching 1,000 ft./min., which was confined to a narrow band. Above 15,000 ft. lift became smoother as he approached the base of the lenticular, one or possibly two miles back from its leading edge. At 19,000 ft. he tried flying forward but the lift diminished, so he slowed down to stay in maximum lift, heading about 290° in a wind of 60-65 m.p.h.

At 25,000 ft. the canopy and double-vision windows were almost covered with frost, but sunlight showed he was above the first lenticular. Climb was fairly steady at between 1,000 and more than 2,000 ft./min., and the lift area was fairly extensive, and could be stayed in by flying at 50-60 m.p.h. on a 280° heading.

From 35,000 ft. upwards the rate of climb diminished to less than 500 ft./min. at 43,000 ft., then seemed to pick up again. At 45,000 ft. on the altimeter Mr. Bikle opened the brakes and made for the sink area behind the wave. At 35,000 ft. during the descent he observed: "To the east and south a whole series of lenticulars extended as far as I could see in the direction of Phoenix and Tucson. These did not seem to be associated with particular terrain features, but seemed to indicate a continuous wave was being propagated through this part of the air mass." He finally landed about 2 hrs. 10 mins. after take-off.

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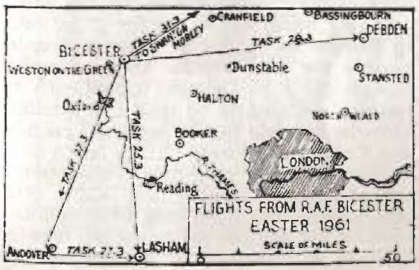
R.A.F.G.S.A. Practice Week

by Wally Kahn

A TEN-DAY practice contest was held by the Royal Air Force Gliding and Soaring Association from 25th March to 3rd April 1961. The object was not only to give the team members some more competition practice but also to select those pilots who will represent the R.A.F. Gliding and Soaring Association in the National Gliding Championships flying in League Two.

The team selected to fly in League One is:
Sgt. John Williamson—Olympia 419.
Group Captain "Paddy" Kearon—Skylark 3;
Sgt. Andy Gough—Olympia 460;
Flt.-Lt. David Cretney—Skylark 3;
Wing-Commander Joe Croshaw—Skylark 3;
Flt.-Lt. George Coatsworth—Olympia 401X;
Squadron Leader Lindsay Bayley—Skylark 3;
Flt.-Lt. Ron Dunn—Olympia 460.

All pilots and crews assembled at R.A.F. Station, Bicester, which is about 14 miles north of Oxford. The ground organisation was again beautifully organised by Squadron Leader Norman Maygothling, and the Chipmunk tugs very ably controlled by Flt.-Lt. BeBe Sharman. The weather forecasting was most efficiently carried out by Paul Emery of the Met. Office, and he is certainly a met. man to gladden the glider pilot's heart. Task setters were again David Ince and Wally Kahn. It was decided to adopt the marking system as laid down by the B.G.A. which will be used during the Nationals.



First Day, Saturday, 25th March

There was a strong westerly wind blowing at 20 knots and the task set was a cross-wind race to Lasham, 40 miles to the south. Going was very difficult for most of the way and only three pilots completed the task, one other scored and ten failed to score. Fastest time was put up by Wally Kahn; second was David Ince and John Williamson third. Andy Gough landed at Shinfield, a distance of 24 miles from Bicester. Due to the new daily factor in the marking system the top man was awarded 286 points instead of the maximum of 1,000 points.

Second Day, Monday, 27th March

On this day there was a strong north-westerly wind and the task set was a goal race Bicester-Andover-Lasham, a distance of 60 miles. Again the going was very difficult and on many occasions the pilots were forced to slow down or even hang around a particular area to wait for the weather to clear ahead. Paddy Kearon put up the fastest time with Gough second, Kahn third and Don Spottiswood in the Eagle fourth. No other pilots reached Lasham, although four others scored. A number of pilots, including Ince, John Willie and David Cretney, did not fly on this day due to other engagements.

Third Day, Tuesday, 28th March

An easier task was set in order to encourage the unsuccessful pilots of the previous two days. It was also felt that a downwind race would show how much had been learnt about racing techniques by the League Two aspirants. The wind was just north of west and a race to Debden, a distance of 60 miles away, proved possible for all but one pilot. As it turned out the wind was only slightly cross and speeds to the goal varied from one to 2½ hours. Ince completed the course in one hour exactly. Williamson and Kahn took one hour eight minutes, with Gough fourth and Kearon fifth. Most pilots had some difficulty in recognising the goal, as it was under a cloud shadow for most of the time and this meant that final glides were not at all easy. Kahn, in fact, started his final glide into

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TACKLE GLIDING THIS WAY

Stansted by mistake and Kearon did the same into Bassingbourn before both of them realised their mistake.

On our return from Debden the sky over Bicester from north to south was a perfect text-book wave sky. The most magnificent lenticulars were to be seen as far as the eye could see. A number of pilots were towed off but only Williamson was able to use the lift and climbed from 2,000 to 3,000 feet, staying airborne for over two hours. Both John Willie and David Ince (who had been ordered to land by his wife using a glider trailer radio set, as he had a bath booked in the Mess) reported that it was extremely turbulent. So much so, in fact, that John called up David and asked him to fly near him in order to look at John's 419, as he thought that the excessive vibration might have been due to something flapping on his glider.

At the start of this day the President of the R.A.F.G.S.A., Air Chief Marshal Sir Theodore McEvoy, who is now also our new Vice-President of the B.G.A., paid us a visit. Immediately on arrival he was strapped into an Olympia and was soon soaring happily over the site.

Fourth Day, Friday, 31st March

This was to be a most frustrating day. Paul Emery had forecast a westerly wind with difficult conditions which improved as one went into East Anglia. The various fronts which had waved around us for the past week were still waving, and as it turned out the weather remained pretty duff all day. As it was Trevor Ware's birthday he was allowed to go off first to attempt the task of a goal race to Swanton Morley. "X" was again 20 miles and this proved impossible to reach for half the pilots.

Most pilots completed two and even three cross-countries during the day and it was very important to get the glider back to Bicester as quickly as possible in order to give the pilot another start. Kearon, Gough and John Delafield scored early by landing at Cranfield on their first attempt. Ware landed near the line north of Cranfield and Cretney crept over "X" by half a mile. Williamson, after a 12-mile cross-country, landed beyond Cranfield, and Kahn, after one 12-mile and a six-mile cross-country, took off five minutes before the last take-off time at 4 o'clock, and by finding two

thermals managed a final glide into Cranfield in rain, during which he had crossed the M.1 at a very, very low height indeed. He was almost fined for crossing from one lane to the other in an unauthorised place.

No-one else scored that day, which meant that under the new marking system Ware scored 800 points for five miles to count, Williamson 640 for four miles, Kearon, Gough, Delafield and Kahn 360 for two miles and Cretney for ½ a mile. It was obvious that ground-to-air radio was of tremendous help for this sort of activity, and one can only hope that a transistorised light-weight set will soon be available to us. One delightful expression which one heard on this day was: "Let us rush back for a re-light," which in non-service jargon appears to mean "have another bash".

April Fool's Day

At briefing Paul Emery produced a beautiful chart which had everyone fooled, and his explanation of it, which was carried out with a poker-face, was so very convincing that the task of free distance with the carrot of Gold C's to Cornwall was accepted by everyone.

Pilots were busy taking notes of the most outrageous windspeeds, thermal conditions and other details, quite oblivious to the fact that outside the window rain could be seen falling and the 8/8 cloud cover was thick, dismal and quite useless! No flying on this day.

Sunday, 2nd April

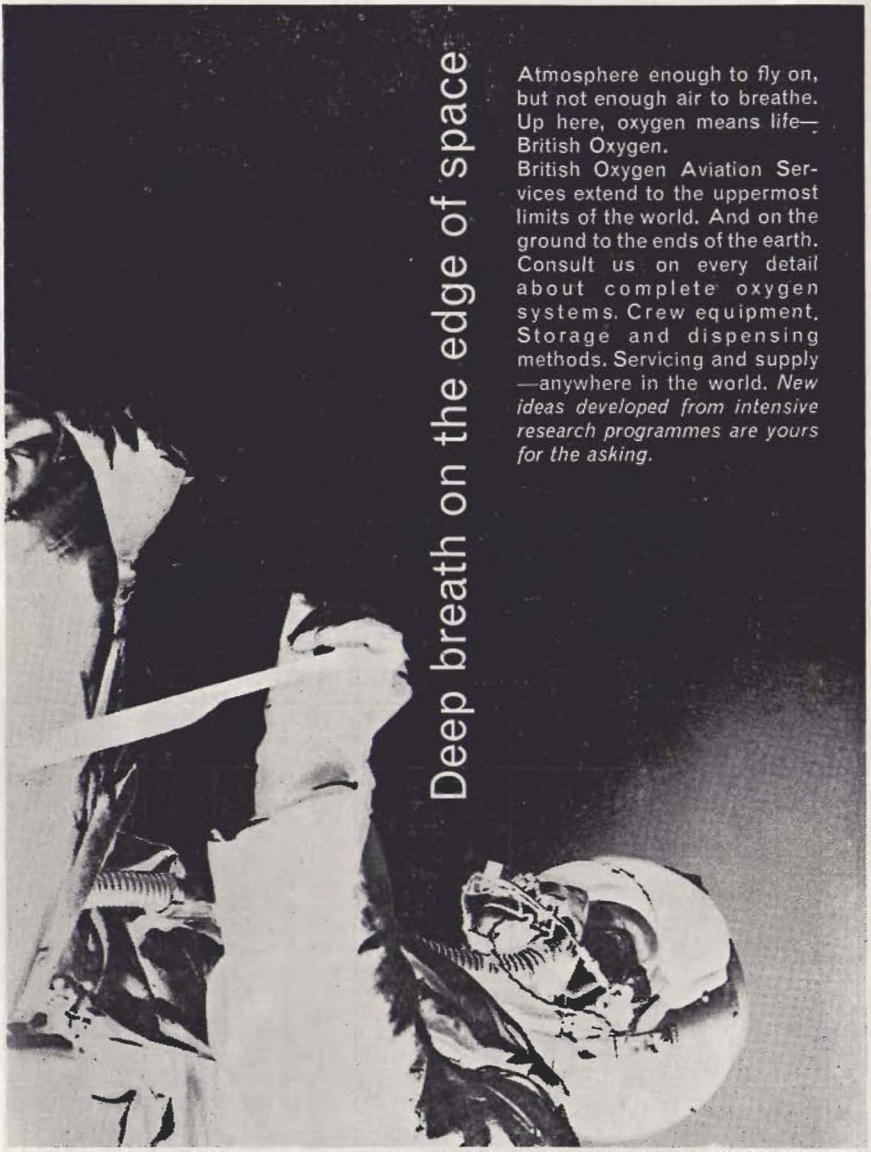
After delayed briefing it was not possible to set a task, and so the afternoon was used to carry out comparison flights between the Skylark 3 and the new (third model) Olympia 460. The 460 appeared to be as good as a Skylark 3 at all speeds and seems to be a very delightful aeroplane to fly. It will certainly be worth watching in the National Championships.

Lessons learnt from this practice contest were that the standard of flying in the R.A.F. has gone up appreciably, that the characters in the R.A.F.G.S.A. are first-class types, that the beer and bar in the Windrushers' Clubroom is beyond reproach, that clear Fablon is wonderful for sticking on to maps so that one can then draw lines on it, and finally that Mamie Sharman is a Great Girl for typing this account of a very enjoyable ten days.

R.A.F. BICESTER: ENTRIES AND SCORES

Place	*Pilot*	*Glider*	*1st Day*	*2nd Day*	*3rd Day*	*4th Day*	*Total*
1	W. A. H. Kahn	Skylark 3	286	890	846	360	2382
2	Sgt. A. Gough	Skylark 3	42	902.5	786	360	2090.5
3	G./C. N. W. Kearon	Skylark 3	0	1000	643	360	2003
4	Sgt. J. S. Williamson	Olympia 419	266	—	846	640	1752
5	F./L. D. Spottiswood	Eagle	0	842.5	525	0	1367.5
6	S./L. E. T. Ware	Olympia	0	0	512	800	1312
7	D. H. G. Ince	Olympia 419	284	—	1000	0	1284
8	F./L. A. Loveland	Olympia 460	0	107	529	0	636
9	F./L. L. Kurylowicz	Olympia	—	30.5	538	0	568.5
10	S./L. J. L. Bayley	Olympia 460	0	0	508	0	508
11	F./L. R. Jones	Olympia	0	0	442	—	442
12	F./O. J. Delafield	Olympia	—	—	—	360	360
13	F./L. F. D. Cretney	Skylark 3	0	—	—	80	80
14	F./L. R. Taylor	Olympia	0	61	0	0	61
15	F./L. G. McA. Bacon	Olympia	0	45.5	—	—	45.5
16=	F./L. E. Clarke	Gull IV	0	—	—	0	0
16=	F./L. R. Dunn	Olympia 460	—	—	—	0	0

NOTE.—A dash signifies that the pilot did not fly that day; a zero that the flight earned no points.



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Winter Gliding in New Delhi

by Michael Pertwee

I NEARLY started this article by saying that while in New Delhi over Christmas I decided to combine business with pleasure and join the local gliding club. But since, I went to India to get married this might have been misunderstood by my bride.

I actually discovered the existence of the gliding club on the first morning of my honeymoon, when I stepped on to the balcony of my New Delhi hotel to see a T-21 apparently about to land on my head. I watched it land half a mile away and joyously informed my wife that our happiness was now complete. There was a gliding club ten minutes from the centre of the city! She received this news with noble restraint and a marked lack of enthusiasm.

Regular readers of this magazine may remember an article I wrote four years back on the difficulties of getting airborne in an Italian gliding club (including the obtaining of a certificate of Good Morals from the British Consul).

No such difficulties arise in India. You hurry to the club, where you are received with interest and enthusiasm. You fill up a remarkably brief form. (I had no papers with me.) Then and there you pay the equivalent of 2s. 6d., which entitles you to a temporary membership. This allows you 25 flights of a maximum of 45 minutes duration, each flight at the price—wait for it—of 1s. 3d. a launch!

Mathematicians will swiftly calculate that it is thus possible to have some 18 hours of soaring for a grand total of about £3.

Winter flying conditions in Delhi are such that a moderately experienced pilot has little difficulty in achieving something approaching this figure. Every day is a sunny day with temperatures in the low 70's. The nights are cold at around 40-45 degrees. From about midday, dry thermals are popping up all over the place. Heights of 1,500 ft. at lift of between 3 and 6 ft. per second are difficult to miss. Stronger stuff taking you up to 4,000 ft. is fairly common.

The club uses one of Delhi's civil airports, which appears to have little or no traffic during the gliding hours. It shares time with the Auxiliary Air Force and a local flying club. Therefore its hours of activity are somewhat restricted. The average is about four hours a day. On Tuesday there is no flying and on Wednesday you can fly from dawn to dusk.

There are about 200 members, most of which do not appear to be very active. With the limit of 45 minutes for local soaring, there seem to be fair shares for all.

The machines consist of T-21s, Grunau Babies, Olympias, a docile and light-to-handle German two-seater—the K-7, a rather heavy-looking Indian two-seater, and a Polish two-seater.

A visitor like myself is merely asked to submit to a couple of check flights before being given free rein.

Launching is efficiently and briskly carried out by winch—a single strand cable with, I am told, a short life and a tendency to break. You get 900-1,000 ft. in the Olympias.

Now I come to something which may be old hat (Old Turban there) to some readers. This is the invaluable assistance given by the thousands of hawks who are honorary and honoured members of the club.

Before the first flight of the day the skies are clear. But, within moments of the first launch—as if from nowhere—the hawks swoop in to join the glider in its search for lift. This is a thing to note. At this stage they are *seeking help from you* and not vice versa. Try a few turns in sink and they will wheel away disgusted and find something on their own.

But, before very long, literally hundreds of them are in the area and they are

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invaluable. One's first action on release must be to search out the largest collection of soaring birds and make straight for them. They never fail you. Neither do they get in your way. They seem to welcome your arrival and get into formation with you. An odd thing I noticed was that although their performance is a good deal better than yours, they have no desire to show off. Once you are with them they seem to prefer to keep with you. Thus they gain on you and then seem to wait for you to join them. They will fly up to 3,000 ft. with you.

Eagles will also do the same, but go to much greater heights. At Poona one glider pilot I talked to was joined by a large eagle who got into formation with him about 3 ft. off his wingtip and soared to just over 10,000 ft.

No one denies the usefulness of the hawks for local soaring, but, without exception, all pilots insisted that it is a fifty-fifty partnership and that the birds consider the glider pilot a most useful ally.

As with gliding clubs anywhere, one feels immediately at home and the casual chatter could be taking place at Lasham or Dunstable. There are the odd little differences, of course. The Chief Instructor is treated with great respect and called "Sir" by the majority of members. His discipline is strong and he will ground a man for a day without hesitation for making a low turn. Mr. Nehru is a keen supporter of the movement and comes for a joy ride whenever he can—and recently suffered a cable break.

The inevitable crowd of onlookers is also rather different. Ragged men squatting on their haunches; a man with a performing bear or another with a plaintive playing pipe and performing snakes.

Also, one must not be shocked by the spectacle of the equivalents of Wally Kahn and Lorne Welch walking and talking together *holding hands*. This is something one sees everywhere in India. Recently I was stopped by two impressive policemen who ticked me off for photographing in a forbidden place. They arrived, reprimanded me and walked away without once letting go of each others' hands.

It is a long way to come for a little gentle local soaring, but, as B.O.A.C. gliding enthusiasts and people like myself have discovered, it is well worth while if you are there. For one thing it is lovely to know almost for sure that to-morrow's conditions are going to be just as pleasant as to-day's.

OBITUARY

WILLIAM DOUGLAS

WILLIAM Douglas, who died on 26th February, began gliding with the Ulster Club in 1931, and subsequently visited several clubs and competitions in England as assistant to the late William Liddell. He also spent a short period at the Slingsby works. During the last war, and for some time afterwards, he served as an A.T.C. Gliding Instructor with Northern Ireland Command.

His ready handiness with aircraft, and long experience of cars and trailers, was most useful to the Ulster Club. While flying at the Magilligan Site on 15th June, 1947, in a Club Kite I, Willie Douglas established an Irish Duration Record of 6 hrs. 56 mins. He retired from actual flying shortly afterwards, but continued to help the Ulster Club by often taking charge of its ground organisation, to the delight of the members present. He was also active with Shorts Club for a considerable time. In the summer of 1958 he accompanied William Liddell to the Long Mynd and assisted as winch driver.

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South African Safari

by Anne Burns

FIRST of all I should like to say how enormously indebted I am to Boet Dommisse. In many ways the records flown by me in South Africa are more his than mine. He was the moving spirit behind the whole undertaking and he provided the practical means in the shape of one of the best equipped Skylark 3's I have ever seen, together with trailer, car and crew. His generosity in lending us his sailplane is all the more remarkable when it is appreciated that opportunities to fly from Kimberley, where the desert-like surroundings provide such wonderful thermal conditions, are limited to only a few weeks in the year.

Besides all this, Boet was responsible for a lot of imaginative preparation: the triangles were already marked on the map, seven different forms waiting to be filled in according to the type of record, and the chronometer calibrated. When it came to flying, there was Boet, with his vast experience, ready to decide with uncanny accuracy the appropriate task for each day —a by no means easy matter in view of the somewhat sketchy met. information. True, he required co-operation from pilot and weather; I for one felt I did not dare to let him down and I think the weather must have felt the same! I am indebted, too, to many others who helped in a hundred and one ways: to timekeepers, tug-pilots, fillers-in of documents, those who did the photographic work and surveyed the courses, and particularly to our fellow-pilots whose hospitality and advice, not to mention their cautionary tales, made all the difference.

Closed Circuit Flying

It would be somewhat uninteresting to describe my closed circuit flights in any detail. The impression one gets is that everything is scaled up, except for the thermal cores and landing field. Visibility is terrific—one can see all turning points of a 100-km. triangle; one operates over a wide height band, say, 3,000 to 9,000 ft. above ground; lift is strong, 2 to 3 m./sec. disappointing, 5 to 6 m./sec. more usual. Occasionally the downs can be devastating, so that one puts the speed up to 110 kts. to escape and the rough air restriction goes by the board. Conditions vary a lot even over a few days; my 300-km. triangle and out-and-return were flown in clear air thermals (maximum height 17,800 ft. absolute in an evening thermal!); in both these flights the wind was having a noticeable effect, the into-wind leg in the triangle taking some 50 per cent longer than the others and the outward leg in the out-and-return taking nearly twice as long as the return. The 200-km. triangle was flown on a day with cumulus cloud and the main hazard was over-convection. This can occur very rapidly in South Africa over large areas, and I was nearly caught out on the last leg which was flown in completely dead air.

Flying was very enjoyable and exhilarating on all these flights and made more so by the presence of soaring birds, both vultures and storks. The only exception was perhaps the out-and-return south to De Aar; no birds flew there and only dust devils enlivened the arid red landscape which, with its black rocky kopjes, looked more like the back of the moon that the South African veld.

Friday the 13th

I had every intention of keeping out of thunderstorms when flying in South Africa. For one thing, it was not my Skylark 3, and one could hardly overlook the sort of damage hail could do, when the sailplane already had a large patch on the canopy where a lump of ice had come through in a big chopper. Then, south African thunderstorms can be quite ferocious, and I was probably thinking as much of my own safety as of that of the sailplane. Thus my encounter with what turned out to be quite a considerable-sized chopper was unpremeditated and somewhat adventitious.

I am not sure whether it was because it was Friday the 13th, or whether we were all a trifle exhausted by the succession of champagne dinners (champagne by courtesy of the Savoy Hotel, Kimberley), but there was a marked reluctance to fly that day. It was not until a light liquid luncheon had been consumed that a stalwart band of



This was the Mayoral champagne party at the airport during which Denis Burns arrived in the dusk from his world out-and-return record.

helpers wheeled the "bird" out at the end of the runway. Ground temperature was now some 104°F. in the shade, and the cumulus cloud which had started at lunch time was showing considerable vertical development. The task was to be a 100-km. triangle and it was obviously high time to be off. Fate intervened, however, with a three-quarter-hour delay, while a Viscount landed, was "turned round" and took off again in leisurely manner (airliners and sailplanes seemed to mix quite happily at the airport). Meantime we cooked in the car and somewhat despondently watched the over-development of the cu.

At last the coast was clear and John Hugo heroically climbed into the now almost red-hot Super-Cub and we were away. There was still a chance that a couple of good climbs in cloud might make the triangle possible, provided the turning points were not obscured by rain. The starting line was crossed, but the nearer clouds proved unco-operative and I was soon crawling back to base with nothing but a low point slightly under 700 ft. to my credit.

It was still very hot and a cool-down in cloud seemed an attractive proposition. Slowly I climbed up to cloud base, about 10,000 ft. a.m.s.l., to find the cloud had become very extensive with rain and lightning erupting out of its rear end. The lightning was rather too close for my liking, so I scuttled off west to a much more modest-looking cloud with an interesting top at about 25,000 ft. (all heights are now given above sea level). Lift was much more powerful under this cloud, about 5 m./sec., and in no time at all the cloud was dipping down all round to envelop me. There was little time to change my mind now, although the blackness of the cloud and the noise of the rain gave me an inkling of what I was in for. Inside, the rain soon changed to hail. As advised by the local pilots, I checked for size by drawing some pellets in through the clear vision panel; they were small and easily squashable with water inside—called graupel by the experts. I have yet to find out what one is supposed to do if one draws in a handful of "golf-balls".

So far so good: the horizon was humming reassuringly, the demand oxygen only required the mask to be hitched up—no

cocks to fiddle with, and the smooth lift was getting stronger and stronger. There were no signs of lightning or thunder to worry about, but a distinctly unpleasant electrical charge was building up on the metal parts. Gingerly I explored the dive-brake handle, and metal bottom of the stick. Both showed an unpleasant level of tingleness, while the rudder pedals were giving off a succession of quite painful shocks, forcing me to lift my feet off the pedals from time to time. Perhaps there is something to be said for the old-fashioned wooden pedals!

At 25,000 ft. we were still winding up at about 7 to 8 m./sec. and I started to treat myself to a bit of oxygen at 100 per cent, switching back intermittently to "normal" to conserve the supply. After 32,000 ft. the character of the lift began to change, becoming more broken and very violent in places. At a bit over 34,000 ft. I was struggling to get the most out of a smallish funnel of high-speed lift at 12 to 15 m./sec., just next door to which was a very nasty down, when there occurred what I can only describe as an explosion. I must have been dazed for a split second or so, as the next thing I knew was that I was flying straight and level in smooth air. There was no doubt in my mind that I had been subjected to some form of induced lightning strike. Quickly I checked oxygen and controls. All seemed well, but I had no intention of staying in the cloud, a sitting target for such goings on.

Setting course on my previously determined escape heading, I soon emerged from the anvil into a dazzlingly beautiful world of deep blue sky and soft white clouds. (How innocuous one's cloud looks from the outside!) I revelled in the sunshine, getting pleasantly cool in my thin shirt, while I tried to chip a tiny hole in the ice on the outside of the canopy. There was quite a lot of ice on the starboard wing (I could not see the port) but the dive-brakes came out readily enough.

Soon niggling thoughts began as to how I was to get back. I had no upper wind



Boet Dommisse and Denis and Anne Burns inspect the wing-tip damaged by lightning.



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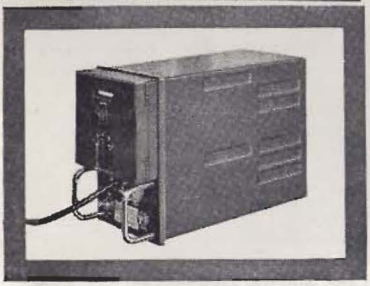
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forecasts, but the anvils on some distant storms showed little spread. There was 8/8 cloud below with what looked like a gap a few miles to the south. Gently I made for this gap and spiralled down with dive-brakes out. As I approached, the gap closed, but there was little risk in letting down through cloud with such high cloud base. I broke cloud to find a dull world of rain and storm. Some ten miles to the north lay Kimberley airport, or rather the crescent-shaped sandpan on the southern border, as the airfield itself was blotted out by rain. I edged in, but soon turned back as the lightning seemed almost continuous.

It would have to be a field landing. The choice lay between sheep or cattle fields, both near farms, or a cultivated field in the middle of nowhere. On closer inspection the cultivated field looked rough, so I opted for the sheep field and, after a somewhat fraught approach over telephone wires in a wind much stronger than anticipated, ground safely to a halt. The reason for this strong wind was soon apparent; no sooner had I landed than the storm burst over my field. Crouching under the wing, and clinging to the dive-brakes while the rain pelted me with red mud, I was in no position to make a good impression on a sheepdog which regarded me as a suspicious character.

Friday the 13th was now beginning to hold sway: the telephone was disconnected and the farmer's car out of action. There was nothing for it but a three or four miles walk to the next farm (this was the cattle farm previously inspected). Here all was well and, together with the retrieving crew, we were most hospitably entertained.

On de-rigging the glider we found quite a bit of minor damage to the top and bottom ply covering of the port wing. It was punctured in several places as if by blows from inside. At the tip, where the wire for the thermal snifter ends, a bit of panel was blown out altogether. The leading edge of the aileron was lifted and the hinges slightly blackened. Perhaps British sailplanes should have "wicks" as fitted in continental gliders, although I understand some wicks did not save wing-tip damage from lightning in a recent incident on a powered aircraft.

Thus ended a most wonderful fortnight with our gliding friends in South Africa. We just cannot thank them enough for all they did for us, and only hope that when they come to the United Kingdom we shall be able to give them some equally enjoyable, if rather less exciting, flying.

KEN FRIPP

GLIDING ENTHUSIAST PAR EXCELLENCE

GLIDING in this country is fortunate in having a large number of "nice fanatics". Ken Fripp qualifies quite easily. At present he is Chairman, Managing Director, chief shareholder and most of the staff of Southdown Aero Services, which means that he repairs and maintains gliders at the Lasham Gliding Centre.

He started gliding in 1930 when at the age of 14 he built a 20-foot span biplane glider. He persuaded his father to give him a car launch with strict instructions to keep going whatever happened. When he reached his operating height of 15 feet he found that he could not release. After collecting the bits of his glider from a ditch, he went home and started work on a "hang" biplane glider. He finished this design when he was 16, but suffered a wing failure on his first flight.

Ken then decided that he had better learn to fly properly, and joined the Southdown Gliding Club in 1932. In 1937 he joined Short's in the experimental department and stayed there until the outbreak of war, when he went into the R.A.F. After the war he joined first Airspeeds and then F. G. Miles. During the war he flew gliders as an A.T.C. Instructor.

I first met Ken after the war when he arrived at Redhill with the smallest 8-h.p. van I have ever seen. Out of it tumbled no less than 10 Fripps—two parents and eight small ones. Ken had arrived!!

Ken worked on the K-1 Crabpot and many other projects. In August 1959 the call of gliding became too strong for him and he moved his family to Lasham. One of his sons, Michael, works with him and has just become fully qualified as B.G.A. inspector. Ken himself is a Senior Inspector.

Last year he teamed up with an old chum and bought the beautiful Weihe from the Surrey Club. This he now flies when he can sneak away from his workshops, where he and Mike are always busy with C's of A and repair work. His aim is to expand his firm, and he might even take on subcontracting work for well-known Glider Manufacturers. As a craftsman he is superb; as a gliding type one of the best.



R.A.F. WAVE PROJECT

BASED on Carlisle, the first R.A.F. Wave Project was held in March and April 1960, chiefly with the idea of exploring the Helm Wind Wave in the lee of Crossfell. The highest flight, to 21,500 ft., was made by Flt.-Lieut. F. D. Cretney in an atypical Helm Wind, but many other waves, particularly in the lee of the Lake District, were explored as well, and on several occasions waves were found when they had not been forecast.

The second R.A.F. Wave Project has lasted much longer. Starting on 19th October 1960 at R.A.F. Silloth, its base was transferred to Crosby-on-Eden on 11th December and it is still going strong as we go to press; the present closing date is 23rd April. Up to 8th March, 100 participants had flown 480 glider hours, and 5 gains of height for Gold C and 1 for a Diamond had been flown.

So far, the highest wave flights have been:

13TH FEBRUARY.—Grp. Capt. N. W. Kearon in Skylark 3b; reached 15,400 ft. from a launch to 3,400 ft. Lift was 6 ft. per sec., but he had to break off the climb because of oncoming darkness, though there was a lenticular arch overhead at about 30,000 ft. Tops of low lenticular clouds were at 5,500 ft. For 2½ hours he had been at about 7,000 ft. in company with G. McA. Bacon and A. Eldridge in the Eagle and C. P. Jeffery in an Olympia 2b. Wind from S.S.W.

14TH FEBRUARY.—Flt.-Lieut. G. McA. Bacon and Master Eng. A. Eldridge in Eagle: reached 20,100 ft. from a launch to 4,600 ft. The flight is described separately. This was the greatest absolute altitude reached in Britain in a two-seater sailplane, and the greatest gain of height, but the latter did not exceed by 3 per cent the record gain of 15,240 ft. set up by A. D. Piggott and B. Whatley on 27th July 1953 in a flight from Camphill in a T-21, so is not recognisable as an official record.

23RD FEBRUARY.—Corp. Tech. C. P. Jeffery in a Skylark 3 reached 20,000 ft. from a 3,000 ft. launch; M. Eng. A. Eldridge in an Olympia, 16,000 ft. from 3,200 ft.; Sqn. Ldr. J. Lindsay Bayley, flying an Eagle solo, 14,100 ft. from 2,200 ft. Wind S.E.

2ND MARCH.—Lieut.-Cdr. E. J. Robinson, 24,000 ft. from 4,000 ft. Greatest height yet reached in a wave in the U.K. Wind W. The barograph, being a 5,000-metre type, only registered to 18,000 ft.

Highest British Two-Seater

by Flight Lieutenant G. McA. Bacon

I SPENT a week in February at Carlisle with the R.A.F. Wave Project. During this week several high-altitude flights were made, including two Gold heights (plus one without a barograph and one by a Gold C pilot) and a flight to 19,900 ft. in the Eagle.

The R.A.F. Wave Project is now in its second winter of operation, and besides its sporting aspect its purpose is to provide information about wind flow over mountains for the Met. Office and the R.A.F. Directorate of Flight Safety. A similar project has been going on for some years over the Rockies conducted by the U.S. Air Force, and I believe that the Norwegians also have a similar scheme.

On the 14th February I took off in the Eagle with "Lofty" Eldridge, who had been up on a similar flight with John Williamson the previous year. We were towed to 4,600 ft. by Sqn. Ldr. Maygothling and released about five miles S.E. of Crosby (the base airfield of the project). I had some difficulty whilst on tow telling whether we were in wave lift, but eventually it sank in that we were in a wave hole in the strato-cu which almost covered the area. When we released we found a climb rate of 300 ft./min. and a wind of approximately 240°/45 kts. During this climb a lenticular formed just downwind of us and we flew just upwind of the most active-looking part of it. At about 15,000 ft. we put on our oxygen masks and at the same time noticed that the lenticular had reorientated to be east-west. Accordingly we adjusted our beats and the climb

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continued (about 200-250 ft./min.) to a peak of 17,500 ft. The wind here, judging by our position over the ground, seemed less than 45 knots, but, of course, this was I.A.S. which at that height would be about 60 knots T.A.S.

During this climb we had drifted about eight miles downwind from our release point and were positioning ourselves with relation to a valley to our south, but gradually the strato-cu sheet drifted in and covered the ground below us until the only hole in the sheet was one near where we had released. Neither Lofty nor I were keen to fly upwind for eight miles to find that the only hole had closed up, so we burnt our boats and headed east where there was no strato-cu to the east of the Pennines, but only some rather tatty lenticulars.

After several miles of 500 ft./min. sink, both variometers started to show a climb and we turned into the estimated 180° wind. Again lift of 2-300 ft./min. was obtained and again the wind seemed less than 45 kts. I.A.S. with reference to the ground below. At this time we were overhead of Hexham and the only cloud was some broken strato-cu at about 6,000 ft. and a sheet of upper cloud at 20,000 ft. or above. This upper cloud appeared orientated north-south and appeared to have no definite lenticular hard edge except about 10 miles to the south. I found it most difficult to reconcile the fact that we had climbed about 3,000 ft. in a southerly wind with this upper cloud showing a westerly wind—if, in fact, it was a wave cloud.

During our climb over Hexham the lift gradually petered out until we could get no higher than 19,500 ft. on the altimeter. This height gave 20,100 ft. on the two-month-old barograph calibrations, but on a new calibration gave 19,900 ft. We had therefore established the first British Multi-Seat Altitude, as all previous height attempts had been below the 5,000 metres required as a minimum by the F.A.I. Although our gain of height was more than the record it was insufficient (only 50 ft. more) to set up a new record, and Derek Piggott still holds his cu-nimb T-21 record.

After searching around for 5-10 minutes, we could find no more lift and set off eastwards again. However, we could find no more lift and arrived overhead of Newcastle at 15,000 ft. making a rapid descent to a hospitable welcome at Wolsington airport. The surface wind was 180°/10 kts., so it would seem that our estimated upper wind was probably correct.

Although wave altitude flying is much easier and more comfortable than in cu-nimbs, there are some difficulties which must be overcome if maximum effectiveness is to be made of the wave. I found it most difficult to position in a clear-air wave with 8/8 cloud below preventing pinpointing of position. Under these conditions if lift is lost it is most difficult to know whether one has drifted forwards or rearwards out of the wave. One technique we used was to fly what we felt was too fast and then turn-about on losing lift, turning into wind again as soon as lift was regained. Another difficulty is in wind strength estimation. I had not realised until after I had landed how the density error of the A.S.I. (R.A.S.-T.A.S.) makes a wind of 60 kts. at 20,000 ft. appear as one of 45 kts. by reference to stationary position-keeping and the A.S.I. Probably the biggest problem of all is the closing in of the lower cloud, with the danger of descending through solid-centred cloud or away landings in inhospitable hill land.

What is a Better Sailplane?

by P. A. Wills

PILOTS are always dashing up to me asking: "Is your sailplane better than mine?", as if there was a monosyllabic answer.

The other awkward question is: "My best gliding angle is 36—what's yours?" To which the answer is (a) how do you know, and (b) do you mean—the gliding angle I buy it on, or the one I fly it on if I want to win? This does not imply that anyone is trying to be dishonest, but because no one really knows (or hardly ever knows) what is the exact performance of a sailplane, all designers have to make estimates which naturally tend to be optimistic.

To take these problems in order: What *is* a "better" sailplane? Dick Schreder, on his extraordinary HP-8, ran away from the rest of the field in 1960 in the strong Texas thermals. In those conditions this aircraft was undoubtedly the best there, and possibly the best in the world. In the weak conditions of the 1960 World Championships in Germany, the HP-8 came nowhere —it was not designed for them.

The 15-metre Ka-6 in Germany put up a brilliant show, and outflew some or even all the Open Class as well as the other Standard Class gliders. It is a splendid machine, but a conventional 15-metre design. How could it be "better" than, say, the exotic Foka, or the conventional but 18-metre Skylark 3F? The answer is, I am sure, that it isn't, performance-wise. The Foka fell down on one day only, but so badly that it lost first place in the Standard Class. The Open Class result was distorted by poor task-setting.

Let us be quite clear on this question of span. Given the same degree of sophistication, and up to a span where structural limitations become serious, a larger-span machine must have a better *performance* than a smaller-span one. But performance is far from the only criterion. Stability and handling is another thing, and on the important question of manoeuvrability, it is easier to get, e.g., quick rates of roll and lighter controls with a small machine than with a larger one.

Let us therefore, in our search for the "better", put down first our specification of the perfect.

1. PERFORMANCE

(a) A low minimum sinking speed—say 2 ft./sec.

(b) A good maximum gliding angle—say an L/D of 40.

(c) Good penetration—say an L/D of 20 at 90 knots.

2. HANDLING AND STABILITY

(a) Positive stability at all speeds.

(b) Light and responsive controls at all speeds; quick rate of roll.

(c) Limiting airbrakes.

(d) Good cockpit—good view, draught-free, silent, good instrument panel, adjustable seats and pedals.

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This is not the same as strength. All aircraft have to meet strength requirements so they don't break up in the air, but the rugged aircraft stands up to the knocks of real life, which take place on the ground.

Having set down the specifications for a perfect glider, it will be clear that we shall have to wait for the next world before we can hope to get one. The best any human pilot can do is to decide what he wants most, how much he is prepared to spend, and then—buy whatever machine most nearly fits his desires and his pocket.

If he wants to win records, he must go for a fast machine, above all regardless of price, for he is only interested in good days with strong lift. If he wants to win championships he needs a wide spectrum of performance. Weight and ease of rigging are secondary. If he wants the maximum of fun, he will go for the performance spectrum but price will be a factor, and so will weight and general ease of ground handling.

It is a curious thing that nearly all the "exotics" built so far have been aimed at record flying, and so have been heavy and fast. The HKS-3 was the nearest exotic designed for competition flying, but even that fine sailplane had to wait for the slightly special conditions of weather and terrain in 1958 in Poland before it really showed its paces. When someone spends the same time and money to build a championship winner, with a wide performance spectrum, we may see something important, for the exotics of today point the way to the production aircraft of ten years ahead.

The aspect that costs least is good stability and handling, for this is a function of design skill. So if everything else is equal, go for the machine which is best in this field. If a machine handles well, you can centre in thermal and outclimb another which is, on paper, better, and you can tackle cloud-flying and rough air conditions with safety and confidence. You won't get so tired, so will land safely and fly better next day. You will have much more fun.

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So the first answer to this first awkward question is: "Better for what and for whom?"

On the second question, of performance, the main problem is the great difficulty of accurate measurement. About once in ten years one particular type may get reasonably accurately measured. With an almost audible thump, everyone comes down to earth. Then year by year new types come along with estimated performances that creep higher and higher. Everyone naturally tends to optimism in their estimates, and I suppose no one is much the worse off provided relative estimates remain roughly proportionate. Machine A claims 30; machine B, 33. If the figures, on test, should come to 27 and 30, relatively speaking the pilots of each will not be misled—unless they base their speed charts on these figures, but even so a few sad experiences will lead them to discount them downwards in actual flight.

We are going to have a serious shot in 1961 at getting this problem down to earth again, and perhaps by the end of this year we shall be able to publish a series of polars which will do so.

A Stratosphere Flight over the Tatra

by Stanislaw Jozefczek

We are indebted to Mr. Roman Zabiello for translating this article, and to the Polish journal "Skrzydlata Polska" for permission to reproduce it. An editorial note adds that Mr. Jozefczak's gain of height was officially confirmed as 10,674 metres (35,020 feet). This was an unofficial world record, though it does not beat Mr. S. H. Georgeson's 34,300 ft. by the 3 per cent needed for international recognition, and both climbs have now been exceeded by Mr. Paul Bikle in the United States. The flight here described was made on 4th January 1961.

At early dawn I saw through my window high wave clouds which could be called altocirrus lenticularis. Maybe it is a chance for an attempt on a 300-km. Gold C flight, and perhaps a Goal Diamond also. At 06.50 I was on the airfield. After completing necessary arrangements I was the first to take off at 09.10 in a Mucha 100 sailplane and my task was a goal flight to Warsaw.

The aero-tow was short, and I released 3 km. south of Nowy Targ airfield in a rotor upcurrent. (Nowy Targ is about 30 km. north of the Tatra Mountains). In this rotor-wave lift of 5-7 m./sec. I soon reached 4,000 metres (13,100 ft.). Then I left the upcurrent and headed towards the airfield looking for signals which should confirm permission for a goal flight. Afterwards I turned back to the rotor region.

As I had an accelerometer aboard for the purpose of testing maximal "g" forces on this day, I flew into the very centre of the translucent and bubbling-up rotor cloud. It is the usual task of every pilot in a sailplane equipped with this instrument. Really I am not able to describe this part of the flight. Dust from the floor went dancing up in the cockpit, I struck the canopy several times with my head; it wasn't possible to hold my legs on the pedals. But the accelerations weren't greater than +4 and —2.3 *g*. After much struggling to the top of the upcurrent I went towards the rotor roll over the village of Poronin (15 km. south of the airfield) through considerable downcurrents, however, not exceeding 12 m./sec. (Sometimes in this position we met 20 m./sec.).

Then I contacted strong rotor lift of about 7 m./sec. which brought my Mucha to 5,700 metres (18,700 ft.). At this level the rotor upcurrent joined with that of the wave over the Tatra Mountains. The wind was here S.S.W. to S.W. of about 80 km./h. Constantly heading south over the region of the High Tatra, I reached an altitude of 8,500 metres (27,900 ft.). Then I left 3 m./sec. lift and ran at increased speed to the west in the direction of the Giewont summit just under the leading edge of the lenticular cloud. Here, after passing 10,700 metres (35,100 ft.), I had still 5 m./sec. rate of climb. That was the moment when I began to search with excitement in my memory for the actual figures of national or even world records. But I couldn't accomplish the simplest subtraction, fully occupied with one thought only: is my barograph still working correctly? I have had experience in this matter, having to repeat my Diamond height because of barograph failure.

Already from 9,000 metres upwards a thick layer of frost covered the canopy, and now I could see only a little sunbeam through a scratched-out slot. The open side-window allowed me to see the patches of wave fog passing by—the last one disappeared at 10,700 m.

At 11,000 m. I have 2 m./sec. lift. Till now I saved oxygen by pressing rhythmically the rubber pipe of the oxygen mask. At the moment my arms grow slightly stiff. I have to scratch out a new slot in the ice, but I see no more sun. The variometer shows continuously 2 m./sec. up, and the height . . . what's happened?—one thousand one hundred metres? No—11,100! (36,417 ft.).



Jozefczek's barograph chart.

But what about the barograph? If it hasn't recorded this flight, nobody will believe that I have passed the height of eleven thousand metres.

I didn't suffer from cold at all, in spite of the fact that alcohol in the thermometer contracted so much that it was not visible since passing 9,000 metres. Now the thermometer itself disappeared, too—all covered with frost. I am feeling well: only my breathing rate has increased considerably. In the previous flights I usually took air-oxygen mixture; now I decide to use pure oxygen and turned the valve. The oxygen reserve was a full 70 atmospheres, quite sufficient for descending. After a few deep breaths I perceived the symptoms of approaching loss of consciousness. I understood very little what was happening around me. Quickly I opened the spoilers, increased speed and put my hand on my knee to limit the stick movements. So I descended to 5,000 metres, where I felt much better, and soon landed on the Nowy Targ airfield.

During all this wave flight, minimum upcurrents were of about 2 m./sec., maximum 12 m./sec. The controls didn't become stiff at all, and my Mucha flew perfectly.

(NOTE: All altitudes given above Nowy Targ airfield level, which is 600 metres a.s.l.)

Robert Perfect Trophy



AT the British Gliding Association Annual Ball at Londonderry House on the night of Friday, 10th March, Air Commodore G. J. C. Paul, Secretary-General of the Air League, presented to Mr. Philip Wills, Chairman of the British Gliding Association, a new Trophy for annual competition among British Gliding Clubs.

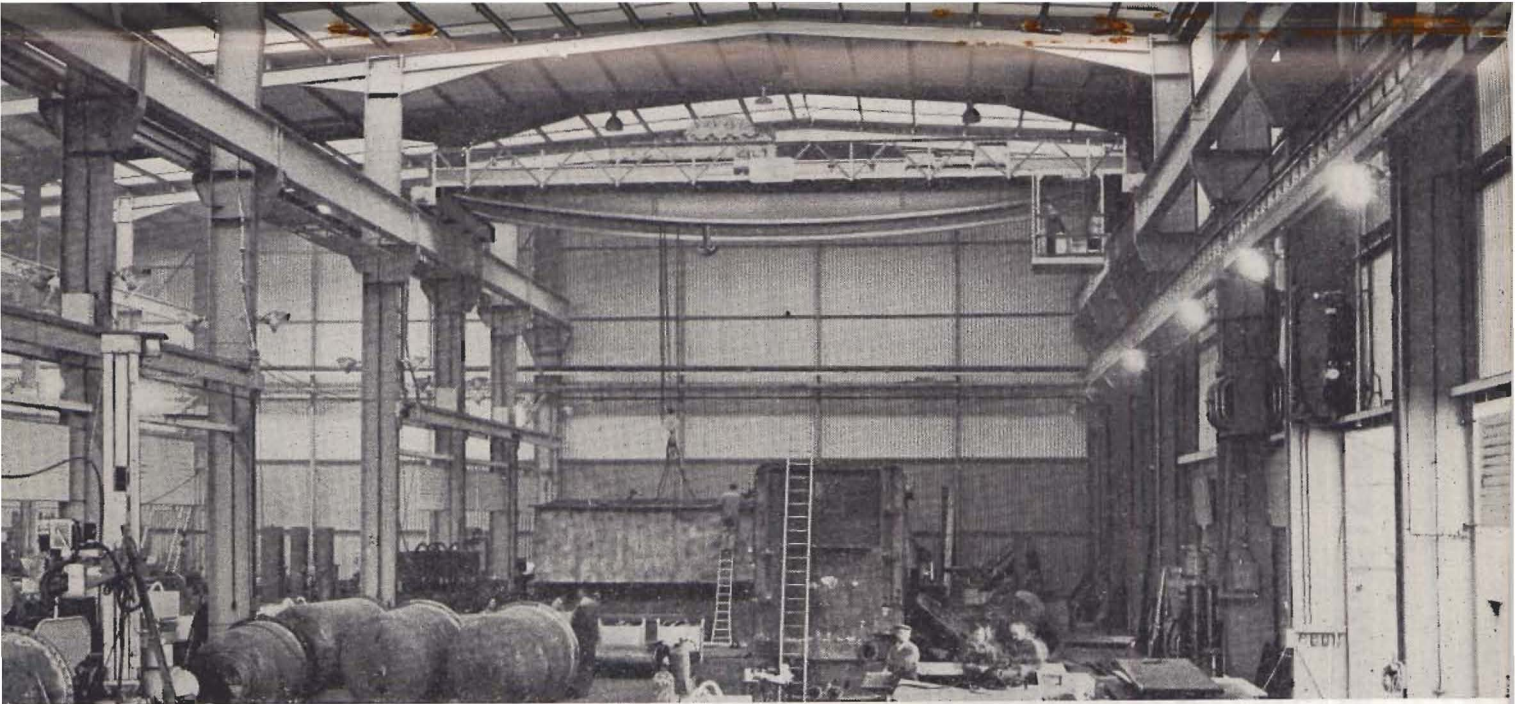
The Trophy is a beautiful solid silver model of an Albatross, displaying on its nest, and is presented as a permanent Memorial to Robert Perfect, for a number of years an active and prominent member of the Air League Council.

The Trophy and prizes aim at the maximum benefit, spread over the greatest possible numbers of young people wanting to learn to fly. For this reason, the rapidly expanding gliding movement has been selected as the "medium", and the particular object is the incentive to Clubs to produce gliding instructors of the quality and numbers which are now badly needed.

The conditions of the Competition are as follows:—

1. The award is to be made annually to the Club, Service or Civilian, which in that year has maintained the highest number of British Gliding Association Categorised Instructors in proportion to its flying membership.
2. In addition to the Award, the winning Club to receive £40; the runners up £20; and the third £10.
3. The Contest to be judged by a Committee appointed by The British Gliding Association.





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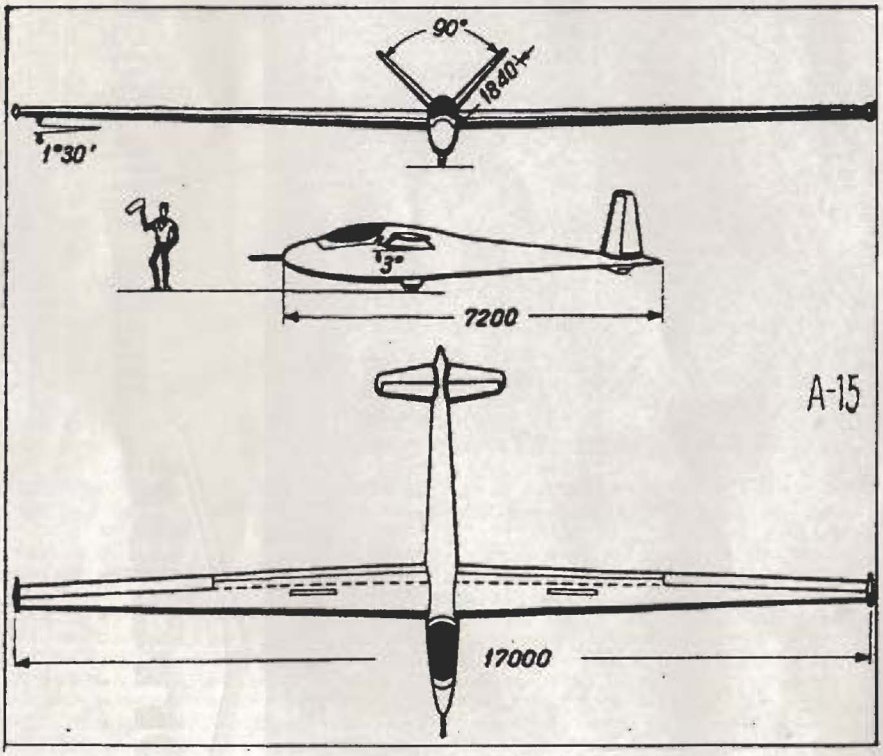
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Russia's A-15 Sailplane

With this new machine last year Mikhail Veretennikov put up world's records for goal flight (444 miles) and speed round a 100-km. triangle (69.2 m.p.h.), and Anna Samossadova a feminine 200-km. triangle world's record of 45.6 m.p.h., (since beaten by Mrs. Burns). The following article, reproduced from the Polish journal "Skrzydlata Polska", has been kindly translated and condensed by Mr W. Stack.

SOVIET designer Oleg Antonov and his team, who developed a number of gliders in the "A" series, notably A-11 and A-13, have produced a new type of high-performance sailplane, the A-15. It is of remarkably modern construction, intended for competition flying in the Open Class, and has already established a number of national and international records. It is regrettable that this glider was not produced in time to be able to take part in the World Championships, as a comparison with the Zefir 2 might have proved very interesting indeed.

The A-15 is a single-seater sailplane of all-metal construction with a mid cantilever wing. The wing is trapezoidal in plan, with 1.5° dihedral angle and a laminar-flow aerofoil with a very smooth surface. The main spar is of box section in aluminium alloy. The alloy wing covering, 1.5 mm. thick near the fuselage, decreases to 1 mm. towards the wing tips. The covering is riveted at the trailing edge and glued on the leading edge of the wing. The thickness of the alloy covering between the rits has been reduced by a chemical process.



The ailerons are in light alloy and filled between the ribs with light-weight foamed plastic, mass-balanced, and the entire control mechanism is concealed within the thickness of the wing. The slotted type flaps, of the same construction as the ailerons, can be let down at the positive angle together with the ailerons, and are hand-operated. The D.F.S. type airbrakes are placed behind the main spar. The sailplane is equipped with water tanks of 50 litres total capacity (11 gallons).

Each wing is fixed to the fuselage at three points: two in the main spar and one in the leading edge. At the wing-tips are removable wing-tip bodies, "salmons".

The fuselage, of semi-monocoque construction, is elliptical in section, made in 1 mm. thick aluminium alloy and reinforced with twenty ribs. There are no longerons, but special reinforcing elements have been introduced to support wing fittings and the tail.

The comfortable and well-designed cockpit has an adjustable seat and an easy-to-reach instrument panel. The canopy, blown in one piece, opens to the right and is jettisonable. The cockpit is reasonably airtight and equipped with an oxygen set of one hour capacity at 12,000 metres (39,370 ft.). The transmitter-receiver radio, of 90 kilometres range, is part of the standard equipment.

A symmetrical V-tail is set at 45° to the horizontal plane. The "tailplanes" are constructed in light alloy and covered with 0.8 mm. thick aluminium covering with reduced thickness between the ribs as in the wing construction. The "elevator-and-rudder", of alloy-timber construction, is covered with fabric and mass-balanced.

In the actuation of all the controls no cables have been used, and lightweight rods are employed for this purpose. Apart from the control column and rudder pedals, there is a co-ordinating mechanism which transfers their movements to the right or left part of the tail.

A hydraulically sprung wheel is completely hidden in the fuselage when fully retracted.

A special open trailer has been designed to facilitate high-speed retrieving without detrimental effect on the glider.

It is hoped that the A-15 will be shortly in quantity production.

Technical Data and Performance

Span ..	17.00 m. (55 ft. 9 in.)
Length ..	7.20 m. (23 ft. 7½ in.)
Wing area ..	12.00 sq. m. (129.2 sq. ft.)
Aspect Ratio	24
Fuselage area	0.493 sq. m. (5.307 sq. ft.)
Flying weight	365-425 kg. (805-937 lb.)
Wing loading	30.4-35.4 kg./sq. m. (6.23-7.25 lb./sq. ft.)
Permissible *g*.	6
Braking *g*.	9
Max. L/D	41 at 100 km./h. (62 m.p.h.)
Min. sink ..	0.6 m./sec. at 80 km./h. (1 ft. 11.6 in. at 50 m.p.h.)
Towing speed	140 km./h. (87 m.p.h.)
Max. speed	250 km./h. (155 m.p.h.)

Easter Rally in Norfolk

by E. A. Cunningham

At Swanton Morley on 4th April it was already raining steadily at 09.30 hours when the final briefing took place at the Easter Rally organised by the Gliding Clubs of Norfolk. Ian Strachan from Marham, a member of the Fenland Club of the R.A.F. G.S.A. and the Rally Committee, gave the last sad weather forecast. He could offer no hope of improvement during the day, and so the Rally came to an end without having produced any soaring at all.

Before the pilots and crews left the briefing to de-rig their aircraft and make their way homeward, Alfred Warminger, chairman of the Rally Committee, said goodbye to the visitors. He made it clear that although the organisers were disappointed, they were far from being discouraged, and other Rallies would definitely be planned in the future.

On behalf of the visitors Peter Scott thanked the organising clubs for the tremendous amount of work they had done to prepare for the Rally and for the excellent facilities that had been made available. The weather may have made us miserable, but at least we were able to be miserable in comfort! The visitors, he said, were no more discouraged by the weather than the organisers. This he intended to prove by

leaving his aircraft at Swanton Morley ready to fly the following week-end.

So ended the Rally which had begun in such high hopes on the morning of Thursday, 30th March, just six days before, when some 20 gliders assembled at Swanton Morley for the first task-flying rally to be held in this part of the country.

Our disappointments started early. Even before the first briefing it was quite clear that the weather was unfit for flying and showed no signs of improving. Then we learned that Philip Wills was unable to come because of illness and Denis and Anne Burns were unable to come because of a bereavement.

Nobody was very concerned about not being able to fly on the first day, because it gave an opportunity to make last-minute adjustments to aircraft and get everything in competition trim. In any case, the weather couldn't stay as bad as this for the whole six days. Could it?

On Friday morning we were honoured with a visit by the Lord Mayor of Norwich who attended the morning briefing, where he made a short speech welcoming the visitors. Later he inspected the gliders in the hangar. With the promise of better weather and the possibility of some convection later in the day, a task was set for free distance. However, the promised improvement didn't materialise, and although launching did take place during the afternoon nobody managed to get away. Dave Taylor, the Chief Marshal, used this limited activity to good advantage to test his organisation while the competitors had a look at the airfield and surrounding countryside from the air. This was the only flying to take place during the Rally, although another free distance task was set for Monday. On this day the weather deteriorated much more quickly than forecast and nobody took off.

There were two bright spots to the meeting. A Brains Trust during Sunday afternoon gave some illuminating answers to questions about variometers, thermals, bird migration, radar, etc. The panel consisted of Peter Scott, Rika Harwood, George Burton and Geoffrey Stephenson under the chairmanship of John Furlong. Betsy Woodward and Gordon Rondel provided some supplementary answers from the floor.

Doctor Bob Tringham, chairman of the Norfolk Gliding Club at Tibenham, provided the other bright spot. He made good use of the non-gliding weather by getting some dual instruction in the Tiger Moths with C.F.I. Taffy Rich of the Norfolk & Norwich Aero Club whenever possible, and celebrated Easter Monday by doing his first solo in a powered aircraft. It looks at though the Norfolk Gliding Club will soon have another tug pilot for their Tiger.

What has this rally achieved? First of all, one must say that only good can come from the intermingling of gliding enthusiasts from many clubs all over the country, with the interchange of ideas and information that goes with it. Secondly, it has given the gliding clubs of Norfolk the opportunity to prove they can develop in their own ways and yet work closely together whenever necessary. We all have as our ultimate aim the growth and improvement of the gliding movement. Thirdly, it has shown that here in Norfolk we can, with the co-operation of the weather, provide the glider pilots of this country with the organisation and facilities to run a really first-class rally.



Easter Rally at Long Mynd

by G. Benson

THE story of the 1961 Rally is both brief and depressing—no Rally, not one contest day being flown.

FRIDAY, 31ST MARCH, the first contest day, produced a moist westerly air stream of some 20 knots with cloud base at a maximum of 2,500 ft. a.s.l., a complete overcast. Free distance was the task, but competition launching was delayed in the hopes of some bright intervals developing later in the day. This did not happen, and at 1.30 p.m. the day was "scrubbed" and most competitors spent the remaining hours of daylight soaring on the ridge (67 launches, 46 hrs. 20 mins. flying).

SATURDAY, 1ST APRIL, was a repetition of the Friday in all material respects.

SUNDAY, 2ND APRIL, was similar except that winds were lighter and more northerly. The task of Free Distance was finally scrubbed at 2.30 p.m. and a certain amount of rather marginal hill-soaring was done.

MONDAY, 3RD APRIL. A slow-moving front crossed the area in the morning, bringing low cloud and drizzle, and then finally moved away by about 2 p.m. Wind was almost non-existent, but what there was of it was north-westerly. The task was again Free Distance. At 2.30 p.m., after a launch of the T-21, which soared to cloud base at 3,000 ft. a.s.l., competition launching was announced for 3 p.m. Six competitors went away. Anita Schmidt in her Grunau Baby was launched first, and after sinking to some 350 ft. above the site, climbed up to cloud base and was first away, followed by the next three aircraft launched: Stuart Morison in the Army Skylark 2, Charles Green in his Skylark 3F, and Ron Rutherford in his Skylark 2. All these left at about 800 ft. above the site and, generally speaking, drifted away on the very light wind, struggling to maintain what little height they had. Chandler of the Moonrakers, flying an Olympia, was next away, followed by Ted Stark in the Army 3F off his second launch. Of these only two exceeded the minimum distance of 15 miles, Stuart Morison getting 25 miles to beyond Bewdley and Chandler some 20 to Tenbury Wells. Charles Green landed at Wigmore (14¼ miles). The others landed in the area of Ludlow, with Anita Schmidt the only one of them to get beyond that place. This was *not* a contest day.

TUESDAY, 4TH APRIL. During the night the wind veered to the east and freshened as the depression moved to the south, but by 7 a.m. the depression had decided to about-turn and came north again, and by 7.30 a.m. it was snowing hard. This continued until 10 a.m. when the snow turned to sleet and then rain.

"No contest" was declared at 10 a.m. briefing, and a sad farewell said to all our visitors. In spite of by far the worst weather conditions we have ever experienced at our Easter Rally, competitors all remained most cheerful and the bar receipts were the only item that showed an improvement on any previous year.

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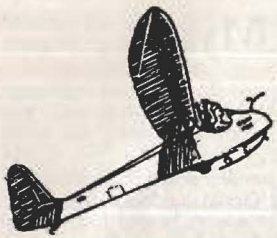
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For and About Instructors



THERE are many ways in which the C.F.I. can organize flying in his club. Perhaps the most important thing he must do is to brief his assistants, and let them know clearly where they stand and what is their job.

The following notes are those the British European Airways Club C.F.I. gives to his instructors, and are an excellent example of a "concise guide to instructors".

A.W.

B.E.A. GLIDING CLUB INSTRUCTORS' NOTES

Introduction

The purpose of these notes is to acquaint new instructors with the procedure used by the club and to standardise training methods as far as possible. In this way pupils will not suffer too much by flying with several different instructors. The basis of instruction is the B.G.A. Instructors' Manual, which should be read in conjunction with these notes.

Categories of Instructor

(1) CLUB INSTRUCTOR.—Approved to give dual instruction and to send people solo.

(2) ASSISTANT INSTRUCTOR. — May instruct under the supervision of a club instructor. May not send people solo.

(3) U/T INSTRUCTOR.—Under training.

(4) ADVANCED INSTRUCTOR.—Approved to give instruction in soaring and field landings. (Need not be a club instructor.)

Solo only Flying

When solo flying only is taking place, an experienced sailplane pilot will be authorised to supervise flying. Passenger flights may be given but *not* dual instruction.

Duty Instructor

Whenever dual instruction is being given, a club instructor must be in charge. He will be known as the Duty Instructor and will be responsible to the C.F.I. for safety and flying discipline on the airfield. It may well happen that the Duty Instructor will be controlling flying when pilots with more experience, but who are not instructors, are present. He will still be in charge, but must wield his authority diplomatically. The advisability of giving a dual check must always be considered if any pilot is out of practice or is unfamiliar with the site. He will always be right to stop flying when in his opinion the weather or any other circumstances warrant it. He will always be held responsible if an accident occurs through his failure to do so.

Method of Instruction

All dual instruction will be given with the pupil in the right-hand seat, i.e., flying right-handed as he will be in solo gliders. Every effort should be made to get pupils at least three consecutive launches unless long soaring flights are being made. Pupils should never be given more than six consecutive flights, as their assimilation will decrease rapidly.

Training can be divided into two parts. the handling phase and the judgement phase.

The Handling Phase

In this phase the exercises follow a natural progression from air experience to the stage where the pupil is doing all the flying, take-offs and landings. He will be positioned in the circuit by the instructor telling him where and when to turn. Give the pupil objects to fly towards; avoid saying "roll out now". In this way the pupil will soon be able to fly in a definite direction instead of wandering aimlessly about the

sky. The instructor should use the spoilers for the initial attempts at landing, the pupil being told not to worry, but to concentrate on keeping the speed right. Each exercise should blend with the next and it is not necessary for the pupil to be able to do one exercise perfectly before progressing to the next. For instance, when he can co-ordinate the three controls, and maintain a fairly steady speed, he can attempt the latter stages of the launch and can be taught turns. While he is learning turns he can be taught the take-off and landing. At any time when his flying is reasonable, stalls and spins may be introduced. It is most important that the pupil can recognise a stall or spin and can recover instantly. Note that with an instructor spins may be practised down to 800 ft. Solo pupils must not practise spins below 2,500 ft. An average pupil should be able to do all the flying by himself after about 15 launches.

The Judgement Phase

When the pupil is ready to be taught circuit planning, he should first of all be shown a perfect circuit. It is much better to let the pupil see what he is aiming at, rather than fumbling for several trips. The use of spoilers should now be taught, and it is suggested that he is told to try them out at altitude to get used to the feel and change of trim. He must be told the crosswind check of "hand on spoilers, increase speed and disregard altimeter". During this phase begin to insist on more and more accurate flying and continue with stalls, spins and cable breaks, etc. Endeavour to let the pupil do all the circuit planning for himself and only give directions if he begins to get dangerously out of position. As he improves, make him criticise his own flying and keep your comments down to the minimum. If the pupil is doing well, more advanced exercises such as steep turns, side-slipping, crosswind take-offs and landings, can be given. If he is backward, these may be left until he has gone solo.

The First Solo

The first ten solo flights will be flown in the T-21 with ballast. When the instructor is satisfied that the pupil can: fly a normal circuit and land approximately in the right place, recover from a stall and spin, land safely off a cable break and extra low or high circuit, and can maintain a good look-out at all times, he is ready to go solo. Now although the first solo is only a logical extension of the judgement phase, it will be a big event in the eyes of the pupil. Do not give a detailed briefing. All that is required is to ask what he would do if the cable broke. Discourage wives, girl friends and fellow pupils from wishing him luck, etc.; it is best to ask everyone to keep away during the preliminaries. In considering whether to send a pupil solo, the instructor should note the weather and light conditions, remembering that any low cloud, gusts, or precipitation may upset his judgement to a dangerous extent. Although a calm evening gives ideal conditions for a first solo, leave enough time for fumble to occur and still have enough light for the pupil to be able to cope. Nothing is more demoralising than to sit in a glider waiting to go solo while the cable is being mended or the tractor refuelled, only to find that when all is ready it is too dark, and to have to go through it all again another time. If the first flight is satisfactory, send him off for two more to get the A and B certificates, remembering that he must do both left and right turns and that the landings must be normal. Finally, the golden rule for sending pupils solo: "If in doubt, DON'T."

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Further Solo Flying

For the first ten or so post-solo launches the pupil will have a dual check every time he flies. The instructor should insist on an increasingly high standard and must curb any tendencies to over-confidence and carelessness. Over-confidence can be recognised by such things as a reluctance to be briefed, careless cockpit checks, making low slow final turns, landing too close to other gliders and obstructions, a "know all" attitude and a tendency to hand out advice. Pupils can normally be cured by giving them very difficult tasks and by insisting on perfection. Criticism must be fair. During the post-solo phase the pupil may be taught advanced exercises not previously covered. Every opportunity should be taken to teach thermalling. The instructor must not fly the aircraft in a thermal but should endeavour to talk the pupil into position. The best practice is to centre in a thermal, gain about 1,000 ft., then leave it and find another. If there are many pupils waiting to fly, do not prolong these soaring trips. About 30 minutes should be sufficient. Special attention should be paid to rejoining the circuit, this being good practice for field landings. Methods of losing height so as not to arrive on the crosswind leg too high should be shown. There is no reason why a pupil should not get his C during his solo period on the T-21. Never allow pupils to soar in marginal conditions at this stage, as they may get out of position and have to land short of the airfield. They should be briefed not to go beyond safe gliding distance downwind of the field. During dual flights make the pupil "field conscious" and point out suitable ones, giving reasons. As the pupil gains experience and converts on to more advanced types, briefings should become advice and the planning of flights and finding thermals should be left to him. Advanced instruction should be given as required and will give opportunities for checking flying standards.

Record of Progress

Since it is impracticable to keep written records, an easy method of establishing a pupil's standard is needed. This is done quite simply by asking him how many launches he has had and what was his last exercise. Now an average pupil will, after ten launches, be doing take-offs and landings. After 20 launches he will be attempting circuits unaided. Some will be more and some less advanced than this. If a pupil has had nine launches and has not started taking off and landing, he may be below average. If after 12 launches he is trying circuits he may be more advanced. With a little practice this method soon reveals a pupil's standard.

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Faults

The following are some faults that can be expected and some hints on how to rectify them.

(1) Poor control co-ordination. Demonstrate aileron drag and make the pupil mechanically use stick and rudder together until it becomes automatic.

(2) Gaining speed in turns to the right and losing speed in turns to the left. Pupil is probably looking at the central pitot head. Make him use his own windscreen as a reference point. A good way of curing this is to make the pupil practise rolling from one turn into another in the opposite direction.

(3) Over-banking and diving in turns, especially the final turn. Make pupil hold a constant angle of bank with stick and rudder together . Point out that the elevator still controls the speed as in straight flight.

(4) Flying straight with crossed controls.

Caused by not using own wind-screen as a reference.

(5) Making a slow, shallow turn onto the final approach. This is caused by some pupil's reluctance to bank the aircraft near the ground, and is dangerous in that too much height will be lost due to the low rate of turn. Demonstrate a spin off a slow turn and point out that less height will be lost in a 30 to 40 degree banked turn. Point out that in windy conditions the wind gradient might prevent the wings from being levelled.

(6) Failing to round-out on landing. Pupil not looking far enough ahead. This fault also makes it difficult to keep the wings level on landing. In The T-21 the instructor can watch the pupil's eyes to see where he is looking.

(7) Heading for obstacles on landing. Caused by a fixation on the obstacle. Tell the pupil to pick a landing run and not to be hypnotised by other objects.

(8) Failing to notice when he is getting too low. Caused by relying on the altimeter and forgetting it may stick. Point out that the altimeter should be disregarded below 400 ft. a.s.l. and that it is easy to judge height by comparison with trees, hangars, etc.

(9) Forgetting to keep straight with wings level after landing. Impress on pupil that the landing is not over until the glider has stopped (Power pilots suffer from this fault as it is a problem they have not met before.)

General Hints and Advice

The T-21 is our only dual machine: take care of it. Give a good briefing, there is so little airborne time. Always insist on a thorough cockpit check. Aim for perfection but criticise fairly. Set a good example by your own flying. Always make safe approaches and do not make low turns to save a retrieve. If pupils are at a loose end, give them talks on theory, etc. Try to be friendly and explain to newcomers how to be useful. Pupils always respect their instructors; do not misplace their confidence.

ROGER NEAVES,
C.F.I. B.E.A. Gliding Club.

How to get "SAILPLANE AND GLIDING"

"Sailplane and Gliding" can be obtained in the U.K. at all Gliding Clubs, or send 20s. (post free) for an Annual Subscription to:—The British Gliding Association, Londonderry House, 19 Park Lane, London, W.1. Single copies and most of the back issues are also available, price 3s. 4d. post free. Enquiries regarding bulk orders of 12 or more copies, at wholesale prices, should be made to The British Gliding Association.

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Correspondence

GLIDER LAUNCHED FROM AIRSHIP

Dear Doc,

I've just read your article, "Thirty Years Ago", in the December 1960 SAILPLANE & GLIDING, and noted under "United States 1930" your statement about the glider flights from the U.S.S. *Los Angeles*—and hasten to *discover* for you the "undiscoverable" date.

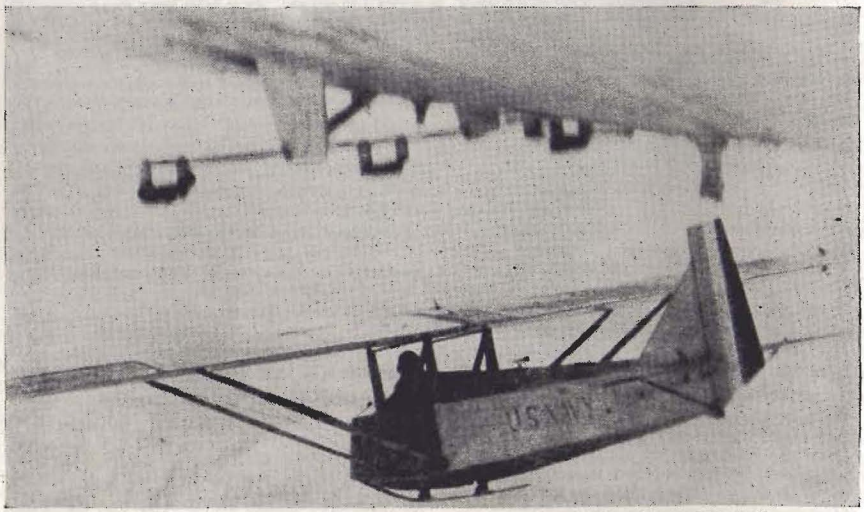
It was a very cold (16°F.) Friday, the 31st January 1930. The launching was made over the Naval Air Station, Lakehurst, New Jersey, at an altitude of 3,000 feet. I was not "taken-up in a Prüfling glider"—I was in the control car of the airship until time for the drop, and then climbed down a ladder into the cockpit of the glider shortly before the release. That climb down the ladder at 3,000 feet scared me more than all the rest put together!

I guess each one of us in this business at some time in our life reaches a point where the thought flashes through the mind—"How did I ever get myself manoeuvred into this situation? Of such are pioneers made!

RALPH S. BARNABY.

"The Early Birds",
Philadelphia, Pennsylvania.

We have now discovered an account of Capt. Barnaby's descent from the airship, which was reproduced in THE SAILPLANE & GLIDER for 23rd June 1933, p. 141. He wrote: "The only danger I had foreseen was the possibility of fouling the dirigible, so I immediately put the glider into a steep dive. I levelled off some 100 feet below the dirigible and, because of the speed gained in the dive, well ahead of its nose. It was not until several minutes later that I again caught sight of the *Los Angeles*. I held the glider at a speed of between 35 and 40 knots except when passing over the [airship] hangar. Then I slowed to about 30. I wanted to see if the hangar could provide any lift. Though it was only a five to eight mile-an-hour wind, and more along the hangar than across it, I could feel decided up-currents at 1,500 feet. They were more noticeable as I descended, and when I passed over it at 200 feet I was able to pick up some altitude." He landed after a flight of 13 minutes. ED.



Ralph Barnaby, in a Prüfling, is released from the airship "Los Angeles".

HALF-SPOILER APPROACH

Dear Sir,

It is with some diffidence that I offer advice on gliding training, allergic as I am by virtue of my individualism to giving or taking dual instruction, much as I myself need it; but there is a technique which I have always thought has much to commend it but which I do not recollect having heard or seen the instructor pundits mention.

Please forgive me if I indulge in a bit of self-experience to illustrate what I mean. I was taught to fly a very long time ago when engine failures were ten a penny and aircraft could be landed "dead-stick" in any field of reasonable size. Hence forced-landing ability was the main aim of our basic training; and to this end, every landing, even at base, had to be made without engine assistance from a height of 1,000 ft. or more. It was almost criminal to use a touch of throttle, and such was our discipline in this unwritten law that no one would dream of avoiding by this means a crash from undershooting. And I have never heard of a pilot being punished in those days for crashing by this cause.

Thus it was axiomatic that every approach had to aim for an overshoot, finishing with a side-slip, and if we didn't do so, we were sent round again, fined 2s. 6d. (a lot of money then), and taken off flying for a time. Then came flaps, motoring-in, controlled glide angle and high wing-loadings, and at once we learnt the great value of the steep approach in judging distance.

Now what can we glean from all this? Well, I believe, just this: that, having safely gained reach of the selected forced-landing field in "fully clean" flight conditions, the entire approach should be made with *half* spoiler to afford the steep good-view easier-judged condition, aiming for a slight overshoot. If you pull this off perfectly, there is enough spoiler left to pull down correctly. If, however, you have erred in the other direction and are undershooting, you have a "little motor" up your sleeve, because of course by taking off spoiler you can stretch your glide. Should you overdo the initial overshoot, you have both full spoiler and side-slip (with extra care) at your disposal.

Having written which, what is the betting that my next landing is in the hedge?

L. P. MOORE.

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

PINS IN SOCKETS

Dear Sir,

Mr. R. C. Stafford-Allen's article on De-Rigging (February, p. 42) does hit the pin on the head (to coin a phrase). But I must take him to task on Rule 2. All pins should go back into their own sockets to prevent loss. This is a must, and I find no argument with it. But let us get our reasons for doing so right.

Most sockets and pins on gliders are virtually non-moving parts, so the degree of wear they are likely to receive over a period of, say, 20 years would not be appreciable. If we take Mr. Stafford-Allen's reasoning one stage further, we find that if we must fit the same pin to the same socket, then to complete the job we must also mark the head of the pin with an arrow so that it fits the same position in relation to the socket all the time. If we do not do this, then we are gaining nothing.

One item I would like to add as an extra. We often find the point of the pin looking something like a mushroom, due to regular and frequent blows from a hammer. Is it too much to ask that some sort of a drift be used? Preferably of a softer material than the pin.

R. H. TAVERNER,
Chf./Tech., R.A.F.

MR. STAFFORD ALLEN replies:—I agree with most of Mr. Taverner's remarks, but I have found that the degree of wear of glider pins, particularly those gliders that often get rigged and de-rigged, is appreciable. In fact, these sockets do sometimes have to be reamed (I would stress that this must *not* be done without a concession from the Manufacturers), and oversize pins fitted. Therefore, unless the pins and sockets are all *exactly* the same size, there will not be a proper fit unless the pin goes into its own socket, and this will reduce the effective bearing area, thereby increasing the rate of wear. I agree that the ideal would be to mark the pins, but this is scarcely practical; but I heartily endorse the remarks that he makes on the subject of hammers and drifts.

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ANALYSING ACCIDENTS

Dear Sir,

The Accident Analysis Officer, in his report for 1960 published in the April issue of SAILPLANE AND GLIDING for 1961, deplores the decline in the number of Instructors and of instructional students.

Unfortunately, the figures used to make his point are inaccurate. He states that the number of categorised instructors was 98, the lowest ever. The true number was 108, the highest ever. Further, in Table 2, he blames the accidents listed on poor instruction, but has included technical defects, damage to parked aircraft and other accidents which have little to do with instruction.

In Table 3 he shows the cost of accidents per hour at a horrifying figure; but, in gliding, launches are a more realistic criterion than hours. The following figures for the last few years are, I think, a truer picture of the position, which, in fact, is remaining steady:

	1957	1958	1959	1960
Cost of accidents per launch	1s. 5d.	1s. 11d.	1s. 5d.	1s. 8d.
Number of launches for each accident	1146	1344	1349	1392

We all know that we need more and better instructors in our growing Club movement. Steps have already been taken to achieve this. What we want from the Accident Analysis Officer is more insight into the basic reason for accidents and, above all, a study of the thinking of the pilot prior to the accident.

ANN WELCH.

BIRDS AND THERMALS

Dear Sir,

Birds, mostly gulls and sometimes plovers, show a decided preference in this part of the world to turn right-handed (clockwise) when thermalling. A member on the committee of your magazine wrote once that birds don't turn for fun, so it is logical, I trust, to conclude that thermal air often spirals its way skyward and that birds, sensing also the lateral wind, fly or soar against it to obtain quicker lift.

It is very tempting, of course, to rush to the hasty if not quite irrational conclusion that the cyclonic movement of the atmosphere in the Northern Hemisphere imparts this left-handed spin, particularly in cold front conditions.

If there is any truth at all in such an assumption, then birds in the Southern Hemisphere will tend to turn towards their left wing. Perhaps some obliging South Africans or Diggers could send us a few Capricornean observations?

A. W. GODFREY.

Zoute Aviation Club, Belgium.

[Will readers commenting on this letter please note that clockwise rotation seen from above is anticlockwise seen from below, and *vice versa*; so it is best to talk of left-hand or right-hand circles, and if clocks are brought in when describing visible thermals, the direction of view should be specified.—ED.]

AIR TRAINING CORPS INSTRUCTORS

Dear Sir,

Midst the hustle of the introduction of new regulations by the B.G.A. governing the appointment of instructors, one distressing, candid phrase bobs up and shouts for explanation: "not Air Training Corps". It appears that instructors operating with the A.T.C. schools up and down the country are *personae non gratae* in the instructor's cockpit, despite the fact that, as the current copy of SAILPLANE AND GLIDING asserts, nearly four times as many souls were trained to the solo standard by these gentlemen in 1960 as in the rest of the United Kingdom. What is wrong, then? Sure, experience in the soaring field in the A.T.C. is meagre compared with civilian clubs, but, in terms of *ab initio* instructor technique, the organisation is rich.

More: consider the facts. Each and every A.T.C. instructor twice a year has (and always has had—no stable door shutting here) to take a written examination in Airmanship, Meteorology, simple Aerodynamics and glider Technicalities, and is given a flying test by

a qualified R.A.F. instructor, usually a man with thousands of hours experience. He is medically examined once a year. Depending on his competence and experience, he is categorised in one of four levels, by which the extent of his authority is strictly defined. A.T.C. schools themselves are run on organised lines, contrasting with the more free-and-easy, quickly-excitable chaos tending to reign at the clubs.

What, then, one asks oneself, makes the categorised A.T.C. instructor the unwanted man? Surely the poor soul is of some use? Can it be that A.T.C. is just one of those three-letter words?

In a wider context, one is constrained to muse on the whole issue of A.T.C.-Civilian club relations. The A.T.C. could be the great *ab initio* training organisation, providing a steady flow of members to the clubs, themselves engaging more in advanced gliding. What an expansion in the gliding movement would result if all these newly-fledged young aviators could be attracted to the clubs to continue their flying, perhaps by a subsidy (which should be regarded as an investment), instead of their wings withering for lack of funds and encouragement.

Pipe dreams, perhaps, but it would be pleasant to see some sort of effort being made towards togetherness, instead of the present vacuum of peaceful co-existence.

M. C. HALL,
Flying Officer.

Importation of Foreign Gliders

FROM time to time new and second-hand foreign gliders are advertised for sale in SAILPLANE & GLIDING. In accordance with the Operational Regulations of the British Gliding Association, all gliders operated from club sites must have a valid B.G.A. or Ministry of Aviation Certificate of Airworthiness, a Permit to Fly, or equivalent Service Document. Exceptions are made for testing, or in the case of foreign gliders belonging to bona-fide visitors from abroad. However, if a foreign glider is purchased by a person normally resident in the U.K. to be flown at a club site, Ruritanian documents are not deemed to satisfy this Regulation.

If the glider is of a type already certificated in this country, the B.G.A. will exchange a valid C. of A. of the country of origin for a B.G.A. document, subject to an inspection by an Approved Inspector. This process is quite straightforward, but it rests with the purchaser to ensure that the foreign documents are in order and that the inspection is carried out.

If the glider is of a type not already certificated in this country, it becomes the responsibility of the importer to obtain a C. of A. under the procedure outlined in "Certification of Foreign Gliders", published in SAILPLANE AND GLIDING, October 1960 (p. 308). Briefly, this involves providing documentary evidence relating to the Design Requirements to which it is constructed, the Type Record if available, weight and c.g. data, the C. of A. for the actual machine, and carrying out such test flying as the Technical Committee may require by a Test Group or Approved Test Pilot.

For the guidance of intending purchasers, the following is a list of foreign types already certificated by the B.G.A.:

Grunau Baby	Ka-7
Meise	Avia
Weihe	H-17
Kranich II	
Jaskolka-Z SZD-8 bis*	
Bocian SZD-9 bis*	

*with some restrictions.

In general, the absence of a type from this list does not mean that the B.G.A. has decided not to grant certification: it merely implies that no formal application has been made. However, there is at least one type for which certification has been refused and certain others for which certification is likely to be rather difficult without modification or the imposition of additional limitations.

In their own interests, intending purchasers of foreign types are asked to seek the advice of the B.G.A. Technical Committee in advance.

F. G. IRVING,
Chairman, Technical Committee.

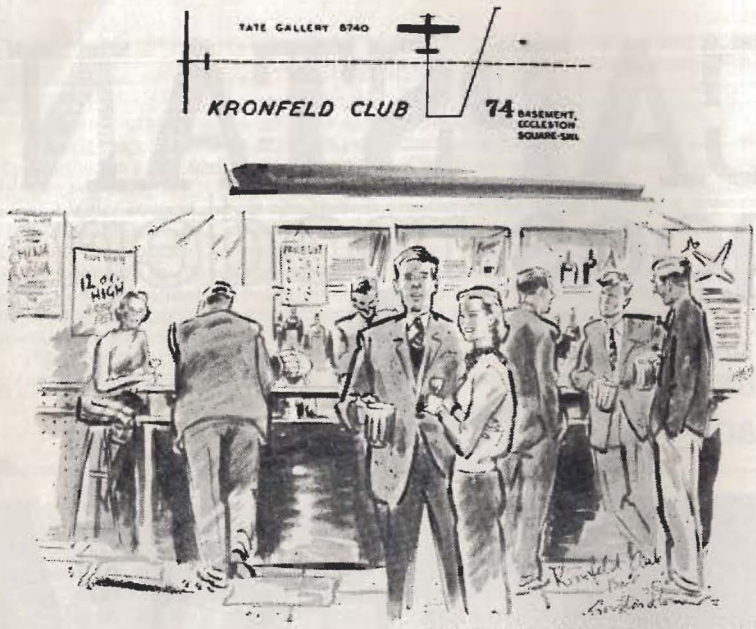
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IF you are not already a member, why not visit the club one Wednesday evening—details of the regular lectures and film shows are given below. Anyone interested in gliding or light aircraft flying is very welcome.

For those considering taking up gliding there is a special talk at 8 p.m. on the first Tuesday of each month. Members and non-members alike may attend and admittance is free.

Besides a lecture room the club has a bar and coffee bar and the Annual Subscription is only £1 (no entrance fee). Married couples 30/- and overseas and country membership 10/-.

Further details may be obtained from the Secretary or call in or telephone the club.

Wednesday Evening Lectures and Film Shows at 8 p.m.

May 17th National Championships, no lecture.
24th (Provisional) "Ferry Flying Can Be Fun". Some experiences of delivering aircraft all over the world by Beverley J. Snook.
31st Reserved for the winner of the National Championships.
June 7th First film of fortnightly series on U.S. Air Force Story, from beginning to 1930.
14th See posters.
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28th See posters.
July 5th U.S. Air Force 1939-42.

WORLD CHAMPIONSHIPS POSTPONED

AT the meeting of the Gliding Commission of the Fédération Aéronautique Internationale held in the middle of April, no offer had yet been received from any country to organise the next World Gliding Championships, due to be held in 1962. It was therefore reluctantly decided not to hold any Championship meeting next year, since, if any offer were received at the Commission's next meeting at the end of this year, it would give insufficient notice for a 1962 meeting.

When the Commission met in Poland during the World Championships of 1958, it decided to hold the Championships in future only every three years, but afterwards reversed the decision and returned to the two-year interval.

B.G.A. BALL 1961

THE Annual Ball of the British Gliding Association which was held at Londonderry House on Friday, 10th March, was one of the most successful yet.

The guest of honour, the Rt. Hon. Julian Amery, M.P., was unfortunately prevented by illness from attending, but Air Chief Marshal Sir Theodore McEvoy, another of the guests, kindly consented to take his place. Lady McEvoy presented the B.G.A.'s Annual Gliding Awards and also Silver C 1,000 to Sergeant E. Edwards of the R.A.F. G.S.A. Moonrakers Club.

The Robert Perfect Memorial Trophy (for details see page 161) was presented by Air Commodore G. J. C. Paul on behalf of the Air League to Philip Wills, who graciously accepted it for the Association.

A surprise item was the unveiling by Lady McEvoy of a bust of Philip Wills which was sculptured, and generously presented to the Association, by H. A. Pitt-Roche.

Other guests were Lord and Lady Braye, who is presenting a cup (details of which will be found on page 181). Air Vice Marshal and Mrs. Lowe, Air Vice Marshal and Mrs. Scragg, and Air Vice Marshal and Mrs. Wykeham.

The Beatnik coffee and hot dog bar, which had been most cleverly decorated by Frank Kinder and Margaret Kahn, did a roaring trade throughout the evening.

Another very popular attraction was the Cross-Country Lucky Dip organised by Beryl Stephenson and family.

R.O.S.P.A. kindly lent a driving reaction tester which fascinated glider pilots and their wives. I was told by the chief instructor that the gliding fraternity seemed to have quicker braking reactions than most.

Barbara Alexander had another sideshow that caused amusement; this was a sucking the barograph competition.

Over 360 people attended and dancing to Bill Savill and his orchestra continued until the early hours. M.C.'s Wally Kahn and Cliff Tippett seemed to keep the proceedings running very smoothly.

All in all this was a most enjoyable occasion and a big hand is due to Yvonne Bonham and her untiring committee, who included (other than those already mentioned) Barbara Carrow, Betty Fairman, Rika Harwood, Jill Walker and Lionel Alexander.

JULIA.

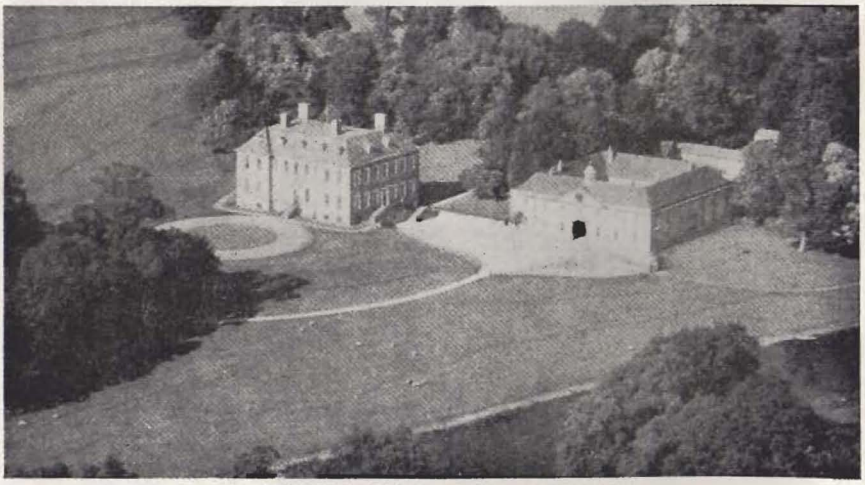


Paddy Pitt-Roche's bust of Philip Wills, face to face with its original. (Official photo by Air Ministry).



Trophy winners and others at the B.G.A. Ball. Left to right: Humphry Dimock (Seager Cup), Peter Scott (Wakefield Trophy), Stuart Morison (Douglas Trophy), Sir Theodore McEvoy, Lady McEvoy, Anne Burns (California in England Trophy), Ted Shephard (Douglas Trophy co-winner), Gordon Rondel (de Havilland Cup), Tony Deane-Drummond (Frank Foster Trophy), A. J. Stone (Volk Cup and Manio Cup), Philip Wills (holding the Robert Perfect Trophy).

Photo by "The Aeroplane & Astronautics"



Stanford Hall and grounds from the air.

Pilcher Memorial Trophy

LORD and Lady Eraye, of Stanford Hall, near Rugby, have generously offered a trophy for annual competition in the gliding movement, to be called the Pilcher Memorial trophy, after the British gliding pioneer. Percy Pilcher was a friend of the present Lord Braye's father, and carried out much of his gliding in the grounds of Stanford Hall until, in 1899, he lost his life in an accident due to structural failure.

The trophy is to be presented annually to "the pilot of a glider achieving the longest flight terminating in Stanford Park." The conditions are:—

(1) The flight to be conducted under British Gliding Association rules, and all claims and correspondence to go to the B.G.A.

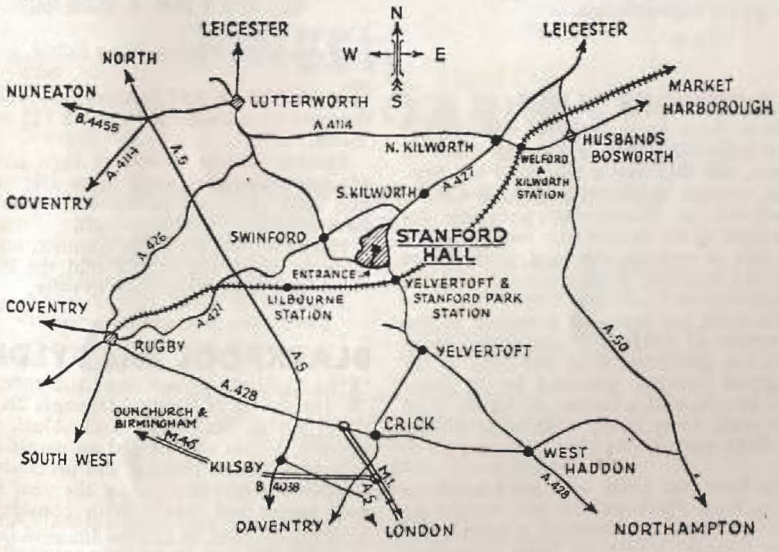
(2) The flight must take place only on a Sunday or Bank Holiday Monday between 1st April and 30th September. Cattle are loose at other times.

(3) A maximum of two turning points before arrival is permitted.

Each suitable day, coloured strips will mark the landing area and two white-coated attendants will be on duty to help pilots before and after landing. Stanford Hall Park has many trees, but there are two suitable strips where Pilcher used to fly. It is 5 miles E.N.E. of Rugby and 5 miles due north of the Crick terminal of the M1 motorway.

A Lecture on Pilcher.—On 12th April Lord Braye gave an interesting lecture to the Kronfeld Club on Percy Pilcher, who as a Naval officer had derived his inspiration from watching gulls and albatrosses at sea. Later, when at Glasgow University as a lecturer on naval architecture, he built and towed through the air a full-sized unmanned glider. After that he made a large number of glides at Eynsford in Kent, and the daughter of a man who helped him at that time has recently sent Lord Braye a collection of contemporary Press cuttings, one of which reports that Pilcher once flew 3 miles.

Pilcher often stayed at Stanford Hall and made a large number of towed glides there. Relics of those times are to be seen in Lord Braye's Pilcher Museum in the park grounds.



CLUB AND ASSOCIATION NEWS



WHAT a discouraging start to the soaring season the Easter week-end gave us, but let us hope for better things at the Nationals and wish all competitors the best of luck.

We have news this issue of the recently formed Blackmore Vale Club who are to fly at the ex-R.N. Aerodrome at Henstridge, Dorset. For those interested in joining, the Secretary is G. B. Warwick, The Square, Puddletown, Dorset. In the overseas section we have news, after a very long silence, from the Victorian Motorless Flight Group.

Swindon have sent us an excellent photo of their club badge which is reproduced on page 188. Have any other clubs got badges or ties they could send in so that we can continue the series?

I would like to thank Press Secretaries for responding so efficiently to my pleas in my recent circular.

The August issue Press date for Club News is Wednesday, 21st June, as usual typed double-spaced on foolscap and sent to me at 14 Little Brownings, Sydenham Rise, London, S.E.23. And don't forget to also include any forthcoming events and photographs suitable for reproduction.

YVONNE BONHAM,
Club and Association News Editor.

BLACKMORE VALE

THERE have been previous unsuccessful attempts to start a Gliding Club in Dorset, but this time a real start has been made, thanks to the release of the R.N. aerodrome at Henstridge and the co-operation of the farmer who now owns the site, not to mention the hard work put in by our Chairman, John Garrood, and the committee.

We think we have set a record in the formation of Gliding Clubs—four weeks from the germination of the idea to an inaugural meeting, attended by 70 interested people, and a further six weeks, if all goes well, to a flying club with 40-odd members, cash in the bank and aircraft to fly.

We have had some very good publicity in the local Press and on our airfield we have the use of the runways, a hangar and some cottages which we hope to convert to a clubhouse and bunkhouse. At the moment we are negotiating for a T21 and a Tutor.

Several private owners of light aircraft are hoping to stay with us at Henstridge and have promised us aerotows when we have obtained suitable aircraft.

Here's hoping for a fine summer, and we hope to dispel the fallacy that the Blackmore Vale has no thermals to offer.

G.W.

BLACKPOOL and FYLDE

THE highlight of our news this month is the arrival of our new Olympia 2b. Our Chief Flying Instructor, Jack Aked, went down to Elliott's for it, did an aerotow the following day at Lasham and proceeded to contact his first thermal of the year when well below 900 feet. With considerable strength of mind he opened the dive brakes at 2,000 feet and in no time rejoined Ivor

Stretch, who was waiting with the trailer and Land Rover in readiness for the 230 miles journey north.

A joyful reception awaited the somewhat late arrival of the Olympia.

The following Sunday was a day of very high wind velocity, but we managed to do several Olympia flights in the afternoon after the aircraft had been officially handed over to us by our President, Mr. Herbert J. Liver.

Much speculation is rife as to when many of our eager Grunau pilots will be promoted to the Olympia.

J.S.A.

BRISTOL

At the well attended A.G.M. held on 25th March, Denis Corrick was elected as the new Chairman and Doug. Jones as Vice-Chairman. Changes on the Committee brought in Rosemary Storey and Ray Jefferies, and Pete Collier is now C.F.I.

The Rex Young Trophy for the best progress by a beginner was awarded to Lucy Barlow. Peter Scott won the Cyril Uwins Trophy for the longest flight (248 miles) and Derek Stowe retained the Evening World Trophy for the best height (24,000 ft.).

Flyingwise, a prolonged dry spell during March dried out the car park, emptied the water-tanks and produced a succession of ridge soaring days. On 19th March in particular, everyone was up at cloudbase at 5,000 ft. and many hours were logged. At Easter someone was shot off every time a gap appeared in the clag, but again only local soaring was possible.

E.A.W.

CAMBRIDGE

March 1961 will be remembered in the Club first for the delivery of the new Skylark 3F and secondly for an exceptionally vigorous start of the cross-country flying season.

The Skylark 3F arrived by aerotow on 21st March and within a week she had logged well over 10 hours' thermal soaring. The position of the new aircraft in the Club's system of advancement is between Skylark 2 and Eagle and this means that the 3F will be flown by a large section of the membership this soaring season.

It seemed as though a wave of good cross-country weather had been supplied together with the new Skylark. By the end of March there had been three flights to the East Coast and the total cross-country mileage exceeded 250.

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Book early to avoid disappointment and remember we offer the following special reductions:

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If a diamond leg is obtained	— 30%

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On 25th March John Brenner gained both Silver C distance and height in the Olympia. He got within four miles of his goal, Great Yarmouth, where Dr. J. W. S. Pringle, the President of the Club, had landed the Skylark on the same day.

The second Silver C distance of the season was flown on 28th March by A. R. Ismail who took the Olympia 60 miles to Southwold, only a week after he had gained his C Certificate.

Since the trailer for the 3F was not quite finished, the cross-country flying in this sailplane was limited to a cautious 34-mile triangle which can be managed quite easily without ever getting out of gliding distance from the airfield even in a 20-knot wind.

G.S.N.

CORNISH

WESTERLIES once more—and good use being made of them. The 18th March was particularly good. Ernie Hayman did his five-hour leg in the Swallow, while George Collins soared a ten-mile beat in his gleaming new Skylark 3F, to beyond Portreath. Bernard Warmington also flew the Skylark for three hours that day, soaring for miles along the cliffs, and both he and George were able to maintain 2,000 feet with little difficulty.

March 26th was another very good day, in the course of which Peter Lanyon did 28 minutes in the Tutor for his C. George Tuson had got his C earlier in the week.

George has been—and is—very busy coping with bookings for our 24 summer courses, which are coming in very well indeed.

Dave Treadwell is proposing to build another trailer for the Club during the coming months, suitable for either Tutor or the Swallow. Fred Breeze has been busy with the C's of A., and a 10-plus and spoiler mod. on the T-31.

Our fleet is now T-21 and T-31 two-seaters, 2 Tutors, and Swallow, plus privately owned Skylark 3F, Meise and Avia and, of course, the indispensable Tiger Moth. The Swallow pilots' list has been increased recently by the addition of Alan Farmer, Ernie Hayman and John Kenny.

P.V.P.

COVENTRY

THE club's A.G.M. was held on Friday, 24th February. H. Woodhams kindly continues to serve us as President. Doc Gregg, who relinquished the post of chairman after serving the club for eight years in that capacity, was elected Vice-President and a life member of the club. Our new Chairman is Mike Hunt.

Vic Carr, John Large and Sheila Hands continue their former services to us as Vice-Chairman, Secretary and Treasurer respectively. Our new C.F.I., appointed shortly before the A.G.M., is Lou Glover. Doc Gregg gave the club a 'Boomerang' trophy to be presented annually for the longest out and return flight.

The state of the club fleet is satisfactory. The Viking made her long-awaited return to flying at the Easter holiday.

The flying news is heartening. In February and March we were able to exceed 100 launches in a day on several occasions. On the week-end 18/19th March, Doug Cunningham took the club Olympia to above 7,000 ft. at Edgehill, three private aircraft set out on cross-countries and Spud Murphy, whose first gliding solo was recorded in the last issue, got his C certificate in a thermal at Bagington.

Over the same two months we have had five first soloists. These were Messrs. D. Finndon, Bennet, Edwards, Williams and Riley. The last three named went on the first possible opportunity after their respective sixteenth birthdays. Three Olympia conversions—Doug Sadler, Reg Neap and Frank Neale; and two to passenger-carrying—Doc Hearn and Phill Winkley—have occurred in the same period.

C.D.-J.

CROWN AGENTS

SUNDAY, 2nd April saw the near-conclusion of a very interesting series of research flights in which this Club was privileged to play a small part. The club-operated Slingsby "Swallow" has since Christmas been placed at the disposal of the Technical Committee of the B.G.A., for the purpose of finding out the loads which might be placed on the control surfaces in performing aerobatic manoeuvres, such as "rolls", and thereby determining the strength requirements.

"Dessyn" transmitters fitted to the ailerons, rudder and elevator pass electric impulses to a "black box" known as a "Hussenot Recorder" which traces these on a roll of sensitised paper. Air speed and "G" are also recorded photo-electrically, and analysis of the resultant wavy lines can

reveal exactly what happens when a glider is being flown. The Recorder and necessary batteries were securely fixed to the wing roots, and the installation had been designed and fitted by Cedric Vernon. His work culminated in the flights by Dan Smith at Dunstable, when a series of loops, half-rolls, slow rolls and inverted flights was performed.

J.E.G.H.

DEVON & SOMERSET (FORMERLY TAUNTON VALE G.C.)

At the Annual General Meeting it was agreed that the Club's name be changed to the Devon and Somerset G.C. which is, we feel, more appropriate.

John Pomeroy was presented with the Kelsey Trophy for the fastest flight to Exeter Airport in a Tutor and Reg Chubb with the President's Trophy for having made the greatest progress in 1960. Reg did the club's first Silver C 5-hour leg on the cliffs near Sidmouth, before low cloud forced him to land on the shingle beach. When the weather is suitable, we hope more 5-hour legs will be done on the cliffs.

The Club fleet now consists of a T-21, T-31, two Tutors and a Swallow, together with a syndicate Kite and a Skylark 3. Already this year we have been able to make much greater use of our two ridges and have managed to contact waves over the airfield, in both Westerly and Southerly winds.

Eight courses have been arranged and are fully booked for the coming season. Old hands in the gliding movement will be amused to learn that on our first course starting on 29th May, under Sam Tolman's instruction, we have booked a Mrs. A. Welch, Mr. B. Masters and Mr. Burns!!

P.E.B.

DONCASTER

The main news from Doncaster this month is that the wave has been located. Peter Grime, in the Skylark, flew about two miles upwind off a winch launch and then climbed to 4,000 ft. This looks as if the lee wave off the Pennines can be contacted from Doncaster and opens up great possibilities except that it is directly under the airway (base 5,000 ft.).

On Easter Monday Arthur Midgly became the first member to go from ab-initio to C.

M.C.U.

LASHAM

The recent spell of fine weather came as a welcome change after a depressing winter. March produced some 2,900 launches and with the Clayton winch, tow car and Austers going from dawn to dusk, 200 launches a day was exceeded on more than one occasion. Some good soaring days resulted in the year's first cross-countries and 5-hour flights.

Meanwhile, much midnight oil has been burnt in organising the multifarious details of the Nationals and we can only hope that the weather co-operates to make the biggest gliding meeting yet, also the most successful.

Thanks to a great deal of help from many quarters the major problem of security of tenure seems at last on the way to being solved. It may not be too long before the pipe dream of a decent clubhouse and new hangar becomes reality.

J.N.C.

LONDON

Firstly, some good news. John Jeffries, who has on occasions in the past instructed part-time both here and at Camphill, is to take on full-time instructing at Dunstable. This very popular appointment should restore much-needed continuity and drive to our training programme.

Not so good news—the Eagle fuselage is up at Kirbymoorside, and the wings in our workshop, undergoing extensive repairs.

Plentiful hill and thermal soaring in February and March brought two C's—J. Argent and I. Seth—while three Silver Durations were gained, two by lady members, Elizabeth Hargreaves and Angela West, and a third by Albert Tarnow.

The unspeakable Easter weather was brightened by the arrival from Sweden of two Weihes (famed for their small sink and small brakes), whose new owners had an easy time outsoaring the rest of the fleet and a less easy time landing within the confines of our portion of the rolling Downs.

Cedric Vernon has fitted the Crown Agents' Swallow with devices for recording continuously control deflections, airspeed and 'G'. This should tell us just what goes on when one attempts rolls and other inverted aerobatics with varying degrees of hamfistedness.

The growing horde of private owners have expanded their workshop so that now two

trailers and two gliders can be worked on without difficulty. The Ottley building is getting like a sausage machine, emitting trailers at the rate of nearly one a month!

M.B.

MIDLAND

THE Easter Task-Flying Rally, just completed, goes down in our records as the wettest and the only one we have held which has had to be written off, not one day being a competition day.

A little hill-soaring was possible on the first two days, which was some consolation for the folk who came so far to fly. On Easter Monday the sun fought its way through the clouds for a short while and a free distance task was announced in a light Northerly wind.

Six pilots left the site, but all came to earth under almost complete cover, the best distance being 24 miles. The following day we woke up to a snow-covered Mynd, which really was the last straw.

Our retrieving winch has been so changed by Jack Minshall during the winter as to make it unrecognisable. In place of the two-stroke engine, a four-cylinder Ford engine has been fitted, complete with water-works and has been mounted on the rear of an old retrieve vehicle for transport and stability. Reports are that it is a great success.

Col. Benson celebrated the arrival and first flight of his Skylark 3F with a wave flight to 7,200 ft. a.s.l. on 2nd March, one of the best flying days we have had for months.

C.G.

NORFOLK & NORWICH
Swanton Morley

WE enjoyed the pleasure in February of a visit from about eight gliding "bods" from Boxted Airfield, near Colchester, who fly a Cadet glider there.

On Saturday, 18th March, unexpected soaring was enjoyed by five pilots. Although conditions looked unpromising due to the anticyclone, surprisingly strong lift was obtained and Alfred Warminger took the chance to air his new 419 and fly it a few miles to Little Snoring for their Rally of powered aircraft.

Norman Brett reported the green ball at the top of the tube in one thermal and Peter Salmon kept the Skylark 2 up for over two hours. Alan Jefferies had a good trip in the Meise. We shall be looking forward to hearing of some good flights from Alan when he returns to South Africa in July.

The less said of the Easter Rally the better, as rain washed it out completely, and we extend our sympathy to all competitors and crews and to the hard-worked Rally Committee.

However, we would remind pilots that the North Easterlies may arrive still and if you want to come, aerotows are available every day except Monday, if you would ring "Taffy" Rich (C.F.I. power) beforehand at Swanton Morley 274.

W.B.R.

NORTHAMPTON

INSTRUCTOR Geof Pentelow "kited" the Swallow to the full extent of a cable some 4,300 ft. in a strong North-Westerly wind on 26th February.

The following Saturday saw the eagerly awaited arrival of Harvey Britten complete with his Tugmaster, and so our general training began to incorporate regular aerotows. The following day almost, it seemed, as a gesture of disapproval of the Tugmaster, our old faithful winch blew out everything it could in the front engine. A new engine has, however, been fitted under the skilled supervision of Ralph Hawkings, Reg Spokes and other willing hands.

In a brief spell of thermal activity on Saturday, 18th March, Tony Barrows reached 4,000 ft. in the Swallow, and the following day quite a number of local soaring flights were recorded.

The C.F.I., with Stan Norsted and Eddie Clarke, have put in many hours of work on the Skylark 2, carrying out a complete check, followed by a respray.

D.W.W.

OXFORD

AT the Eighth Annual General Meeting of the Club, Professor G. C. Varley, L. A. Speechley and S. J. Taylor were again elected to serve as Chairman, Hon. Secretary and Hon. Treasurer respectively, whilst John Ellis will continue to be C.F.I. and Chris Hurst will again minister to the needs of the club's aircraft.

V. R. Collins and D. E. Everard were re-elected with J. Wren and D. Evans who struggled to good effect with our Ground Equipment last year. This year they will be aided by J. Womack, who joins the Committee with R. Simpson.

The latter celebrated by being converted to the Olympia, of which he is part owner, and Donald Lowe, another of this syndicate, made an attempt on the Silver C Duration from an aero-tow to Edge Hill. Disappointingly the Olympia landed "at the bottom" in good company after 4 hours 3 minutes.

By Easter we had flown on as many days as last year but the weather left its mark by one hundred fewer launches.

However, we produced five more flying hours and recorded three less soarable days and since very few of our flights commence with an aero-tow it would seem that our overall ability continues to improve.

Our Skylark syndicates had hoped to obtain some measure of our prowess at the Swanton Morley Rally, but this is now part of the sorry story of Easter.

L.A.S.

SOUTH WALES

With our Tutor at Slingsbys for a T-31 conversion, we will not be airborne before June. Our site has proved effective for ridge soaring, some hour and half-hour trips being made. Two members flew the required time for the C but do not qualify yet.

A second trailer is under construction and two members are attending an instructor's course at Perranporth.

Sunday, 8th March, provided soaring for every solo pilot on the site—lift at 8 up being experienced at 300 feet while snowing!

H.I.S.

SURREY

On 21st January there was a Farewell Party for Brian Masters, who has left to take up an instructor's post at El Mirage, California. This party also became a celebration for Anne and Denis Burns, who scooped most of the world records while in South Africa.

The warmer weather before Easter encouraged old faces to appear and take to the air. Ray Duckett managed to do his five hours on his first flight this season, also Ferelis Wills, while Rocky Stone and Hugh Hilditch did 100 km. triangles in good time.

Saturday, 25th March, was an excellent day with nearly all the machines at Lasham in the air at one time. During the afternoon Wally Kahn arrived from Bicester—the task on that day being a goal race to Lasham. David Ince and John Williamson arrived soon after. Wally Kahn was the winner of the R.A.F. Championships at Bicester.

Easter saw most private owners setting off for rallies held at the Mynd and Swanton Morley. At Swanton Morley the Surrey Club was represented by four Skylark 3's, all of which took to the air once on Good Friday, which was the only hopeful day there. However, members made the best of a bad thing and went on a Cook's Tour of Norfolk searching for places to eat and also bird watching.

Congratulations to our Chairman, Sydney Swallow, who married Jennifer McDowall on 18th February.

J.W.



SWINDON

Since our last appearance the club has acquired a car badge (see photograph). This was developed (with permission) from a printing block designed by Mr. C. T. Cuss in 1919 for the original "Wiltshire Light Aeroplane & Glider Club".

The new Olympia was aerotowed from its test site—Thruxton—to South Marston, despite indeterminate weather.

Enthusiasm has grown in the parachute section. Anyone interested in ground training (jumping optional) please write to Brian Porter, 67 Graham Street, Swindon, Wilts.

Easter Sunday provided much activity with a visit from the Biggin Hill Flying Club. Prentice, Chipmunks, Tigers and Jackaroos were set aside in one corner of the airfield while their pilots explored the possibilities of our T-31.

Visitors to social or flying events will be most welcome.

YORKSHIRE

MANY hill sites do not have facilities for aero-towing and so this Easter the Swallow was taken to Crosby-on-Eden to give senior pilots the opportunity to qualify for the Nationals and Categorisation. Some seven club pilots had their first tows there and in the three days available some 53 tows were carried out.

Only Easter Monday was a satisfactory soaring day. A task was set for an out-and-return to Kirby Stephen. Only Jock White in the Skylark 3F completed the task, but Ian Paul of the Newcastle Club landed at the turning point. The Swallow went up to 7,000 feet twice.

At Sutton Bank we have had some excellent waves in February and March. Ritchie Pick has taken the Swift to over 9,000 feet twice. On 4th March he was able to soar over the North Riding and reached his best height over Harrogate.

On the 25th March waves were again present when he and Frank Randall of Newcastle Swallow Syndicate went up to 9,000 feet again. John Iceton in the Club Swallow gained 4,000 feet.

In the previous week a member of the Cleveland R.A.F.G.S.A. Club at Leeming took a Tutor up for five hours and found a wave that took him to 7,500 feet.

Training goes forward well and Fred Bainbridge and Bob Whiteley both completed their flying tests for their C's. Massman and Waldron have been converted to the Swallow. Smallwood has been sent solo.

J.C.R.

ULSTER

THE sudden death last year of our Secretary and Founder Member, the late Mr. William Liddell, has left the club with a deep sense of loss. "Billie" was undoubtedly the "Father" of gliding in Ireland.

We have resolved to forge ahead in 1961 and for this purpose have obtained the late Secretary's Gull III and also a Bergfalke II two-seater from "Aviator" in Jutland.

This season's soaring is well under way and the Club has logged 7½ hours' during the last three weeks. A Silver C gain in height of 3,600 feet was obtained on Easter Monday—but, alas, without barograph!

G.M.

SERVICE NEWS

BANNERDOWN (Colerne)

IN spite of the March winds we have been very active and have totalled 42 hours in the month. One A and B was gained and our retiring Secretary initiated the cross-country flying with a Silver C height and distance, for a flight to Old Sarum. On Easter Sunday our first lady member went solo to gain her A.

Our Novices Cup, generously presented by Harry Daniels, has yet to be awarded to the best novice progress in the air, and on the ground.

Four members attended the R.A.F.G.S.A. Wave Project at Carlisle and gained valuable experience.

S.B.

EAST ANGLIAN (Duxford)

DESPITE mechanical troubles, flying has continued as much as the weather allowed. Our first soaring trips have been made with John Delafield hogging an hour in the Eon Baby and odd trips of 15-30 minutes each.

Congratulations to Bill Boarman and our Chairman, Group Captain Winskill on gaining their A and B in the Tutor, and also to our C.F.I., Max Bacon, on establishing the British Two Seat Absolute Altitude Record in the Eagle at Carlisle with a height of 19,900 ft.

Alec Caudron has made a wonderful job of the Eon Baby trailer and is at the moment making modifications to our third winch. Pete Dawson also mended the tractor when it threw a big end.

Several members went to the B.G.A. Ball and came back just in time to start the next day's flying, which commenced at 07.00.

One impressed onlooker was overheard to say: "You can't miss the instructors; they're the ones wearing the dinner jackets."

Dave Stephens in the Kite had a hair-raising experience. He was struck by lightning, knocked unconscious for a few seconds and unable to release because of shocks from the release knob. After a safe landing, the aileron cables were found burnt nearly through, with some other damage.

A.W.H. & D.V.D.

HOME COUNTIES (Hornchurch)

WE wound ourselves into the air again at the beginning of February after a winter's hibernation.

We passed on the T-31 to Four Counties in January and in the same month we took delivery of our new Olympia. We now have a T-21, a Cadet, a Grunau and the Olympia. Our C.F.I., Ron Taylor, flew the Olympia at Bicester in March in rather indifferent weather and knocked up 80 miles on four cross-country flights.

The weather at Easter spoilt our flying programme, but we are hoping for better luck for our soaring fortnight in the middle of June.

We have had one certificate this year so far—a B for S./L. Taylor.

We had the opportunity to lend a hand, and a cable, to Roy Hubble and Philippa Buckley, who called in en route for Swanton Morley with the Kent syndicate Skylark. We look forward to seeing more visitors during the summer, especially if they happen to be airborne.

G.H.M.

MOONRAKERS

OUR contratulations go to Eddie Edwards who was presented with his Silver C—The B.G.A.'s 1,000th—by Lady McEvoy at the B.G.A. Ball. Also congratulations to Mac McKenna who has gone solo since our last report.

Though the first soaring of the season at Upavon was experienced on the 19th March, when John Willie reached 7,000 ft., there is little more to report from the flying side of club affairs. Of late, effort has been concentrated mainly on repair work and this together with R.A.F. team practice and the Easter Rally at Long Mynd has curtailed our activities somewhat.

However, one ray of hope in an otherwise gloomy report is the maiden voyage of our new 40-ft. trailer which "hit the road" at Easter when it went to Long Mynd. Everyone agreed that it is a credit to its builders—Taff Thomas and his team.

D.W.L.



Sergeant E. F. Edwards receives Silver C No. 1,000 from Lady McEvoy

WINDRUSHERS (Bicester)

A LONG absence from Club News has given rise to the rumour that the Windrushers at Bicester are now defunct. Annual statistics for 1960 and the recent R.A.F.G.S.A. Practice Week (reported elsewhere) proved the rumour completely unfounded.

The Club continues to flourish year by year and despite the poor 1960 season we broke all records for launches and hours, and collected the highest number of certificates and legs of any club in the R.A.F.G.S.A.

Recently we have unfortunately lost the services of Flt.-Lt. Dave Cretney as C.F.I. M. Plt. Ken Poole is now C.F.I.

We have also lost the valuable support and guidance always given by Flt.-Lt. Ron Dunn who is at Farnborough with Dave. We wish him every success with his new club, Wessex, at Andover.

During the winter a number of Windrushers have visited the R.A.F.G.S.A. Wave Project at Carlisle. Whether new to wave soaring or old hands, all agree this facility for winter gliding is always a great success.

This club could not have struggled through this very wet winter, which always makes operation from a grass airfield most difficult, without the valiant efforts of our local instructors, Dave Parry and Ron Newall. The club also owes a lot to Ron for his wizardry in keeping the winches up to scratch single-handed.

A and B certificates have been gained by Flt.-Lt. Jock Cameron, L.A.C. Normington, A./A. Stan Grice, J./T. Jenkinson, A./A. Bruce Gourlay and Mr. Squire Hoyle. More recently a C flight was gained by Mr. Bob Harvey in an early March thermal and an A and B gained by 1st Lt. Charlie Newcomer, U.S.A.F., converting to gliders from multi-jet aluminium monsters.

P.I.P.

OVERSEAS NEWS

AUSTRALIA

IT has been quite a few years since news of the Victorian Motorless Flight Group made the pages of SAILPLANE & GLIDING. The group has expanded to over 100 flying members and there are four club sailplanes and three private syndicates.

Last year we replaced our Kookaburra two-seater with the new long-wing version from Edmund Schneider Ltd., and this new type has accumulated an impressive flight log.

The new "Kooka" has proved so popular that another has been ordered to replace our T31 which has given sterling service on "circuits and bumps" over the last seven years.

To help finance the new glider the veteran "Golden Eagle" has also been sold. The "Golden Eagle" was designed and built by Mr. H. G. Richardson in 1937 when it was the best sailplane in Australia and for many years was our "flagship".

On the last week-end of flying with the club the GEII scored another Silver C duration and distance to complete an impressive career.

This season has been, without doubt, the best for many years for the Group. At the "Nationals" our Gull IV, Skylark 2 and LO150 teams did well.

Previous champion, Jack Iggulden, was just beaten for the title and we had five of the first ten placings, also Dave Ferguson in the LO150 set up a 200-km. triangle record of 48.9 m.p.h.

Since then the syndicates have not ventured abroad as soaring at Berwick has been the best ever. Even the T31 has been to 7,000 ft.

The Tandem Tutor could have gone even higher but the instructor, in shorts and sandals, cut the flight short despite the temptations of 20 ft./sec. lift. Best height recorded at Berwick was 14,000 ft. in blue air thermals by the Kookaburra.

In any event the soaring weather is in marked contrast to last year's dismal flying. All the gliders have made long flights.

Best of these were Rupert Brown (Skylark 2) 260 miles, Gary Sunderland (LO150) 239 miles, Bill Iggulden (Gull IV) 236 miles, Otto Brand (ES56 Nymph) 190 miles and Ron Roberts (ES52B Kookaburra) 140 miles. Many Gold and Silver C awards were completed but, surprisingly, no additional Diamonds.

A few A and B awards have been earned must most of this season's crop of trainees

have yet to go solo.

However, the next two months should see most of them off in the T31 before it is sold. The Instructor's Panel can then draw breath and revise the training programme to the new machines.

The old system of "progression", under which a pupil transferred from T31 to Golden Eagle to Kookaburra and then Nymph will be replaced by one in which a fully trained pilot is produced on the long-wing Kookaburra and solo conversion occurs at a late stage.

This latter system, as outlined by Ann Welch, has been used by quite a few Australian clubs over the years and found to be practical and safe.

G.S.

TREVOR Sherrard also writes from Brisbane: "3,500 mile X/C by Hütter H17; flying time 1 hour 57 minutes."

This should make the big boys sit up and take notice.

Actually the aircraft was trailed from Perth in Western Australia, across the Nullabor plain to Gawler, South Australia, where I took delivery.

After the comps, I trailed it, via Melbourne, to Brisbane and then my partner, Max Howland, took it the final 150 miles to Kingaroy. There it makes full use of the excellent thermal flying.

The 1 hour 57 minutes involved was local flying at Gawler and Waikerie in South Australia.

There have been quite a few long trails in Australia,

Recently, I understand, the H17 from Alice Springs turned up in Townsville in North Queensland—how that trip was arranged I don't know. However, it would involve quite a few thousand miles.

The historic Gull I, which started its Australian career in Sydney, found its way to Alice Springs, then to Onslow, right up in the North-West of Western Australia.

Australia is the land of distances and on a Nullabor crossing, it's 450 miles between beers! Perhaps the fact that we travel 150 miles to our gliding site is an indication of enthusiasm.

T.S.

THE CRUSADERS (R.A.F. Akrotiri, Cyprus)

SINCE our last report we have taken delivery of our T31(b) fuselage from Slingsby's, presented by the Nuffield Trust. Owing to the fact that the T31(b) wings have not yet been completed, it was necessary to convert the Tutor wings to T31(b) standard.

Since flying commenced with the new machine on the 12th March 1961, we have instituted a programme to train the first 12 pupils, during which we have so far completed 260 launches.

Our members comprise a wide cross-section of our community, including ground and Squadron air-crew, and even three wives.

Membership is a difficulty since our runway airfield and one two-seater operating limit the number of launches we can offer and also the pupils we can train. The advent of our 2nd two-seater should materially improve this situation.

We had three notable flights in the Tutor before its conversion, the best of which was an hour's flight to 5,000 ft. by Roger Brundrett, and one of 45 minutes by our C.F.I., Bill Owens.

We are anxiously awaiting the arrival of our T.21(b) and Swallow.

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