Sailplane and Gliding

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COVER PHOTOGRAPH.—Skylark IIIb crossing the paddy fields of the Scottish Gliding Union at Portmoak.—Photo by courtesy of "Courier and Advertiser".

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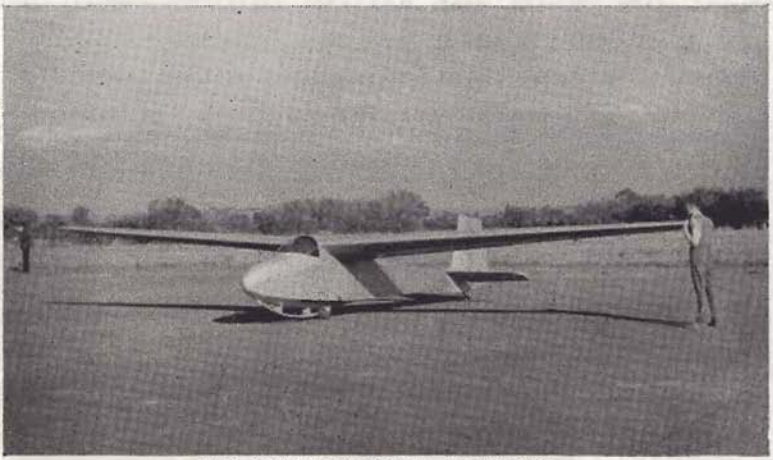

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The World Championships

by Nicholas Goodhart

Leading pilots in the Open Class at the prizegiving ceremony: the Champion, Ernst-Günther Haase in the centre; No. 2, Nicholas Goodhart, on his left and No. 3, Rudolf Mestan, on his right.

(Photo by Betsy Woodward)

PREPARATION for a World Championship is a long-drawn-out and frankly tedious affair involving hard work by many people for months before departure date. From the pilot's point of view there is first of all the question of what machine to fly. I was offered a special Skylark III and an Olympia 419, but finally I ended up taking my own standard Skylark III, because I was doubtful about the delivery date of the Olympia 419 and I did not think the special Skylark III had any performance advantage over my own.

With the machine I was going to fly selected, there was then the question of selecting a crew; not everyone can take a month off work in the middle of the summer and in addition be a good trailer driver as well as being able to put up with me, particularly when under the influence of "competition nerves". Lorne Welch as team captain was a natural selection as he had proved his equability and skill in France two years ago. Bryan Jefferson as the second crew member proved equally successful, so that first and major hurdle was cleared most satisfactorily. Experience has shown that a crew must get on well together for there to be any chance of success. Experience has also shown me that two, no more and no less, is the right number for a crew.

At last the final week came and preparations were almost complete; up till then it had all been rather a chore, but as every day passed it got more and more exciting. Not only was there that anticipatory pre-competition feeling but also a rather similar feeling engendered by the unknown into which we were to plunge. I had no idea what Poland would be like, nor Czechoslovakia, through which we were to pass en route to Leszno.

The visit to Buckingham Palace at the invitation of the Duke of Edinburgh made a superb send-off for the team, and everyone was in high spirits as we drove down to Dover, but always there was that nagging feeling in the back of my mind that so many people had worked so hard to make all this possible—wouldn't it be awful if we damaged the glider beyond repair on the way there. There always seems to be at least one machine that does not turn up for this reason. In France, two years ago, four were damaged en route. This time one of the Austrian machines was wrecked. But I need not have worried, as my splendid crew navigated the 1,000 miles to Leszno with complete success and I was hard put to it to find any excuse for back-seat driving. The calm in the car was occasionally shattered by a cry of "Rechtsfahrt", but I must admit it was generally me driving at the time.

Once at Leszno, it was a great relief to get all the spares unloaded and get the car and trailer down to a reasonable weight. The difference in performance was immediately noticeable and, given a following wind, the whole outfit became almost sprightly.

My first concern was with matters domestic; one cannot give full time and attention to competition flying if one cannot get a decent wash and a proper night's sleep. However, all was well on that score as the camp beds in the camp were quite satisfactory, and the wash house, when one got to understand the vagaries of the water system, was good. The feeding arrangements, too, turned out satisfactory, though the management missed a good point of the French championships by providing many

small tables instead of a few long ones. The big tables have the great advantage of mixing up the nationalities.

And so it was time to concentrate on gliding. On the first practice day there was no task, but it was a great relief to get gliding at last, and with no shortage of lift there was no difficulty in staying up and exploring the local area around the airfield. Though I didn't realise it at the time, I was "seeing" nearly the whole of Poland, since the vast majority of the country consists of the same flat plain with occasional small towns and villages, but otherwise entirely covered with the most meticulous agriculture interspersed with clearly defined woods and occasional lakes. There are no hedgerows or fences and most of the cultivation is in small strips; however, these are for the most part of ample size for landing in. Roads did not appear to be too infrequent, so in general it was apparent that the selection of a suitable field should not be difficult.

In the next few days of practice it soon became apparent where the strongest competition lay. The two Meteors from Yugoslavia had a formidable performance under strong conditions; the Czechoslovak Spartak was another in this same class; Haase's HKS, too, showed up well, though I must admit that I underrated him on the strength of his performance in the two-seater class at St. Yan in 1956. Other outstandingly good gliders were the Polish Jaskolka and the Bréguet 901 and 904; and last, but very far from least, there was the Olympia 419/ Tony Deane-Drummond combination.

The last three practice days worked us all up to a great pitch of enthusiasm with tasks of a 100-km., a 200-km., and finally a 300-km. triangle, all of which were completed quite easily by most competitors. These three days also made me realise that my own machine could not possibly keep up with the really high performance machines under such good conditions, and hence my strategy was more or less decided for me—I must at all costs complete every task and hope that the speedsters would overdo it somewhere and lose out on one day. Since the rules required all days to count, one bad day would drop anyone out of the running. The days on which I should catch up would be any task in which flying goes on until one can stay up no longer. Under these conditions the superior climbing ability of the Skylark III might well mean an extra half-an-hour's flying in the late evening—but not over the Olympia 419, which climbs just as well.

The opening ceremonies were most impressive, with superb glider aerobatics, many of which I for one had never seen before. When finally they dangled a glider from its towline under a helicopter I at last understood why the A.R.B. requires glider towing hooks on aeroplanes to be capable of supporting the full weight of the glider —and to think that I had not even thought of it before: ah! the infinite wisdom of our rulers.

The first day of the competition was by far the hardest flight of the contest, and it was only by dint of continuing the struggle long after any sane chap would have called the whole thing off and landed that I succeeded in staying airborne. Just, and only just, did I manage to struggle back, and though my position of =9 was not good, the Spartak and one of the Meteors were below me. This day's flying changed everybody's outlook; the practice days had given the impression that Polish conditions were from good to superb by English standards, but now everyone realised that we could expect, at least sometimes, to have to fight even to stay airborne.

When the next day's task of a 100-km. triangle was announced, it was also announced that the latest time for crossing the line was 14.00. This set a difficult problem, since one would have liked to do it twice, but to ensure being back by 14.00 one would have to make one's first start too early; so I decided to make only one attempt, and then came the problem of which way round to go. One leg was straight into a strongish wind, so I chose to do that one downwind and, as it were, tack upwind on the other two legs. This decision could not have been more wrong, since there was a cloud street nearly straight along the into-wind leg and very fast upwind times were achieved by these who went that way. An interesting feature of this task was the requirement that, at turning points, height must be below 1,000 metres. Since the tops of the thermals were at up to 1,800 metres, one found that one had in fact to do a final glide to each turning point. This called for a terrific amount of juggling with calculators and the map, making the whole trip a nightmare of mental arithmetic.

I was not surprised, though a little

depressed, to find that I was 15th in this task with a speed of 63.2 k.p.h. as compared with Haase's 83.4 k.p.h. and our own Deane-Drummond's 76.6 k.p.h. (he went round the right way). The marking system was such that I got only 67 per cent, and I was reckoning on getting 75-80 per cent each day. Clearly I must pull my socks up and use a little less caution.

Somebody pointed out at this point that many of us who had completed the last five tasks (three in the practice period) had now done just on 1,000 km. without an away landing.

The third day's task was a race to Warsaw. One made the usual calculations about how long it would take and what was the best time to start, but they were a complete waste of time. On being launched, it was difficult to stay up at all. The top of the thermals seemed to be about 2,000 ft. Everybody was floating about like fish in an aquarium. Clearly the problem was to get to Warsaw, and therefore all racing could be forgotten. Naturally one aims to cross the starting line at maximum permissible height (1,000 metres) at maximum speed. This means diving from about 4,000 ft. But not so on this day. At a miserable 2,200 ft. I crept across the line at minimum speed and floated off to one of my pet local thermals—it wasn't there. I pushed on until I only just had enough height to get back to the airfield and then turned back, but hit some weak stuff at 600 ft. My crew had driven through Leszno and were on the road just below me as I drifted downwind, circling interminably.

And so it went on for the next 40 miles; it wasn't in fact difficult, as thermals (so-called) were quite close together, but it certainly was tedious and my crew had long waits beside each suitable landing field until I moved on a bit. When conditions suddenly cheered up, I began to make better time, but my crew were still keeping up although driving hard now. Unfortunately, at about 5.30 p.m. I hit a clear patch and just failed to get my next thermal, and was down in a hayfield for my first away landing. As I bicycled around the country looking for a telephone (14 kilometres by bicycle) and putting out my flag, I saw four others go over, but the evening was dying and they did not get very much further.

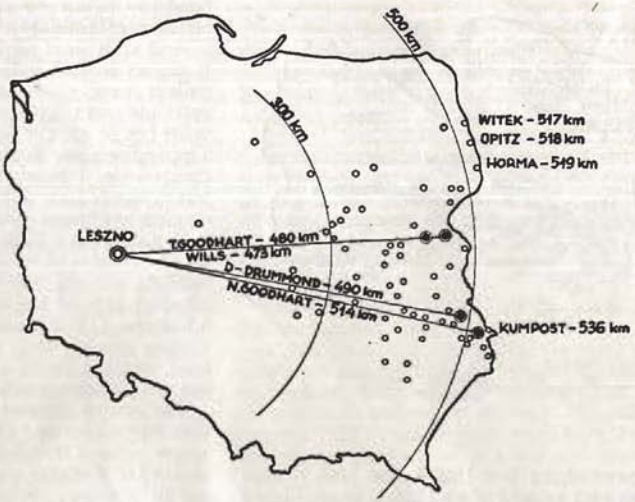
The results showed me fifth for the day with 848 marks and Deane-Drummond top scorer with 1,000 points, the race being marked as distance along a line, as nobody got to Warsaw. What a fascinating finish it would have been had we got there! As we saw later, the final glide would have been made straight over the middle of Warsaw. Imagine being at 600 ft. with three miles of nothing but bomb sites and large flats and office buildings underneath one. One couldn't reasonably be much higher than 600 ft. at three miles out with a following wind of 10 knots or so.

This flight brought me up from 13th to 7th and built up my morale somewhat. Deane-Drummond was now in second place, so there was no doubt that the British team was well in the running, but at this point the weather decided to let us down and for three days we champed at the bit while it blew and rained and was cold.

Finally they did manage to set a task, and what a remarkable task it was—a straight line race of only 92 km., and this on a day with big cumulus build-ups. If one could get one decent climb to about 10,000 ft. one was there, but equally, of course, there were big gaps and rain cloud areas—all very difficult.

In the end I chose a rather poor time to go and was too late to get back for another try, while Deane-Drummond had the misfortune to land short of the goal by two or three kilometres, with the result that he dropped to 9th in the over-all classification, while I maintained my position of 7th.

Another bad-weather day followed, and



Landing points on flights from Leszno on 20th June. Drawn by A. Blasik.

then came a forecast which should have provided a really big day. The forecast was in fact wrong, but nevertheless with a task of free distance some big flights were made.

After considering the forecast it was apparent that the limit of the day's flying should be the Polish-Russian border, so it was simply a question of picking the most distant point and declaring it for a goal (a record if one got there). The point I selected was slightly cross-wind, but it seemed from the forecast I would have ample time to cover the 540 odd kilometres.

The start was not too bad, and with a good wind on the quarter I was getting steadily ahead of my trailer, despite their achievement of 96 miles in two hours of motoring. The radio was working well and I last heard them (and they me) as they entered Warsaw at about 16.30, but by this time the error in the forecast was apparent. The wind should have swung round more nearly to a tailwind and the cumulus should have built up perhaps even to small thunderstorms. Instead, the wind had swung the other way and the cumulus had all but disappeared. The result was that I went aground at about 18.00 a bit north of track and about 10 kilometres from the Russian border for a total distance of 514 km. Half an hour after I landed, Haase and his team mate Kunz turned up in the next field but one.

This flight gave me =4th for the day and raised me to 5th in the general classification, while Deane-Drummond got 490 kms., which kept him in 9th place over-all. Incidentally, six open class and four standard class machines got over 500 kms.

To their everlasting credit my crew came bounding down the highway at 22.30, having achieved 400 miles in 11¾ hours, and though I was one mile off the road I was able to get them on the radio and direct them into my field. The road in was not good; in fact, but for vast numbers of willing hands the car and trailer would be there yet. However, we were soon loaded up and back on the road, and deciding that since the next day was a rest day we should stop for the night in a hotel. A series of fascinating interludes involving the police, a remarkable French girl, an invasion of our room by another charming girl and other minor confusions about other gliders in the locality were eventually sorted out by the ever-capable and ever-coping Lorne, and we had a comparatively good night's sleep. After a shave (the barber spoke excellent Canadian) and breakfast, we pushed on again soon after nine. The wisdom of stopping to sleep for the night was soon borne in on us as we came upon the wreckage of the unfortunate Kunz's HKS, which had become wrapped round a tree in the night.

After lunch and a couple of hours' sightseeing and shopping (not very successful) in Warsaw, we pushed on back to Leszno for an 816-mile round trip in just under 36 hours.

And so we came to the final task—though we did not know it at the time. This task was distance along a set line to the N.E. and, like the third day, the thermal tops were very low at the start—in fact, I did not reach 2,000 ft. until I had been going some time. Deane-Drummond and I were the first to get away on this task, simply because we were ready for take-off when launching time came, and the rest were not. This proved an enormous advantage, as

E. G. Haase in his HKS 3.

after about 200 km. we ran into a sea breeze blowing in from the Baltic and all was lost. As we were leading the pack, we got farthest before hitting the sea breeze and ended up first and second for the day, with me getting just three km. more than he did.

Things were really beginning to look up; this flight raised me to second and Tony Deane-Drummond to seventh in the over-all classification, but the remaining days were clamped, so that was the end.

In retrospect, I made mistakes which might have cost me 200 or 300 points, but I was 479 behind Haase. His performance was fantastically good, and nearly unbeatable unless he had made a mistake.

Championship Statistics

A FINAL *Bulletin d'Information* from Poland, issued after the World Championships were over, summarises the meeting's activities.

Total flying time for the three weeks was 2,898 hrs. 55 mins. in 806 flights. This was made up of 943 hrs. 44 mins. in 355 flights during the practice period, and 1,955 hrs. 11 mins. in 451 flights during the contest.

Cross-country distance was 83,451 km. (51,854 miles), made up of 21,048 km. during practice and 62,403 km. during the contest. The Standard Class was responsible for about 40% of this total. Retrieving teams using Polish vehicles are estimated to have covered 150,000 km. (93,000 miles).

Thirty-one national records were beaten by various pilots. One new international record was provisionally put up; speed round a 300 km. triangle (single-seater) by Bozidar Komac of Yugoslavia in a Meteor.

Ten diamonds were earned, six of them for 500 km. distance.

Germany was represented by 8 different sailplane types, Great Britain by 5 and Poland by 4. When pilots were allowed to try each other's machines after the contest ended, the most sought-after were the Yugoslav Meteor and the Czechoslovak Démant and Spartak. The HKS-3 was not offered for trial.

The Technical Service reported on total repairs done during the three weeks, which were:

Gliders: 3 big repairs, 17 middling and 50 small.

Aeroplanes: 3 big, 20 small.

Transport vehicles: 60 middling.

Tugs put in 120 hours' flying, and their average time for launching 61 gliders was 35 minutes.

Incoming telephone calls concerning landings and retrieves numbered 2,200 and added up to 182 hours; the average, some of the users may be surprised to learn, works out at just under 5 minutes per call.

Finally, the food. In the practice period 656 people used the canteen; during the contest 680. The daily calorific value of the meals served was between 8,200 and 9,850 calories per person, or about three times the normal need.

Looking Back at Leszno

by Philip Wills

(With acknowledgements to "Aeronautics")

IN retrospect, one has to admit that the 1958 World Championships were not amongst the most interesting or exciting of the series, though this was hardly the fault of our Polish hosts.

The main lack was in variety of flying conditions. It was to be expected that, over a mainly flat country such as Poland, the air might not be too interesting, and certainly we could not expect any wave flying, but in the event we hardly had any cloud flying either, which left us six days of flying in thermals varying from very weak to very strong indeed, tailing off most disappointingly into four days of solid rain which brought sad memories of Camphill 1954. As we were all living under canvas, we all got damper and damper, though after Camphill our fellow-feelings for our Polish friends made us wondrous kind.

As for the outcome, there is no doubt that Leszno was Germany's meeting. In the Open Class, Haase 1st, Laur 8th, and Kuntz 16th (his machine was damaged in a road accident after the 5th test, so Kuntz missed the 6th and final day), Huth 3rd in the Standard Class, the Ka-6 won the Standard Class OSTIV award, and no less than 13 German aircraft were flown. This put Germany in the sort of predominancy which we have held since 1952; but they are not way ahead on their own in the manner of the pre-war years, and we must clearly regard the result as a challenge to be met. I will try and break down this challenge into its various components.

Aircraft.

The biggest interest of the VIIth World Championships was the inception of the Standard Class, intended to encourage the design and production of cheap and sensible sailplanes suitable for general use. Whatever doubts may have been held in some quarters on the value of this conception before Leszno have vanished by now, as everyone, including their proponents, was astounded by the performance these machines put up. The Poles were able to set the same tasks for both Classes throughout, so that a direct comparison was possible. If Witek, the winner of the Standard Class, had been flying his simple 15-metre glider in the Open Class, he would have been placed seventh, ahead of such redoubtable exotics as the Meteor, Spartak, Démant, and the Bréguet 901. He would have done even better if the Poles had not insisted on launching the Standard Class after the Open Class every day, a thing which must not happen again. The Standard Class is *not* the Junior Class—it is undoubtedly the more important of the two for the future of gliding.

(Photo by Bernard J. Koszewski)

The most interesting new machine at Leszno was probably the Bréguet 905, the Fauvette, a Standard Class prototype which may well foreshadow the next revolution in sailplane design. The first generation of modern gliders ran from around 1933 to 1952, from, say, the Rhönbussard by Jacobs to the Slingsby Sky. These incorporated cantilever wings of Göttingen 535 or similar high-lift section, lift-spoilers leading to air-brakes, and constantly improved handling and stability character-

istics. Then came the second generation of so-called laminar-flow wings, first made practical from the cost angle by Slingsby with his Skylark series.

Now, after only six years, the next revolution is in sight, a revolution in materials, although it must be said that it may well be five years or more before the difficulties may be all overcome, particularly the problems of maintenance and repair.

In the Standard Class at Leszno, the heaviest machine weighed 575 lbs., the winning Ka-6 weighed 420 lbs., whilst the Fauvette weighed 320 lbs.—all the Standard class aircraft being of 15-metre span. So at last we can look forward to the return of the joyous days when a pilot sets off with his wife towing a trailer with an 8 h.p. car, and was launched from any hilltop with a simple bunjy. But in this happy future his aircraft will have the performance and possibilities of a Skylark II at least.

The Fauvette, however was a prototype and obviously not yet sufficiently developed to be this year's winner of the OSTIV prize. The actual winner, the Ka-6, was in my view the right choice; although selected for partly the wrong reasons. The OSTIV judging committee was, on this first occasion, faced with an impossible task, as they themselves would probably be first to admit. The main reason was that they were not expected actually to fly each machine, and it was only by chance that in the event they managed each to fly the first three they had selected by ground inspection. My guess is that two of these three were not anywhere in the race as regards stability and handling qualities, and that, had they flown the Skylark, they would have been hard put to it to judge between it and the Ka-6. In fact, I saw one of the chosen three stall at 10 ft., drop a wing like any Harvard, and break itself in half at the end of one flight. If OSTIV had been unable to fly it and had awarded it the prize, it would have been a very serious matter.

The other factor was the impossibility of assessing the degree to which each entrant met the requirement for speed-limiting airbrakes. My own belief is that only the two British designs actually did this (they have to, to get a U.K. Certificate of Airworthiness), but in the absence of flight-testing of each type thie must remain a belief. Finally, I believe the Skylark II performance curve would show up as better than the Ka-6. *But*—and this was a factor which OSTIV could not take into account—the Ka-6 is undoubtedly a cheaper machine to build, and as this is the basic idea behind the whole conception, this causes one to accept the Ka-6 as the right machine to win the award. There is, however, clearly still a market for both types.

OSTIV have now proposed certain modifications to the specification for Standard Class gliders, to apply from 1960 onwards, and no doubt they will have to make some arrangement to enable some of their committee to fly each competing design next time.

In the Open Class, the flat Polish countryside and the flying conditions at last gave the exotics their chance, since there was never any risk of failing to find a landing field (in fact, one just carried on until a potato hit one's skid), so that we find the HKS 3, the Démant and the Meteor in 1st, 3rd and 4th place. This makes Nick Goodhart's second place in the Skylark III all the more creditable, sandwiched in as he is between aircraft costing at least ten times as much to build.

Equipment.

There is not much to say under this heading. A number of nations were using the Cook compass, and the new Cook electric variometer is clearly going into world-wide use as soon as it gets into production—everyone wanted one who saw it.

Some nations went in for elaborate ground radio stations, and the usual rumours flew around of pilots being directed by super-brains and super-electronics from the ground. Haase, however, denied this, and I am still quite unconvinced that this is yet more than a bogey.

The most exciting rumour was that Haase had installed a new thermal detector which would indicate thermals at a range of up to 500 metres. He told me that this was not yet working, but ascribed his success (too modestly) to further refinements to his amazing aircraft, including completely sealing the fuselage and arranging vents to ensure that there was a slight negative pressure inside, thus achieving a high degree of laminar flow over its front portion.

Organisation.

These Championships were on a grander scale than ever before. How can we ever

again expect to see a banquet on the opening day for 1,000 people? The aerobatic display on this day was the most amazing I have ever seen. The spectacle of a sailplane being hooked up to an airborne helicopter, launched, towed around, and finally dangled straight below its whirling rotors, was something quite new.

But during the actual Championships there were certain shortcomings. The daily Met. forecasts proved frequently wrong, and for this reason the task-setting often fell down. An additional defect was a rigidity of control resulting in a somewhat more service-disciplinary atmosphere than I personally like to see. One day was scrubbed because of bad w.ather, and an hour later a cold front went over and very interesting cumulo-nimbus built up. But no-one was allowed to take off even for practice flying, though no reason was given.

The big day, 24th June, was quite spoilt by a last-minute decision to put back take-off time from 10.30 to 11.00 hrs. As instructed, all our machines were on the starting line by 10.00, and when cumulus started to form at 10.10, a less rigid organisation would have rescinded the order and sent us all off. As it was, we sat gnashing our teeth on the ground for an hour—more for the poor Standard Class—listening to the tinkle of our 500-km. Diamonds falling out of the window. I personally was airborne at 11.35 hrs. and flew 473 kms. at an average speed of 72 km./hour. It is a measure of the day when I say that this flight brought me no higher than 6th place in the Standard Class! In the event, three Standard and seven Open Class aircraft exceeded the 500 kms. and this number would have been more than doubled by a sensible elasticity of organisation.

The system of laying down the take-off time and putting a strict limit on last take-off time and, in races, of last landing time, is a bad one anyway, and in future it has been agreed to recommend some system, similar to the one we ran at our Nationals at Lasham last year, whereby each pilot can select his own. Such a plan at Leszno would have produced far more interesting and exciting results.

But the worst organisational weakness was in the Operations Room, where the problem of quadrilingual control of 62 aircraft and their trailers proved altogether too much for the system. Admittedly the poor telephonic communications made this problem worse, but this was only contributory. To be fair, this is a problem which has so far defeated every organising country, and I am hoping we can produce a scheme of recommended practices, based on past experience, which will help organisers to avoid the worst horrors in future.

Pilotage.

It was odd that the *average* standard of pilotage was higher in the Standard than in the Open Class. This was because the various usual distant newcomers mostly decided to fly Open, a bad decision because thus they added to the disadvantage of their

Left to right: Tony Deane-Drummond, Betsy Woodward, Alan Yates, Evie Deane-Drummond, Ann Welch, Kitty Wills, John Archer, Brian Jefferson.

(Photo by Philip Wills)

Adam Witek, of Poland, winner in the Standard Class, who flew a Mucha-Standart.

inexperience by flying against the exotics with their additional regardless-of-cost radio and other equipment. This gave the Open Class a tail which the Standard Class did not have.

In the Open Class, Haase was well ahead with 5,651 points, then came nine pilots so close to each other (5,172 to 4,761 points) that another day's flying might have quite altered the placings. Anyone in these first 10 places is a potential future World Champion, and this includes both our own pilots, Goodhart and Deane-Drummond.

My own placing of 13th in the Standard Class indicates that at 51 my days of World Championships are over. Indeed, I have nothing to complain of, my first Championship having been exactly 21 years ago. Now I can look at my history of first-line flying and can see I reached my peak over the ages of 45 to 48 years, which extends the useful life of a glider-pilot by about 20 years over what was assumed in the 1930s. Whilst it is easy to wish now that I had retired for a younger man after 1956, I felt the same after coming out last but one in Sweden in 1950. But at the advanced age of 43 it was just as well I then accepted the decision of the seeding committee which allowed me to become 1952 Champion, so it was probably as well to fly it out.

An analysis of my flying at Leszno indicates that what one loses is the capacity of making instant decisions—and by instant I mean instant. On the first day, half-way along the course, the conditions changed, quite against the forecast, from very good to very difficult. It took me perhaps three minutes to spot what had happened and to change gear from speed to range flying techniques. In that time I had lost a priceless 1,000 ft. and had to land—being placed last but one.

By the end of the Championships, I flew the last two tasks quite well, having by then altered my techniques to suit the differences between flying 15 and 18 metre aircraft, but it was too late. On this last day we took 1st (Goodhart) and 2nd (Deane-Drummond) places in the Open Class and 2nd (Goodhart) and 3rd (myself) in the Standard Class. But on the score of pilotage I am quite happy—we have several first-class pilots in the line, and I hope occasionally I may still give them a run for their money through the dimming years.

Three pairs of the competing teams in the Open Class used their radio to fly together, particularly in difficult conditions. One would stay in a thermal and mark it whilst the other went off to find another. If he failed, he returned to the first; if he succeeded, his companion followed him.

The Germans used this scheme with success for Haase, but Nick beat the others, so its value is still problematical. However, I would like to see it tried out here next year by our seeded pilots.

The Future.

The next Championships are planned for 1960; thereafter they are to become three-yearly, since the task of organising them and of entering for them has become more than many countries can bear every other year. Which country will it be in 1960? The Germans will try, but have to overcome official prohibitions, particularly against cloud-flying.

National Gliding Week at Nympsfield

by Alan Yates

THE 1958 Championships were organised at three regional centres, and the Bristol Gliding Club site at Nympsfield, with twenty entries, had the largest of the three centres.

There was one Skylark III flown by Commander H. C. N. Goodhart and John Williamson. Since Nick Goodhart had been runner-up in the World Championships and John Williamson reserve in the British team, this team was clearly the favourite. Six of the smaller-span Skylark II sailplanes were entered, seven Olympias, three Eagle two-seaters, the London Gliding Club's Sky, a pre-war Rhönbussard and a strutted Kite II. One Eagle was Peter Scott's; although he has only two years' experience of gliding he has already made many excellent cross-country flights. Another Eagle had John Neilan of B.E.A. and Malcolm Laurie as its alternate pilots, both men of many years' gliding experience. But in the main, the entrants were club members of moderate ability and the competition seemed very open.

The Nympsfield site is an 80-acre field on the 750-foot Cotswold ridge near Stroud. The view across the valley of the winding Severn to Wales is breathtaking, but for the first few days of the meeting it was obscured by low cloud and rain.

Little flying was possible owing to rain on the practice day, Saturday, 26th July, and on the first and second competition days, Sunday and Monday, 27th and 28th July. Tuesday was dry but overcast. The task set was to fly as far as possible along a line towards Norwich. The longest flight was of 64 miles to near Northampton by P. J. Neilson of the Cambridge University Gliding Club. Only six pilots scored points by exceeding the qualifying distance of fifteen miles.

On **Wednesday, 30th July,** there was a heavy rainstorm at 9 a.m., just before briefing, but the afternoon forecast was for cumulus clouds with bright periods; the wind, however, would remain westerly at about 25 knots. The task set was a race to Baginton airfield, Coventry, 56 miles to the north-east. The strong wind and wet ground gave only weak thermals and, once again, many pilots were down within a few miles of Nympsfield. Three pilots reached the goal. Alec Baynes (Skylark II) averaged 44 m.p.h., George Burton (Olympia) 37 m.p.h. and Mike Garrod (Sky) 32 m.p.h. Eight others scored points by exceeding fifteen miles.

These first two contest days had offered difficult flying conditions and the best efforts of the Tiger Moth pilots from the Tiger Club and Oxford Aeroplane Club at Kidlington were unable to get all the sailplane pilots on their way.

After two days the leaders were:

1. Baynes and Blake	(Skylark II)	100 pts.
2. Cambs. U.G.C.	(Skylark II)	100 pts.
3. Army G.C.	(Eagle)	86 pts.
4. Neilan & Laurie	(Eagle)	86 pts.

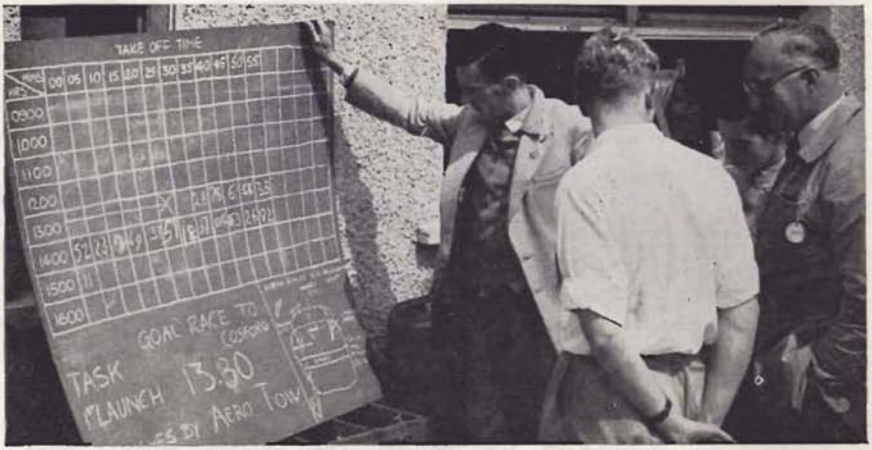
Thursday, 31st July.—This was to be a good day. Heavy clouds cleared by eleven and 19 sailplanes were towed off by 12.40 p.m. Conditions at first were difficult and several landed back for a second take-off. Finally, all left the site.

The map later showed landings between Nympsfield and the North Sea coast. John Williamson (Skylark III) and George Burton (Olympia) reached Great Yarmouth, 181 miles from Nympsfield. Burton had, moreover, been observed seven miles upwind after the take-off and thus made a 300-km. goal flight for his Gold Badge. J. Shepherd in the Army Club's Skylark II reached Skegness (152 miles) and the Neilan-Laurie two-seater Eagle also covered 152 miles into Norfolk. An exceptionally good flight was by M. Wilson in the Handley Page Gliding Club's pre-war Rhönbussard, who flew 122 miles to Peterborough. This later gained him a special British Gliding Association prize.

The leaders were now:

1. Burton (Olympia)	179 pts.
2. Neilan & Laurie (Eagle)	158 pts.
3. Williamson & Goodhart (Skylark III)	156 pts.

Friday, 1st August.—After the strenuous night's retrieving, crews were grateful to find briefing delayed until noon. The delay also allowed a cloudy patch to clear the area. The task set was a race 65 miles due north to Cosford aerodrome near Wolver-



The competition's starting board at Nympsfield.

(*Photo by T.A.M. Bradbury*)

hampton. The wind was brisk from W.S.W. so that cross-wind flying would be needed.

Peter Scott (Eagle) took first launch at 1.30 p.m. under a very black line of cloud which appeared un-forecast by the met. man. He cast off the tow and almost at once vanished into the cloud, which then rained heavily on the other contestants, causing launches to be delayed for half an hour. Scott climbed to over 10,000 feet and reached Cosford in one hour 25 mins.—ahead of the official timekeepers who had set off well before him.

Competitors found it difficult to make headway across wind in weak thermals, and nobody else reached the goal, although John Williamson (Skylark III) and Alan Yates (Skylark II) got within five miles of it.

After four contest days the leaders were:

1.	Williamson & Goodhart (Skylark III)	201 pts.
2.	Neilan & Laurie (Eagle)	182 pts.
3.	Burton (Olympia)	179 pts.

Saturday, 2nd August.—There were hopes that the day would be sunnier than of late, and the task was to fly as far as possible towards Great Yarmouth. The wind was strong from the west and only a little cross-wind manoeuvring would be necessary. It was disappointing to find that the clouds built upwards and outwards very rapidly, giving showers and shadows — neither favouring good thermals.

Commander Nicholas Goodhart had now taken over his Skylark III from John Williamson and vanished into a black cloud from an early launch. He covered the 181 miles to Yarmouth by 2.40 p.m.—a very early hour at which to end a flight of almost 300 km. His speed of almost 60 m.p.h. exceeded the United Kingdom 200-km. goal flight record.

Most pilots again found it difficult to leave the area of the River Severn. Black cloud streets gave thunder and hail, but by mid-afternoon conditions were much easier at Nympsfield. Several pilots got away as late as 4 p.m. and went about 80 miles, but none covered half Goodhart's distance. Some remarkable rates of climb were achieved in storm clouds. Flt./Lt. Tony Morgan reached 17,000 ft. in a R.A.F. Olympia, and Peter Scott's two-seater reached 16,400 ft. after climbing steadily at 1,200 ft./min.

Since the Bank Holiday Sunday and Monday were too cloudy for contest flying, the five days results were:

1.	J. Williamson & N. Goodhart (Skylark III)	301 pts.
2.	G. Burton (Olympia)	195 pts.
3.	J. Neilan & M. Laurie (Eagle)	193 pts.
4.	P. Scott (Eagle)	192 pts.
5.	L. Redshaw (Olympia)	165 pts.
6.	Garrod & Bentson (Sky)	154 pts.

Final Results

27th July—4th August 1958

WESTERN REGION: NYMPSFIELD

Final place	*Pilot or pilots*	*Sailplane type*	*Date* 29	30	31	1	2	*Total points*
1	J. Williamson, H. C. N. Goodhart	Skylark 3	29	27	100	45	100	301
2	G. Burton	Olympia	0	79	100	0	16	195
3	J. C. Neilan, M. V. Laurie, L. and A. Welch	T-42 Eagle	76	0	82	24	11	193
4	P. Scott, P. Collier	T-42 Eagle	45	26	0	100	21	192
5	L. Redshaw	Olympia	0	50	77	21	17	165
6	M. P. Garrod, C. W. Bentson	Sky	0	76	72	0	6	154
7	A. H. Baynes, K. W. Blake	Skylark 2	0	100	0	0	27	127
8	E. Shepherd	Skylark 2	0	0	81	0	33	114
9	P. J. Neilson	Skylark 2	100	—	—	—	—	100
10	A. T. Morgan	Olympia	45	0	13	3	30	91
11	J. D. Jones, M. Hodgson	Olympia	0	28	0	22	34	84
12	R. H. Perrott, E. Chubb	Skylark 2	0	9	67	0	3	79
	M. Wilson	Rhönbussard	0	0	58	21	0	79
14	Sir C. Dorman, J. Corbett	T-42 Eagle	42	0	9	0	25	76
15	B. B. Sharman	Olympia	0	9	27	0	20	56
16	T. R. H. Parkes, A. H. Yates	Skylark 2	0	0	9	44	0	53
17	M. P. Seth-Smith, G. Barrell	Skylark 2	0	0	0	4	33	37
18	D. H. Darbishire, S. B. Wills	Olympia	0	1	0	0	15	16
19	H. N. Gregg	Olympia	0	6	9	0	0	15
20	A. Doughty, J. Currie	Kite 2	0	0	4	0	5	9

The Prizegiving took place on Monday afternoon. The presentation was by one of the Bristol Club's Vice-Presidents, Capt. Cyril Uwins, O.B.E., A.F.C., F.R.Ae.S. In addition to awards for the first three teams, the special B.G.A. prize for the most meritorious flight went to Mike Wilson, who flew the pre-war Rhönbussard 122 miles.

The daily prizes went to Peter Neilson (C.U.G.C.), Alec Baynes, John Williamson and George Burton, Peter Scott and Nick Goodhart.

The weather had been only moderate with five difficult flyable days out of ten. The organisation had been excellent and the cameraderie the outstanding memory of the week at Nympsfield.

PRIZES

First.—John Williamson and Nicholas Goodhart, Lasham Gliding Centre: tankard. Entrant, Comdr. H. C. N. Goodhart, R.N.

Second.—George Burton, Lasham Gliding Centre: tankard. Entrant, pilot and partners.

Third.—John Neilan, Malcolm Laurie, Lorne and Ann Welch, Surrey Club: tankard. Entrants, pilots.

Daily Prizes

These were free aero-tows.

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National Gliding Week at Dunstable

by Tony Walker

COMPETITORS were arriving all day on Saturday, 26th July, and much feverish activity was going on in odd corners—getting trailers roadworthy, making last-minute fittings, checking and modifying secret devices.

The Contest Week was opened at 3 p.m. by Mr. B. J. Hyde, Chairman of the Luton Rural District Council.

Sunday, 27th July

With a strong S.W. wind of over 20 kts. the thermals had very little chance of surviving long. All the competitors were aero-towed despite the very difficult conditions.

The task set for the day had been Distance along a line through Downham Market aerodrome (which is south of King's Lynn in Norfolk). Only one pilot got away, and that was Wing Cdr. N. W. Kearon in a Skylark 3, who only got to Compton, near Shefford, a distance of 13⅜ miles.

Thus Sunday was a No Contest day, which depressed everyone rather.

Since the Daily Prize for to-day was for Class I, we were glad Paddy Kearon had managed to get away. (Class I included Skylark 3 and Olympia 419 types.)

Monday, 28th July

Winds were even higher to-day than yesterday, so it was decided to give launches by winch only. Thermal conditions were forecast by "Wally" Wallington to improve by the afternoon, so the first launch was fixed 1or 3.30. The task chosen was Free Distance.

The first pilot to leave was Wg. Cdr. Kearon, who in fact scored the best distance, landing near Ely Hospital, 3 miles N.E. of Ely. Only three other pilots got away, if we discount Dr. D. B. James, who got sunk at the Zoo.

Second best distance was scored by Mike Fairman, in the Meise, who landed at Bassingbourn Aerodrome, a distance of 26 miles. Third was Sgt. Andy Gough in the Olympia 419, with 24 miles to Tadlow, near Royston; and fourth Flg. Off. D. Cretney in another Skylark 3 with 17 miles to a playing field three miles east of Henlow.

The Daily Prize was for Class II to-day, but Class II didn't go anywhere—except D. B. James—so the prize was held over till to-morrow.

Tuesday, 29th July

With much more promising weather, aero-tows started at 10.45; the wind was still strong and S.W. but Wally didn't expect conditions to last much into the afternoon. Today's task was distance along a line through Beccles, and took four pilots to Lowestoft.

First to land was D. B. James in the Lasham Skylark 2, who landed beside the North Denes Oval cricket ground in Lowestoft. Andy Gough, a few minutes later, landed within some 100 yards of the sea (he said the beach was too steep). They both scored top marks. Next came Flt. Lt. R. Mann in the Olympia 415 with a distance of 107 miles, landing on the playing field at Alderman Woodrow School, also scoring top marks. Then Charles Ellis in the Skylark 3, who landed in a field near Pakefield Hall Holiday Camp, Lowestoft.

The Daily Prize today was for Classes II and III. Mann and James shared it for Class II, and Chris Wills won Class III with his flight to the Three Counties Hospital—not enough to score, but the best flight in his Class. (Class II included Skylark 2, T-42 and Olympia 415; Class III, Olympia, Meise and Kite 2.)

Wednesday, 30th July

Wally couldn't promise weather any better than Tuesday, but in fact it ended by being a much better day for thermals; wind still much the same. The task was a Pilot-declared Goal and flying started at 12.00. Most pilots declared Gt. Yarmouth; D. B. James got daring and declared Scarborough, and sunk in the damp area near Spalding; Andy Gough looked long at the map and declared Winterton-on-Sea.

First to land at Denes Airfield, Gt. Yarmouth, was Flg. Off. Cretney, then Warminger, who prepared the reception for Wg. Cdr. Kearon, Flt. Lt. Mann and Charles Ellis. But Andy Gough got the 100 points because Winterton-on-Sea is one mile further from Dunstable than Gt. Yarmouth! Dickie Ruffett in the Club Olympia landed about 8 miles short of Gt. Yarmouth at Acle.

Everyone got away and everyone scored. The Daily Prize today was for Class I, and Andy Gough deserved it for his one-up-manship alone.

Thursday, 31st July

To-day Wally brought us a good forecast, so a race was set to Honington, a disused aerodrome 9 miles south of Peterborough, and back, a total distance of 87 miles. As might be expected with a stiff cross-wind, to-day's task proved very difficult and only four managed to get back.

First back was D. B. James, who was spotted way back over Dunstable at an impossibly low altitude.

Next in was Andy Gough, who came across the field at a good speed, taking 4 hrs. 3 mins.! Four minutes later Warminger came in from cloud base beyond Dunstable, taking 5 hrs. 4 mins.

Two hours were to follow before the next machine appeared, and in the meantime our Sky passed over on its way from Nympsfield and connected with the street which had formed over Dunstable. As the end of the street drifted away, Roger Mann appeared out of it in the Olympia 415 travelling at what must have been maximum speed, and crossed the line, having taken 6 hrs. 3 mins.

So Andy Gough scored 100 again, for the third day running. Paddy Kearon distinguished himself to-day by landing near Leighton Buzzard from his first aero-tow. However, on his second he landed at Cardington on his way back from the turning-point.

Charles Ellis landed 5 miles short, while Peter Dirs landed at Little Stoughton aerodrome on his way back. Frank Foster also had a go at the task and shared a thermal over Alconbury with G. Burton, who was on his way from Nympsfield to the Norfolk coast.

The Daily Prize for to-day was for Class II and was won by D. B. James.

The R.A.F. brought their own kitchen to Dunstable.

(Photo A. E. Slater)

Friday, 1st August

A dud day; briefing was put off twice in the hope of better conditions but finally it was declared a No Contest day.

Saturday, 2nd August

With a due west wind of 30 kts. a race to Martlesham Heath near Ipswich proved a very hard task in weak thermals. There was a turning point at Feltwell,

The total distance was 105 miles and only two got there: first Cretney landed at 3.15, followed by Gough at 3.39. This time Cretney made the best time—3 hrs. 50 mins. against Gough's 4 hrs. 17 mins. Two others rounded Feltwell: Charles Ellis covered a total of 80 miles and Warminger 71 miles. Dudley Hiscox, who gave up fighting the wind, landed at Mendlesham aerodrome, which according to the rules gave him the distance to the turning point . . . no one else had thought of that!

Cretney won the Daily Prize for Class I for to-day's flight, and Dudley Hiscox for the best flight in Class III, since yesterday was a No Contest Day.

Sunday, 3rd August

With a forecast of westerly winds, poor thermals and rain due at 3.0, a short task was set. Another out-and-return race, this time due north to Podington (a disused aerodrome 5 miles south of Rushden) and back, a total distance of 50 miles.

However, only three got round the turning point; Cretney landed there, Archie Erskine got to Thurleigh and was joined by Andy Gough on his outward journey. Kearon went beyond Podington to land at Chelveston, N.E. of Rushden. After rounding the turning point Charles Ellis gradually got further and further down wind to land at Wethersfield after a six-hour flight.

To-day's prize was for Class II, and the best flight in that Class was done by D. B. James to Podington.

Monday, 4th August

The weather was not good enough to set a task in the early part of the day, so it was declared a No Contest Day.

Since there was no contest to-day, the prize for Class III was given to Archie Erskine for his flight to Thurleigh on 3rd August, he having rounded the turning point.

After tea the Prizes were given by Mrs. Margaret Kronfeld.

The Prizes were then presented. First was Sgt. Andy Gough with 426 points; second, Charles Ellis with 379; and third, Wing Cmdr. N. W. Kearon with 342 points. Flg. Off. D. Cretney won the B.G.A. prize for his race to Martlesham Heath, and R. D. Ruffett the L.G.C. prize for his flight to Acle, near Gt. Yarmouth, when he out-distanced many better machines. The Daily Prizes already mentioned were also presented.

"Paddy" Kearon, who won two tickets for "Where's Charley?", is seen here with his wife being congratulated by Norman Wisdom after the show.

Final Results

27th July—4th August 1958

LONDON REGION: DUNSTABLE

Final place	*Pilot or pilots*	*Sailplane type*	*Date* 28	29	30	31	2	3	*Total points**
1	A. Gough	Olympia 419	35	100	100	100	93	29	426
2	C A. P. Ellis	Skylark 3	0	98	99	46	36	100	379
3	N. W. Kearon	Skylark 3	100	73	99	38	17	32	342
4	F. D Cretney	Skylark 3	17	73	99	35	100	32	339
5	D. B. James	Skylark 2	0	100	38	99	22	32	291
6	R. Mann	Olympia 415	0	100	99	73	0	15	287
7	A. H. Warminger	Skylark 3	0	0	99	82	31	29	241
8	R. D. R ffett, P. Dirs	Olympia	0	0	72	31	1	0	104
9	D G. O Hiscox	Olympia	0	0	40	0	26	29	95
10	J. M. Hands, S. R. Dodd	Skylark 2	0	0	52	19	0	15	86
11	D. M Riddell, M. Fairman	Meise	38	0	20	8	13	6	85
12	G. H. Lee, A. W. F. Erskine	Olympia	0	0	19	15	9	35	78
13	C. Wills, T. Fisher	Kite 2	0	0	31	20	5	0	51
14	F. Allen, L. Bayley	T-42 Eagle	0	0	4	2	22	0	28

*Note.—Only the five best days' scores counted in adding up the totals.

Godfrey Lee then thanked the various people and firms who had helped; Dickie Ruffett, as Chairman of the Contest Committee, thanked all club members who had helped organise and run the Contest. Wing Cmdr. Kearon, on behalf of the R.A.F., thanked the organisers and the Club, and said, of the Field Control: "We think you've a very nice line in popsies!"

PRIZES

First.—Sgt. Andrew Gough, R.A.F. Wessex Club: model of winning glider, presented by Fred Phelps. Entrant, Elliotts of Newbury.

Second.—Charles Ellis, London Club: table lighter, donated by Messrs. Ronson. Entrant, London Gliding Club.

Third.—Wing Cmdr. N. W. Kearon, R.A.F. Wessex Club: two dozen Guinnesses donated by Messrs. Arthur Guinness. Entrant, R.A.F. Gliding & Soaring Association.

B.G.A. Prize for meritorious flight: Flight Lieut. F. D. Cretney, R.A.F. Windrushers Club: pewter beer tankard, for flight to Martlesham Heath via Feltwell on 2nd August. Entrant, R.A.F.G.S.A.

Prize for meritorious flight.—R. D. Ruffett, London Club, for flight in Olympia to Acle, near Gt. Yarmouth, on 30th July. Entrant, London Gliding Club.

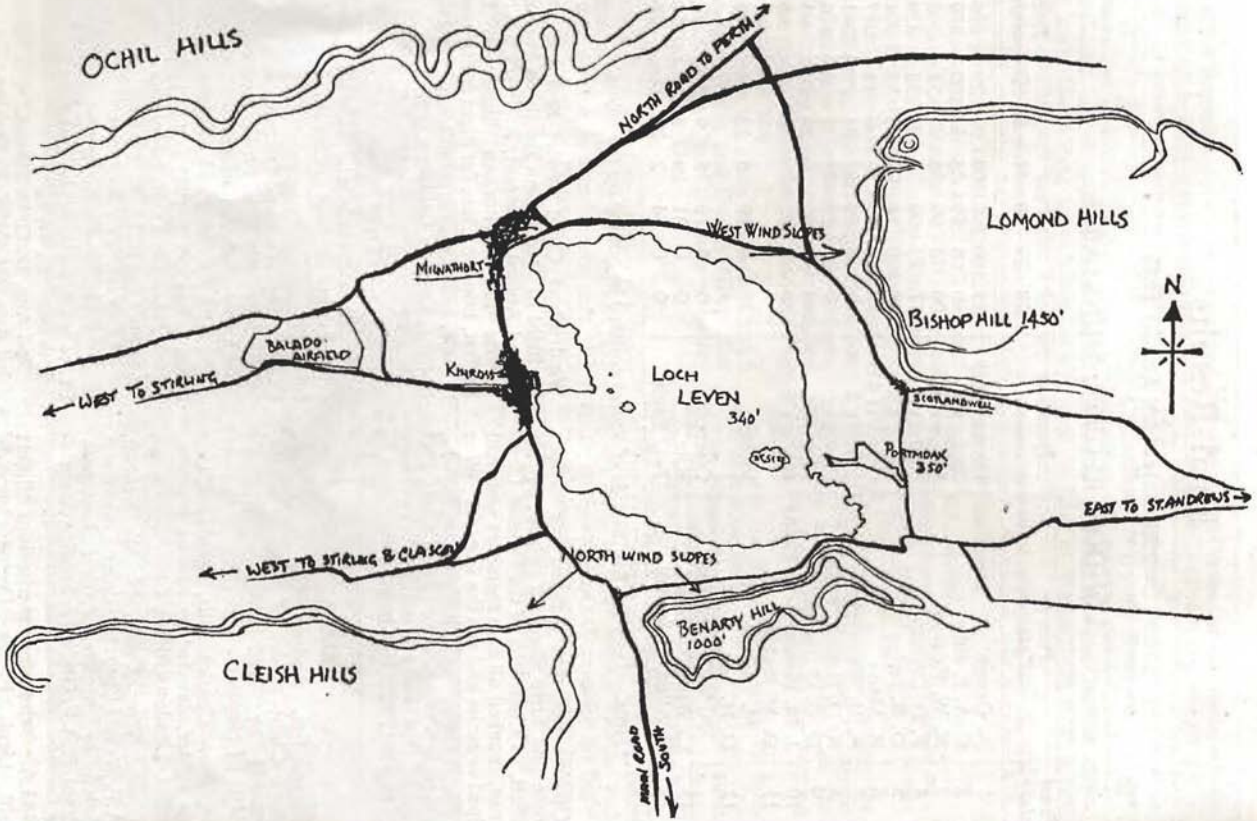
Daily Prizes

For these awards the sailplanes were divided into classes according to performance.

Class 1, Skylark 3 and Olympia 419.
27th July Wg. Cdr. N. W. Kearon.
30th July Sgt. A. Gough.
2nd Aug. Flt. Lt. F. D. Cretney.

Class 2, Skylark 2, T-42 and Olympia 415.
29th July Dr. D. B. James and
(shared) Flt. Lt. R. Mann.
31st July Dr. D. B. James.
3rd Aug. Dr. D. B. James.

Class 3, Olympia, Meise and Kite 2.
29th July C. Wills.
2nd Aug. D. G. O. Hiscox.
3rd Aug. Dr. A. W. F. Erskine.


OCHIL HILLS
NORTH ROAD TO PERTH
LOMOND HILLS
WEST WIND SLOPES
MILNATHORT
BISHOP HILL 1450'
N
BALADO AIRFIELD
KINROSS
WEST TO STIRLING
LOCH LEVEN 340'
SCOTLAND
PORTMOAK 350'
EAST TO ST. ANDREWS
WEST TO STIRLING & GLASGOW
NORTH WIND SLOPES
BENARTY HILL 1000'
CLEISH HILLS
MAIN ROAD SOUTH

On Being a Bur-r-d

by Philip Wills

LIKE everyone else, I have for years wanted to meet our wild Northern kinsmen of the Scottish Gliding Union, more than ever since their 21 years' wandering in the wilderness has at last led them to their Promised Land at Portmoak. But it is too far for a mere week-end expedition, so that when the National Gliding Week gave us the chance of a nine-day visit, we jumped at it.

Kitty and the family set off with the trailer on Friday morning on the 450-mile drive via Sutton Bank; I caught the 10.08 Saturday morning which landed me punctually at Kinross at 20.03 hrs.; the trailer drew up at 20.05 hrs. The usual efficiency! We clocked in at the very comfortable Green Hotel and then drove round to the far side of Loch Leven to park the trailer.

The map shows the curious shape and the natural advantages of Portmoak—it also gives some idea of its lovely setting. But it gives no hint of the staggering amount of work its members have done to turn a long, thin strip of rough ground into the basis of what will one day become one of our major gliding centres, as it is already one of our most interesting and beautiful.

Within the last few months they have acquired a large hangar (free!), dismantled it and transported it to Portmoak, re-erected it (or most of it—they sold a bit they didn't want for a tidy sum!); using several hundred tons of industrial ash presented by a member, they then built a drive-in from the road, involving throwing a bridge (made of railway sleepers) over an intervening creek. They put another creek running across their field into a three-foot concrete drain and filled up the rest of the ditch with more ash. And they put a temporary floor and walls into a corner of the hangar to serve as a club-room for the meeting. Also they got in a little flying—but not much—so our advent gave everyone the opportunity for the first time to find out what sort of flying might be extracted from the site in competitive conditions. In spite of the really frightful weather, I think it true to say that expectations were exceeded, and we all had a really splendid week. During it we had slope-soaring on a grand scale, thermals, cloud-flying, and sea-breeze effect. In fact, everything but waves, though these, too, were to be seen at times, and are, of course, very frequent in these parts.

Sunday, 27th July.—A light westerly drift, low messy cumulus, sea-breeze to kill conditions later on. The worst possible conditions for Portmoak, since not enough wind to give hill-lift on either slope, and the winch only gave one 700 feet. The field is so narrow that the slightest southerly component in the wind drifts one over a neighbouring potato field whose owner looks far from kindly when a winch-wire drops onto his spuds.

We set an out-and-back race to the Lake of Menteith, 38 miles to the west. After a few failures, Bill Tonkyn managed to struggle away on his Skylark III, No. 66, then Andrew Thorburn in his Olympia, No. 83. The rest of us continued to go round and round. The wind then dropped entirely, and by 14.30 hrs. Bill Lawson in desperation brought out his Tiger and we started to aero-tow. This enabled Stephenson (No. 8) to get away at 15.00 hrs., but the sea-breeze was coming in and the next two launches failed.

My turn arrived at 16.00 hrs., and by flying determinedly inland from release I managed to penetrate beyond the stable easterly air and contact lift just as I saw No. 66 racing in to a landing after successfully completing the course.

I was too late to finish, but managed to get round the turning-point and back to Stirling, where the noble south-facing line of the Ochils gave just enough lift in the sea-breeze to enable me to do a grand slope-soar back to within five miles of Kinross. No. 8 got home and made the fastest time, but 66 won the Daily Prize owing to his winch-launch. No. 83 landed near Stirling on his way back; no-one else got away.

Monday, 28th July.—A notable day. It hadn't rained so hard and so long for 27 years, as John Findlater sadly announced. His met. forecasting throughout was of the first class, but to-day was entirely negative.

Tuesday, 29th July.—W.N.W. wind and

a moderately hopeful forecast led to Free Distance. Only one cloud during the day gave a chance to get away, taken by Stephenson and me. I reached 8,000 ft. in it, and thereafter a straight down-wind glide across the Firth of Forth and the Lammermuirs led me to earth at Winfield, a disused airfield near Berwick-on-Tweed. This was 53 miles, a mile more than No. 8 which landed nearby at Kelso. This run involves a rather horrid retrieve of nearly 200 miles, since trailers have to set off in the wrong direction to cross the Forth at Kincardine Bridge.

Wednesday, 30th July.—Another wash-out.

Thursday, 31st July.—Conditions rather like Tuesday. A pilot-selected goal, achieved by no-one. Again only two of us got away, this time me and No. 66. I landed two miles from Winfield again, 66 a mile or two short of me. It looks as if this area south of the Lammermuirs may be a dumping-ground to be avoided; but to do so involves flying down the spine of the Pennines and possibly across the Cheviots, which look pretty horrid. However, on both these days the clouds in that direction looked very good.

This day I was forced to fly round the North-East Coast and found a very marked sea-breeze effect under 8/8ths cloud cover, marked by a ragged cloud-wall *à la* Lasham, up to eight miles inland from the coast.

Friday, 1st August.—Another wash-out. The field by now looked like an extension of the lake in parts, and it was heartbreaking to see one's team faithfully polishing up the Skylark which, on the take-off run, would get splashed all over with pounds of good Scottish mud.

Saturday, 2nd August.—A fairly strong W.N.W. wind, but met. gave hopes of a really big day to-morrow, with even a chance of the 500-km. run down south. So we contented ourselves with a short out-and-back race to Stravithie Station, 24 miles to the East beyond St. Andrews.

Again only one chance to get round presented itself, taken by No. 8 and No. 66. Andrew Thorburn got to the turning-point in rain and cloud, failed to see it or be seen, and got back to within four miles of Portmoak, scoring naught but his pride, poor chap. I missed the magic cloud by one minute, and landed five miles back on the return leg. Bill Lawson, in his T-42, No. 85, landed at the turning-point.

Sunday, 3rd August.—The Great Day eluded us, as Great Days do; the hoped-for north-westerlies, having speeded up their approach overnight, had overshot us entirely and reached the middle of the North Sea. Instead we were offered a very passable second-best, light unstable west-erlies turning to southerlies, enabling us to set a flight along a line to Fraserburgh airfield, 112 miles away on the far north-east coast.

This really proved to be the only genuine contest day, as everyone had a fair chance to get away, and everyone did. I had an enchanting flight, getting away at 11.15 hrs. and keeping inland over the high country. Conditions here were so easy that I loafed

The hangar at Portmoak, with Bishop Hill in the background.
(Photo P. A. Wills).

along between 4,000 and 8,000 ft., arriving at 14.45 hrs. The colours of the clouds, the moors, the green seaboard, and the sea itself, were soft and wonderful. There is a splendid golden beach at Fraserburgh along which the team walked and paddled, and we trailed home along the empty Scottish roads at our leisure.

Others had a sterner time. No. 8 left a bit lower than I and failed to get up into the magic layers over the high ground. Consequently he had an unending struggle, at one time down to 300 ft., and landed eventually about 20 miles short and west of the track. No. 66 was second; after a false start and a hasty retrieve, an aero-tow as late as 15.15 hrs. enabled him to land only six miles short of Fraserburgh. No. 86 reached Inverurie. Everyone scored.

Monday, 4th August.—The only thing to be said about this Monday was that it wasn't quite as wet as the previous one. We sat around and read some of the staggering amount of publicity the meeting had achieved. The local papers were full of it, radio and T.V. abounded with it.

Prize-giving was at 17.30 hrs. The scores were: No. 1, 366 pts., No. 8, 364 pts.; No. 66, 353 pts. But soft! We had had five days' flying, so our worst day was dropped. Nos. 8 and 66 each had a lovely nought to lose—I had to throw away 23 priceless points. So the final result was: No. 8, 364 pts.; No. 66, 353 pts.; No. 1, 343 pts. And a very good thing, too, since the factor of luck in getting away during the week had been so high that the system of dropping one's worst day undoubtedly gave slightly more reasonable results.

Since Steve and I were *hors concours*, the prizes went to No. 66, No. 83 and No. 85. But he and I got some splendidly Scottish Daily Prizes. Guess what.

I hope and believe our hosts enjoyed it nearly as much as we did. It was simply grand.

Final Results

27th July—4th August 1958

SCOTTISH REGION: PORTMOAK

Final place	*Pilot or pilots*	*Sailplane type*	*Date* 27	29	31	2	3	*Total points**
*	G. H. Stephenson	Skylark 3	100	98	0	100	66	364
1	W. N. Tonkyn, B. J. Davey	Skylark 3	78	0	98	91	86	353
*	P. A. Wills	Skylark 3	43	100	100	23	100	343
2	A. J. Thorburn, W. Adamson	Olympia	33	0	19	0	70	122
3	W. Lawson	T-42 Eagle	0	*	0	13	51	64
4	D. P. Docherty, C. Ross	Olympia	0	0	0	0	30	30
5	G. Benson, E. Stark, C. Green	Skylark 2	0	0	0	0	12	12

*Geoffrey Stephenson and Philip Wills were flying *hors concours*. Each pilot's lowest day's score was ignored in adding up the totals, but this only affected Mr. Wills, whose total would otherwise have been 366. Mr. Lawson was absent on the 29th.

PRIZES

FIRST.—W. N. Tonkyn and B. J. Davey, Imperial College Club: canteen of cutlery, travelling clock, travelling rug; also B.G.A. mug for meritorious flight. Entrant, Imperial College Gliding Club.

SECOND.—A. J. Thorburn, Scottish Gliding Union: wristlet watch. Entrant, Scottish Gliding Union.

THIRD.—W. Lawson, Scottish Gliding Union: barometer. Entrant, the pilot.

Daily Prizes

Philip Wills: bottle of whiskey, Haggis, towels and tablecloth. Geoffrey Stephenson: length of tweed.

Retrieve Nocturnal

by Alan Purnell

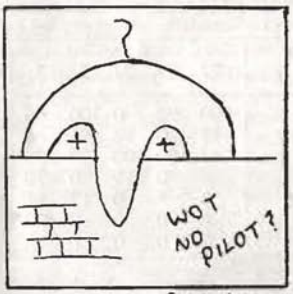
Cambridge University Gliding Club

STUART had circled away downwind at about 3.30, so there was plenty of time to retrieve him before it got dark . . .

At 7.30 we were on our way—just—having had to cope with the usual round of flat tyres, U/S trailers, missing tow-hooks, absent vehicles and the general shambles characteristic of Sunday afternoon at Marshall's. Apparently Stuart had landed at Ludham, a disused aerodrome, which we eventually pinpointed on the quarter-inch as being one of the few stretches of dry land amongst the Norfolk Broads, miles from anywhere—even the village itself.

It was a glorious sunset on the A.11, although we were not in a position to appreciate such beauty, since in fact we regarded it as a knell of doom (or parting day). However, after surprisingly few navigation errors, we pulled up in a narrow lane near the village to ask our way. Time: 11 p.m.

We were directed to the aerodrome—back the way we had come, of course—and eventually arrived on the perimeter track.

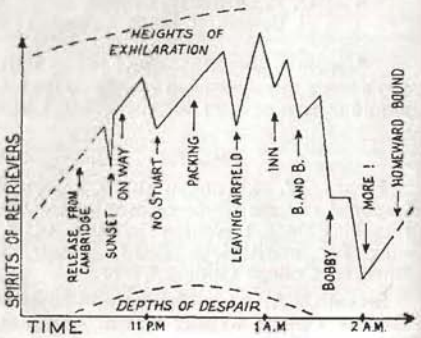


...where was Stuart....

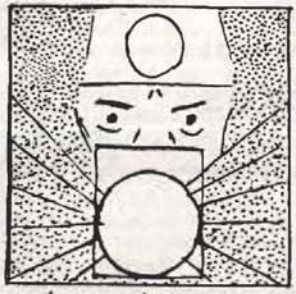
But where was Stuart? We, in our innocence, were expecting him at any moment to jump into our lights, waving frantically—but no such luck. We cautiously circled the aerodrome, lights blazing, peering into the pitch darkness and driving rain for some sign—any sign—of Stuart or the Prefect. Many runways later we came across the aircraft, but no Stuart—only a scribbled message indicating that he was staying at the Baker's Inn in the village. To save time, we packed the trailer—the Skylark's trailer—without him, working in the rain and darkness in silence except for the occasional word—usually a single word—saving our breath for when we met Stuart.

Finding one's way off an airfield is more difficult than one imagines, especially when fate plays havoc with one's sense of direction, for in the next half-hour we followed innumerable footpaths, encountered an equal number of dead ends and, amid much reversing, managed to complete a round tour of the barracks before deciding to leave the ghostly trail of tyre marks across a farmer's field in our effort to locate the peri-track once again. And so it was 1 a.m. before we pulled up outside a lifeless Baker's Inn.

It was at least ten minutes before a glimmer of light appeared in answer to our thunderous hammering and flashing torch, when a grumpy figure materialised at an upstairs window demanding our business. Sheepishly we explained, only to be told that "the glider pilot" was staying somewhere else, at a bed-and-breakfast, 20 yards down the road. One hundred and fifty yards (!) down the road we found it, and there three conscience-stricken, but determined, young men took it in turn to keep the bell-push depressed. Another shock—Stuart was not there either, and we backed down the path, each apologising in turn, to seek out the local Bobby—"only 300 yards down the road," we were assured.



We walked the next half-mile (!) in silence, our minds numbed by the prospect of knocking-up the local Police, when a



...when a powerful light.....

powerful light flashed into our faces. After much stuttering and ejaculations, one of us uttered a tame, "Who's this?" "The Law," came the ominous reply. "Just the man we want to see," we said, having recovered our dignity by this time, and the three of us launched into a disjointed and repetitious explanation of our position and our loss. "Ho," he said. Just then a car roared to a halt beside us, and in the dim light we became aware of four helmeted faces peering at us from inside; there was a whispered consultation and the car disappeared at high speed. Our policeman led us back to the village, explaining that burglars were reported to be breaking into the village store and . . . er . . . could it be anything to do with us? This time words completely failed us; the polite well-oiled apologetic phrases seemed strangely out of place, having lost their meaning in their constant use over the last hour. Here we were, three strange, ill-clad ruffians in the dead of night with some cock-and-bull story of a lost pilot who . . . ; we relapsed into silence and trudged dejectedly back to the village with our guardian.

But that was not all, for there, grouped around the jeep and trailer were at least six policemen, two police cars and a speed cop . . . They were surprisingly courteous and apparently believed our story, related a little more coherently this time. Much consultation followed, and even though they offered to wake up the King's Arms, they funked it at the last moment. One by one the cars disappeared leaving us with only one thing to do. We left—hurriedly—with the parting message: "If you see him, tell him he can walk home." Time: 2 a.m.

It was a glorious dawn on the A.11 . . .

Really, of course, that was from our point of view, but one cannot help feeling that the story is not quite complete without some mention of Stuart's whereabouts. So, for the reader's sake—and no other—here is Stuart's part in the plot.

After being thrown out of the Baker's Arms at midnight, he was "unable" to stay awake while sheltering in the Church.

Who would have believed it?

U.S.A. Accident Analysis

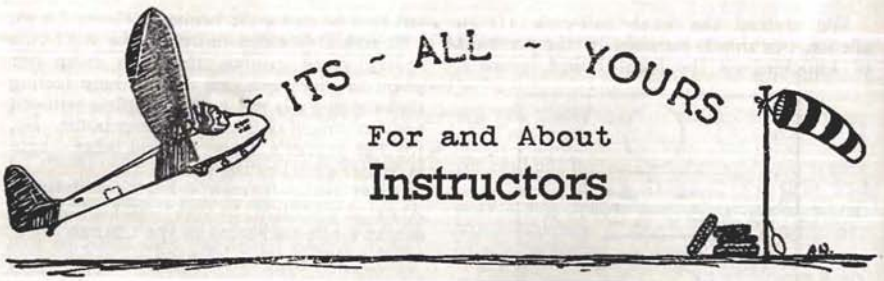
An analysis of accidents in the U.S.A. during 1957 is given in *Soaring* for May-June by Joseph M. Robertson, chairman of the Flying Safety Sub-committee of the Soaring Society of America.

Fifteen two-seaters and 14 single-seaters were involved, representing "roughly 10% of the airworthy gliders in the country."

Of 25 cases analysed, two were on take-off—one after turning back from a cable break at 200 ft., the other while taking off down wind on aero-tow. There were two fatalities from structural failure after losing control in clouds, though both machines had electric turn-and-bank indicators which were working at the time; but neither had any sort of drag-producing device, though one was a new high-performance design, the other being a pre-war type. Only one pilot had a parachute, but he did not use it.

"Approach to land" accounted for 10 cases; three undershot into obstructions, five stalled and spun in (one with fatal result), and two caught their wings on the ground in low turns. A hill-soaring pilot who had previously done nothing but auto-tow circuits, hit the hill. Seven pilots damaged their machines on landing, mostly on contest flights. A tug had engine failure at 50 ft. over heavily wooded country and both machines "were lost." Another loss was of a machine which flew into a turbulent thermal while "attempting to soar too close to the ground."

Mr. Robertson concludes: "One remarkable thing about the accidents listed is the comparatively high level of air time of the majority of pilots. . . . It would seem that the most accident-prone group of pilots are those with a fair amount of power time and just enough glider hours to reach a point of confidence and carelessness."



by Ann Welch

STARTING with this issue, it is proposed to introduce in addition some instructors who, although not C.F.I.'s, also do an excellent job in teaching gliding. This month we feature Laurie Bittlestone, of the Boy Scouts Association.

I will try to keep a list of club details in the June issue (p. 158-9) up-to-date, and would be grateful to know of any changes. I am preparing a schedule of the Service club sites for the next issue. In the meantime, the Cornish Gliding Club telephone is now Perranporth 2124.

AERO-TOWING SIGNALS

At one time or another most pilots have been infuriated or frightened by the tug pilots who drone steadily away in the wrong direction. The inability to know whether the tug pilot is lost, has theories, or is just plain stupid brings on a feeling of enraged impotence. To combat this there is a haphazard but growing tendency in some quarters to try and steer the tug. This is done by yawing the glider away to the right; does this mean he wants to go right, or does it mean he wants to go left, since he has turned the tug's nose to the left? Whatever he means, or thinks he means, he should discontinue this confusing and somewhat dangerous practice forthwith, unless he arranges "suitable signals between the tug pilot and the glider pilot" for the particular flight, as is provided for in the Air Navigation Regulations.

Already at least two incidents have occurred from the uncontrolled and undesirable use of this practice.

1. An inexperienced tug pilot towed a glider rather farther from the airfield than was sensible, and worried the glider pilot into trying to attempt to turn the tug. Yawing out to the right brought little response from the tug pilot, who returned to his original course as soon as he was able to. The glider pilot then yawed out to the left. The tug pilot thought he was being given the signal that the glider pilot wanted to release but could not, and so, without further thought, released his end of the rope. The light rope did not release from the glider end, but as its drag would have prevented the glider returning to base, the pilot released the rope and this was lost.

2. The pilot of a glider suddenly decided that the tug was missing the chance of a good cloud, and so tried to turn the tug towards it. In doing so, the glider became grossly out of position through getting too high as well as pulling up the tail of the tug to such an extent that it became difficult to control. In order to save the situation the tug pilot released his end of the rope, which then back-released from the glider and was lost.

Quite apart from the cost of the rope, injury and accident could easily be caused to innocent people on the ground. There are only two signals which are provided for aero-tows—the order to the glider pilot to release when the tug waggles its wings, and the signal that the glider pilot cannot release when he flies out to the left and waggles his wings. These two signals, and these two only, can be used on aero-tow without prior arrangement. Any other signal must be the subject of agreement between the tug pilot and the glider pilot before the take-off.

SHORT TOW ROPES

The first sight of aero-towing in Poland was startling to members of the British team owing to the extremely short length

of tow rope (65 ft.) compared to the British practice (200 ft.). The Poles have converted to this length completely except for a pupil's first few tows when two ropes are used end-to-end (130 ft.). They say that they prefer the short length because it is easier when towing in turbulent air, smaller fields can be used as the ground run is shorter, and anyway, they have had no difficulties or accidents whatsoever.

I had four tows in four different gliders and the only one which was at all difficult was on a glider which was under-ruddered. There are, however, some possible problems when using very short rope. English tugs are not so heavy, nor have they so much elevator power as the Polish tugs (mostly Junaks). From the glider pilot's point of view he has less time to look around for good clouds, as he has to concentrate more on keeping position. Towing on short ropes is not difficult, even when the rope is further reduced to 30 ft., although the risk here is running into the back of the tug if it had engine failure. Some properly conducted trials with experienced pilots would be good exercise for winter days, and would help to keep up the utilisation of the soaring gliders. There is, however, no reason why the general lengths of nylon tow ropes in this country should not be reduced to 150 ft. forthwith. There are no problems with this length, and the clubs can save some money.

SPIN RECOVERY

Owing to the fact that we have such excellent and tolerant training two-seaters, there exists and, in spite of efforts to stop it, continues to exist a spin recovery drill which is misleading and incorrect. Because the two-seater either won't spin at all, or only partially, some pilots and instructors (a) avoid using the full recovery action, which merely stands the two-seater on its head at maximum permissible speed, (b) fail to even remember or teach the full recovery action. Pupil pilots thus go on to advanced gliders and to cross-country soaring inadequately prepared to deal correctly with an inadvertent spin on an aircraft which spins more readily than the initial trainer, or with a spin in which through carelessness the loading is wrong and the c.g. too far aft. Pupils must be taught until they will never forget it the proper spin recovery action. This is: full opposite rudder, slight pause, stick steadily forward *until the spinning stops*. When the instructor is sure that the pupil really understands and knows this, he can then say: "On any given spin, use as much of this recovery action as is necessary to stop the glider spinning. When the spin stops, there is no need to persist with the recovery action. If the glider comes out of its own record almost as soon as it has started to spin, you may not have time to do more than just start the recovery action before returning the glider to normal flight. If the glider continues the spin, then you must use the full recovery action properly, and you may have to hold on full rudder with the stick fully forward for two turns before anything happens. And that is not the time to try and remember what it is."

THE ADVENTURES OF JOE

THE Club, in a fit of misguided progress. had promoted Joe to carry passengers. The mind of the Committee had shied away from any such advanced ideas as turning him into an Instructor, but had had to find some occupation to prevent Joe from getting the winches into a state of permanent unserviceability. Joe and his innocent companion had a good winch launch and cruised away to look at the view. After a few minutes interval losing height, Joe cruised back again over the winching area secure in his exalted altitude. At this moment a pupil in a single-seater, to his immense surprise, was becoming even more exalted at the end of his tight wire. Suddenly there was a queer sawing noise. The passenger's heart leapt into his mouth, sure that the end had come. Even Joe looked round to investigate, and then his mind started to work really fast. Where had the tailplane and elevator gone?—he was sure they were there when he started. He turned to the passenger to ask if he still had any tailplane on that side, but then refrained in case he scared his precious charge. In this, Joe need not have worried. The passenger was quite grey with fright, clinging to a glider which careered round the sky like a drunken vulture. Luckily all thought departed from Joe's head, otherwise he might have started having theories. As it was, a series of unco-ordinated control movements brought the aircraft finally to rest with nothing further than the crunching of the keel, and a gentle scatter of seat bulkheads.

Laurie Bittlestone

Air Scout Gliding Instructor

Laurie tells a Boy Scout all about it.
(Courtesy Boy Scouts Association)

DURING the past few years at Lasham the sight of a group of "small boys" at the launching point has become an accepted part of the local scene. A two-seater moving back at the double will probably mean that the Air Scouts are on the job with their instructor, Laurie Bittlestone. Laurie has been connected with the Scout Movement for some time and his voluminous scrap-books cover the majority of Scouting events of the past twenty years.

As with many other instructors, the war gave him the opportunity to fly and brought the Air and Scouting together. After a period with Dr. Barnardo's, he started an Air Scout Troop at Basingstoke and eventually managed to get in touch with the Gliding Clubs at Lasham. Since then there has been no doubt in Laurie's mind that gliding is the best way to put the Air in Air Scouting. Having arranged the affiliation of his troop to Lasham, Laurie set about spreading the news. The first Scout Gliding Course was held in April 1955 and proved an unqualified success. Since then Laurie has organised over a dozen such courses and now each one could be filled twice from the number of applications. A new venture of his this year has been a series of week-end badge courses to give Air Scouts a good knowledge of "groundmanship" and to whet their appetite for more with a couple of circuits.

As a result of this, Scouts are fast becoming gliding-minded. At the Jubilee Jamboree last year, one of the high spots was Laurie's Air Scout Display in the presence of the Queen and the Duke of Edinburgh. This culminated in the arrival in the arena of a T-21 carrying an Air Scout (and Vic Carr) and an Olympia carrying another Air Scout instructor. One other aeronautical achievement of Laurie's must be mentioned—that of the airlift of Scouts to Canada in 1955. This he feels was his greatest hour, when a few words over the telephone would charter half-a-dozen aircraft to take part in what turned out to be the largest civil airlift ever. A mere catalogue of Laurie's organisational successes, however, gives very little indication of the true worth of his character. There are quite a few people in the gliding movement who rate as "leaders of men" but few who can compare with Laurie as a "leader of boys". His ability to handle boys of all ages and temperament on the ground and in the air is a constant source of inspiration. It is a tribute to his personality that the Air Scouts from Basingstoke are now as competent as most members on the flying field, but as mischievous off it as boys should be.

They have helped at the Nationals as tug-handlers, crew-members and crowd controllers, and have caused more than one gliding club to be amazed at the speed with which they can rig a machine. It takes very little time for such a group of boys to find out the weaknesses in a man's character; so far they seem to have had no success as far as Laurie is concerned.

As for the future, Laurie is hoping for the day when many more sites run Scout Courses, when perhaps they might have a T-42 of their own, and finally that the day may come when he can find the time to fly solo and get a long overdue Silver C!

P.M.

STRAIGHT AND LEVEL, PLEASE

by Peter Scott

Most of us glide because it stimulates us. What we mean is that it frightens us. The question is: "How much?" If it frightens us too much we no longer enjoy it; if it does not frighten us enough we become bored. Somewhere between the two lies the special appeal of our sport, and it leaves a fairly wide scope for individual variation.

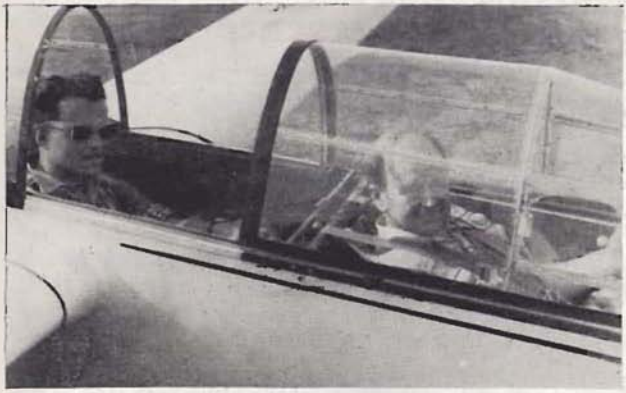
On this general basis I myself have always been a member of The Straight and Level Club. Aerobatics are only enjoyable to me in their mildest forms. Chandelles are all right, loops are my limit, and anything which disturbs the dust from the cockpit floor is well beyond it. Thus when I arrived at the World Gliding Championships at Leszno I was astonished to see a two-seater Bocian glider circling at 500 feet over the middle of the areodrome *upside-down*. It was not until the following day that Colonel Benson and Teddy Proll told me that they had both been indulging in this doubtful entertainment and that if I wanted to fly during my short four days at Leszno they could arrange it. At this point I thought I made myself clear that, although there was nothing I should like to do more than to sample the Polish thermals, there was nothing I wished to do less than to fly upside-down. An hour or so later Teddy Proll approached me excitedly and said he had arranged it all and that in a few moments I could have a flight in the two-seater Bocian.

Now, this machine was not entirely new to me because, a week before, I had flown in one at Helsinki and had found it, although not to my way of thinking quite so attractive as an Eagle, nevertheless a perfectly gentlemanly aircraft of high performance and considerable comfort. I therefore looked forward to my flight with lively anticipation and soon afterwards, at the launch point, I was introduced to the charming young man who was to fly with me. He spoke a very few words of English and a very few words of German, and to make quite sure I explained to him at some length in both languages that the limit of my ambition was perhaps an hour of comfortable thermal soaring, after which I hoped to return equally comfortably to earth. He seemed an intelligent young man and appeared to understand me perfectly. There was some delay because on the previous landing the air-brakes had become inexplicably jammed. When the seats were removed a screwdriver was found wedged behind the air-brake control. Apparently during inverted flight it had slipped out of a pocket. At least this particular hazard would not come my way. No inverted flight for me.

We were launched by aero-tow with a 60-ft. tow rope of a suitable thickness for towing a motor car and wholly innocent of any weak-link arrangement. I found that the climb to 500 metres required all my attention, for the tug—a low-wing monoplane—was terribly close in front of us. To begin with, when I flew in the standard position, with the tug's wings just below the horizon, I was looking down into the cockpit and could almost read his instruments. I was shortly corrected by my young colleague and told that I must keep all of the tug above the horizon. This I did and was surprised not to fall into his slip-stream, but it turned out to be quite a comfortable position. Nevertheless the short tow-rope still required a high degree of concentration.

At 500 metres we released in an indifferent thermal and I started to turn. But my companion shouted, "No, no! Not yet!" and seized the controls. We flew further into the thermal, which had admittedly improved, and was of such enormous dimensions that the straight period did not carry us through to the other side as it would have done in England. As we began to gain height I found that my companion was a confirmed pudding-stirrer. The control column was in constant motion and as a result (so it seemed) we had quite a rough ride. After a while the thermal grew weaker and I asked if I could fly again. Here I was lucky, for I decided to move over to another thermal underneath a cloud which was just forming, and this was so much stronger that we roared up at about 500 feet a minute.

From 5,000 feet we headed back towards the aerodrome. "Now aerobatics!" said my friend. Could it be that he had misunderstood me? Well, there was no harm



Peter Scott and R. Sochacki in the "Bocian" after the flight.

in the simple ones. I performed a couple of fairly mild chandelles followed by a loop. "Is very nice," said my friend, "now I show you." He took over the controls and in a second we were flying upside-down.

A number of unfortunate circumstances dominated the next few moments. First, I had not taken the elementary precaution of tightening the lower pair of straps. Tightly though my shoulders were held, my midriff was only loosely supported. In order to offset this disadvantage I had found a convenient hand grip for my left hand under the seat. Everything seemed under control although I was hanging rather far away from the seat itself. A few moments later my companion began a turn. At this point the seat, unaccustomed to an "upward" pull of one and a half times my weight, gave way with a splintering crash. This was the signal for a loud guffaw from my companion. As a child I wonder whether you can remember lying belly downwards in your bath. I was in just such a position, only the bath was a perspex canopy. It was at this stage, to my undying shame, that I could no longer withhold a stifled cry for mercy. With a flip back of the stick, positive *g* was restored as we half-looped out.

Hastily I tightened the straps, for clearly we had not seen the end of this business. In a few seconds we were involved in two consecutive slow rolls. But with the straps tighter I felt slightly more secure, although my toes were curled around something—perhaps the variometer bottle—which was quite certainly not designed to take the strain now bearing upon it. The next thing was a half-loop to inverted-flight, and at that precise moment we hit the edges of a thermal. "Ah-ha," said my companion, and we began to circle upside down. It was only when he started to tighten the turns and we had already gone up 50 metres that I allowed a further expression of dismay to escape my lips. This time, in what I hoped was a firm voice, I followed it with, "right way up now, please." A few seconds later a more normal world was restored to me.

We were still regrettably high. "Now Immelmann," said my companion. and in quick succession we performed two half-loops, rolling off the top. After what I had already suffered, these were, it must be admitted, comparatively mild and I even made so bold as to try one myself, but it was executed at too slow a speed, and my companion demonstrated with two more.

As we now approached the lower limit of what in this country would be regarded as aerobatic height, I began to breathe again, but my relief was premature. First came two rather charming little flick stall turns, a manoeuvre which only leaves you on the straps for a second or so.

We were now down to 500 feet. Down went the nose yet again. "What now?" I thought. At the edge of the aerodrome our Bocian half-rolled onto its back and we made a run across the whole width of the field upside-down. Oh dear, oh dear! But surely there could not be much more. We half-rolled out, went up into a chandelle, round, out brakes and a spot landing which trickled us up to the hangar door. An enthusiastic Teddy Proll rushed up to take a snapshot and to ask the inevitable question: "Did you enjoy it?"

The Sea-Breeze Convergence Zone

by P. M. Saunders

Department of Meteorology, Imperial College

The conception of a "sea-breeze front", along which soaring might be possible for quite long distances, has provided a new term for the sailplane pilot's vocabulary since the phenomenon was first described by J. K. Mackenzie, of the Meteorological Office, in our issue of December 1956 *(pp.* 294-6)*; but so far it appears to have been exploited only in England. In the following article Mr. Saunders describes a particularly active example of the sea-breeze front along the south coast which might, he believes, have enabled distances of up to* 170 *miles to be flown parallel to the coast.*

THE complex interaction of convection over a heated land surface and a general wind flow was well illustrated on the occasion of the 18th June 1957. At dawn a north-easterly air stream covered the southern half of the British Isles, but during the morning the ground heated up, sea-breeze circulations were produced and the wind pattern modified. Figure 1 shows the surface flow for 12.00 Z (G.M.T.) as analysed by F. H. Ludlam. Zones of strong convergence of the surface winds (and therefore regions of thermal and cumulus convection) were produced along the south coast, along a line N.E. from Portsmouth, and also along the N.W. coast of France; divergence of the surface wind and hence suppression of convection took place in the English Channel.

By about 13.30 Z, showers began to form in the well-marked convergence zones in the south of England; they developed into thunderstorms, and by 15.00 were locally reported to 40,000 ft. The thunderstorms imposed their own circulations on the pattern of convection and the simple picture became confused.

When I took off from Kenley at 13.30 Z (as observer in an R.A.F. Chipmunk) I rapidly entered a belt of cumulus lying to the south; north from the airfield skies were clear. I flew south under deepening

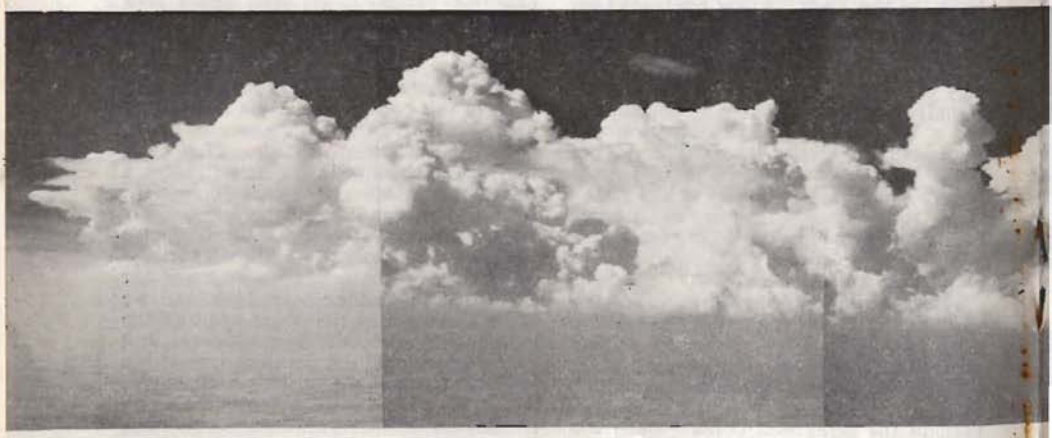


Fig. 2.—A continuous line of cumulus congestus marking the position of the sea-breeze front 10-15 *I ittlehampton, 18th June* 1957, *at* 13.50 *G.M.T. Owing to movement of the*

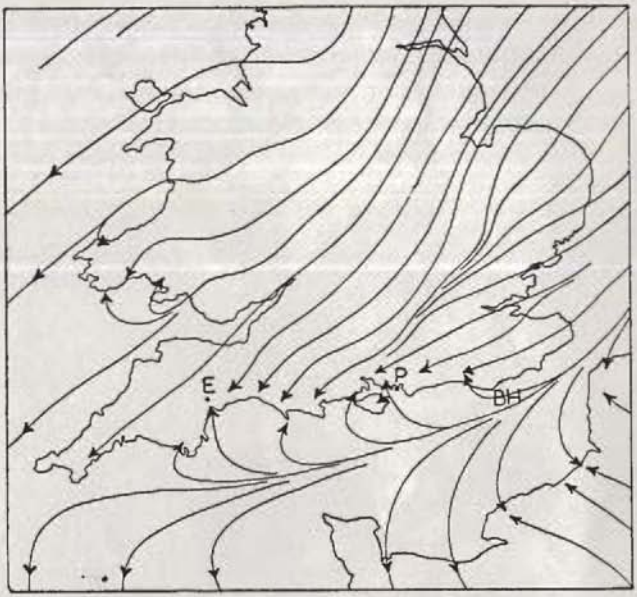
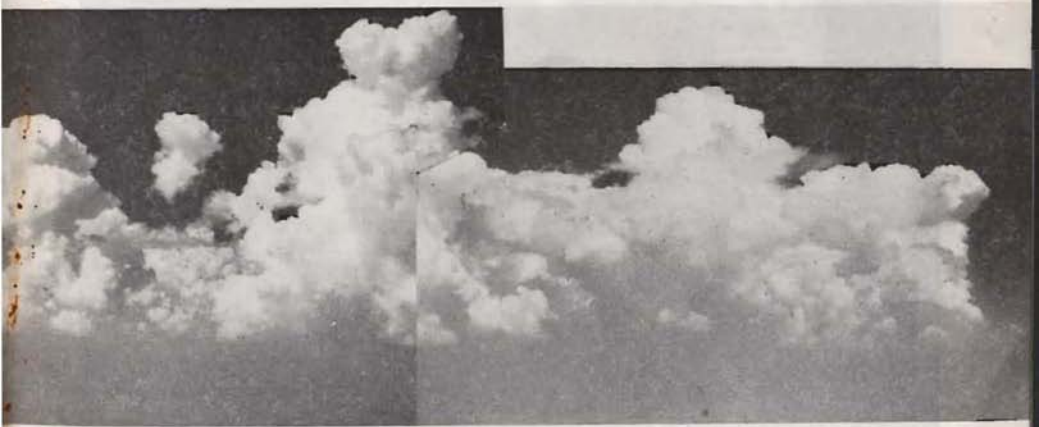


Fig. 1.— Streamlines for the surface wind flow at 12.00 Z on 18th June 1957. (Streamlines indicate the direction of wind flow.) BH — Beachy Head; P—Portsmouth; E —Exeter.



niles inland from the south coast. Photographed by the author from a Chipmunk flying over aeroplane between photographs, the sections of the panorama do not quite fit.

(*Courtesy Editors of "Weather", Royal Meteorological Society*)

congestus until at 13.50 Z emerged into clear about 10 miles from the coast near Littlehampton. There I took the panoramic photographs of Fig. 2; a line of towering congestus with bases at 4,000 ft. and average tops to 12,000 ft. some 10-15 miles inshore from Portsmouth to Worthing. South of this line, there was no convective cloud whatsoever until one had crossed the coast of France, where a chain of massive cumulonimbus lay. I flew east along the English coast and at 14.20 Z, just east of Brighton, took the second photograph published here; by that time some of the cumulus had acquired the anvil structure of the mature cumulonimbus.

To the east, the cumulus line extended only about 10 miles east of Beachy Head, where there were again clear skies: to the west, by my own observations, the line extended to Portsmouth, and the wind pattern suggests as far as Exeter.

Certainly there was scope on this day (as there is on future similar occasions) for glider pilots to make a fascinating and protracted coastal flight: a flight which could furnish interesting information concerning the detailed structure of such convergence zones.

Fig. 3 (*on opposite page*).—*By the time this photograph was taken, some of the cumulus congestus along the sea-breeze front had grown to cumulonimbus, with fibrous "anvils" beginning to form. Brighton,* 18*th June* 1957, 14.20 *G.M.T.*

Lectures for Glider Pilots

A COURSE of eight lectures on "Meteorology for Glider Pilots" will be given by Dr. R. S. Scorer (Imperial College) and Mr. C. E. Wallington (Meteorological Office) on alternate Thursdays from 2nd October 1958 to 22nd January 1959 (omitting, of course, 25th December) at the Kronfeld Club, 74 (Basement) Eccleston Square, London, W.1 (near Victoria Station), beginning at 7 p.m. each evening.

This course is intended primarily for those interested in flying and in soaring in particular. No previous knowledge of meteorology is required but a knowledge of physics would, of course, be helpful. The latest research results in the study of mountain waves and convection will be described, together with the basic principles used for weather forecasting, so that those pursuing the course will be in a better position to make use of B.B.C. and other weather forecasts, and will be better able to interpret them in terms of soaring and general flying conditions.

The fee for the complete course will be 10s. per person and this should be sent in advance, addressed to the Kronfeld Club, c/o The British Gliding Association, Londonderry House, 19 Park Lane, W.1. Admittance tickets will then be issued.

The fee for single lectures will be 2s., payable at the door. Syllabus:—

1. 2nd Oct. The structure of the atmosphere; winds. (C.E.W.)
2. 16th Oct. Modification of temperature; lapse rates; the tephigram. (C.E.W.)
3. 30th Oct. Upper winds, jet streams, fronts. (R.S.S.)
4. 13th Nov. Cloud types; rain. (R.S.S.)
5. 27th Nov. Weather charts; forecasts and their interpretation. (C.E.W.)
6. 11th Dec. Mountain waves and soaring. (C.E.W.)
7. 8th Jan. Thermals, thunderstorms and soaring. (R.S.S.)
8. 22nd Jan. Wind structure near the ground. (R.S.S.)

The lectures will be illustrated by slides, including many in colour, and by cine-films where appropriate, and those attending will be invited to discuss their own observations.

Books recommended:—

"Cloud Study", by F. H. Ludlam and R. S. Scorer. John Murray, 12s. 6d.

"Further Outlook", by F. H. Ludlam and R. S. Scorer. Allan Wingate, 15s.

"Cloud Reading for Pilots", by A. C. Douglas. John Murray, 7s 6d.

"Meteorology for Aviators", by R. C. Sutcliffe. H.M. Stationery Office, 12s. 6d.

"Natural Aerodynamics", by R. S. Scorer. Pergamon Press, 60s.

Cloud + Kite + Plight = Fright

by Bill Longley

WEDNESDAY, the 17th May 1958, had been a somewhat uneventful day at Andover as we were all fervently engaged with preparations for the coming R.A.F.-G.S.A. competitions. We had decided not to fly as the weather looked decidedly sinkable.

"Andy" Gough had ordained that Ken Newholme and myself should fly our recently acquired Kite I (late of Nympsfield) which had only that day emerged from the skilful ministrations of "Scotty", our worthy "Chippy Extraordinary"; so at seven o'clock that evening a solitary bent-wing monoplane took to the air on her test flight.

Ken and I each had several trips and were preparing to hangar-fly when a small frontal cloud with attendant rain squall was observed approaching the airfield. I launched off and released at 1,000 ft. in the rain right beneath the cloud. Here was lift! Genuine Green Ball at five feet per sec., and in two turns I was at cloud-base, which was 1,500 feet.

Now, the Grey-Bearded Fathers of Gliding may nod sagely and say, "time to come down"; but alas! I have only a ginger moustache and am not, as far as I know, a father, so I headed for the front edge of the cloud, which was directly across wind, and was delighted to find that there was powerful smooth lift all along the cloud in clear air, and at 40 knots and 10 to 15 feet per sec. up, I soon found myself at 5,000 feet with clear air on one side of me, whilst on the other side the cloud was seething above and below me, like a huge precipice. This was simply marvellous, I thought, when suddenly with a rush and a roar I was enveloped in cloud. I decided that my position was fraught with danger, so I straightened up on a downwind course and sat waiting for the daylight.

After several dark minutes I realised that daylight wasn't in that direction, and was just conditioning myself for a change of course when I noticed my speed had crept up to 60 knots. "Ease back gently," I thought, so I did, and the needle said 80 knots! Then 0 knots. So this is what they mean when they say "go and get knotted!" Spoilers out—still no difference; then things got really rough. In an attempt to get back in control I peered at all the clocks in turn. Horn Vario 10 metres up, which was as far as it went. A.S.I. varying between 60 and 80 knots; Cosim Vario top of the green tube; Turn and Slip completely incomprehensible but still working, as the venturi drive was wailing like a banshee; Altimeter past 8,000 feet and moving towards 9,000 feet fast!

This completely un-nerved me and I began to dwell on converting from uke' to harp (with obituaries in the "Adventures of Joe"); I lost control completely and the aircraft began a succession of aerobatic manoeuvres which the Rev. Sling never intended her for.

Somewhere round about now the hail started, and with the hail, the tears, and prayers and thoughts about using the panic-bag, which I could feel comfortably pressing from behind. I hauled the stick back and applied full rudder and after a sickening pause the aircraft began to spin. However, the spin soon developed into what must have been a spiral dive, for the A.S.I. reached 120 knots(!) before I managed to spin the other way. In this manner, spinning in alternative directions, I plummetted vertically and thankfully out of the cloud over Whitchurch.

I suppose a braver chap might have taken a bearing on Andover, four miles upwind, and gone back in again; but I could see a good friend's house within gliding distance with a suitable field alongside, and I parked the glider by her house—which made the neighbours talk, you can bet!

Altogether I had been in the air for 45 minutes, and they are minutes I shall never forget. Tribute is due to Mr. Slingsby and the venerable Kite. The latter suffered no damage and is giving of her best with the Wessex Club, who all have a rather understandable fondness for her.

Had I achieved Gold C height and had a barograph, neither of which I did, I would still say that to emerge from circumstances like those I experienced was by far the luckiest thing that has ever happened to me, and if anyone benefits from this description of what can happen, I shall be more than satisfied.

Gliding Certificates

DIAMONDS FOR DISTANCE

No.	*Name*	*Club*	*Date*
3	D. H. G. Ince	Surrey Gliding Club	13.4.58

DIAMONDS FOR GOAL

No.	*Name*	*Club*	*Date*
227	M. P. Garrod	London Gliding Club	25.4.58
228	L. Welch	Surrey Gliding Club	20.7.58
229	D. A. Smith	London Gliding Club	20.7.58

GOLD C CERTIFICATES

35	V. Carr	Coventry Gliding Club	30.5.58
36	M. P. Garrod	London Gliding Club	25.4.58
37	C. W. Bentson	London Gliding Club	20.7.58
38	D. Stowe	Bristol Gliding Club	23.6.58

SILVER C CERTIFICATES

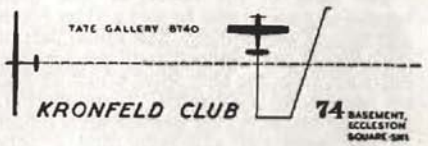
No.	*Name*	*Club*	*Date*
744	H. C. C. Greenway	Coventry Gliding Club	17.6.58
745	P. Millett	Empire Test Pilots School	22.5.58
746	R. H. Perrott	Bristol Gliding Club	27.5.58
747	R. A. E. Dunn	RAF Cranwell	8.6.58
748	D. G. Kuyper	Crown Agents Gliding Club	18.6.58
749	K. P. Smales	RAF Gütersloh	15.6.58
750	P. W. Williams	Army Gliding Club	18.6.58
751	P. A. Taylor	Gamecock R.N. Gliding Club	15.6.58
752	K. V. Nasholm	Wessex R.A.F. Gliding Club	18.6.58
753	C. R. Hutchings	Wessex R.A.F. Gliding Club	20.4.58
754	J. C. Croshaw	Wessex R.A.F. Gliding Club	11.5.58
755	D. G. Margetts	RAF Gütersloh	1.6.58
756	T. C. W. Potts	Army Gliding Club	8.7.58
757	R. B. Swift	Midland Gliding Club	9.7.58
758	W. R. Shackleton	Empire Test Pilots School	15.6.58
759	R. Bishop	Bristol Gliding Club	13.7.58

C CERTIFICATES

Name	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*
R. A. Brew	RAF East Midland	V. R. Hartopp	Northampton-shire	M. J. Broad	London
C. J. Coward	Surrey	C. Falkingbridge	Perkins	A. F. Holloway	RAF Windrushers
M. Headley	RAF Chilterns	J. C. Letch	RAF Wessex	R. E. Stothard	Yorkshire
C. S. Chinnock	RAF Condor	J. M. Young	Lakes	A. T. Farmer	Cornish
T. F. Smith	Avro	J. Deakin	Coventry	J. R. Charters	London
C. S. Hartopp	Midland	T. Greenwood	RAF Wessex	J. T. Wingett	RAF Bruggen
C. B. B. Hunt	Southdown	J. M. Busby	Surrey	C. S. Tong	Perak Flying Club
B. E. Dalby	642 Gliding School	J. M. S. Procter	Yorkshire	I. Dunkley	RAF Bruggen
E. C. Holmes	Bristol	R. B. Swift	Midland	J. W. Pickles	RAF Wessex
H. R. Walton	Surrey	E. J. Luker	Oxford	R. F. Neame	Kent
R. Sharman	RAF East Midland	R. Kaye	No. 632	J. Sandford	RAF Cranwell
R. N. Mason	No. 611	A. V. Clark-Lewis	Cornish	M. J. Frost	London
J. A. Kilby	Perkins	W. R. Shackleton	ETPS	R. S. C. Clouston	RNG & SA
		G. Tylor	Surrey	W. B. T. Bate	Cornish
		R. W. Bishop	RAF 12 Group		

C CERTIFICATES (*contd.*)

Name	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*
M. E. Rudd	No. 621 G.S.	W. H. Harrison	RAF Four Counties	S. R. Cussen	Cork
E. E. Reeves	RAF Moonrakers	J. Deas	R.N. Arbroath	J. M. Bence	London
J. F. McCaughey	H.C.Hawkinge	H. D. Barlow	RAF Windrushers	J. B. Harding	RAF Chilterns
J. Driver	Avro	A. F. Caple	No. 621	B. Carroll	RAF Mid East
T. R. Carr	RAF Windrushers	R. V. Goodspeed	Surrey	E. Clutton	Midland
B. F. Bisley	Kent	R. C. King	Oxford	B. G. Sargent	Cambridge
D. A. Eaton	Surrey	M. J. Smith	Coventry	A. Finlay	Newcastle
D. Dalpra	No. 623	M. V. Parker	Midland	D. C. Powell	Yorkshire
A. O. Conibeer	No. 624	F. Severn	R.N. Bramcote	R. Montgomery	Coll. of Aeron.
A. M. Segal	Surrey	T. A. M. Bradbury	Bristol	G. Ross	Midland
K. E. Tinkler	Perkins	R. C. Salmon	RAF Wessex	R. A. Wade	RAF Ahlhorn
J. G. Taylor	London	A. Clark	RAF Windrushers	M. H. Reid	Southdown
M. J. Mantripp	RAF Moonrakers			K. N. Carnell	I. of Wight



THE new club tie, maroon coloured with a small gold windsock attached to the letter K, is now out and can be had by members for 15/-.

The Exhibition of paintings being organised has now been fixed for the first week in November, and we are looking forward to receiving a lot of entries, both paintings and drawings of gliders and light aeroplanes. There will be a prize for the best entry and for further details please write to the Secretary at the Club or telephone him at VIC. 6056. The prizes will be presented at the Dinner Dance to be held at the Eccleston Hotel on Friday 7th November. The cost is 25/- for a single ticket.

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

Oct.	1st	American Films.
	8th	Alan Yates on OSTIV and what it does for Gliding.
	15th	Film.
	22nd	ANNUAL GENERAL MEETING.
	29th	Peter Brooks "Aircraft at Leszno in 1958."
Nov.	5th	Painting Exhibition — no Lecture.
	12th	The Early Days by F. N. Slingsby.
	19th	Talk by Air Commodore G. J. C. Paul.
	26th	Talk.
Dec.	3rd	Talk.
	10th	Talk.
	17th	CHRISTMAS PARTY.

Annual Best Flights

BY some mischance the best goal flight of the year, done in April, has not yet been recorded. Details are:

Goal flight single seat.

25th April. C. Green, Skylark II.

Long Mynd-Great Yarmouth. 194.5 miles.

Duirng the last two months (which includes National Soaring Week), nothing else of note has been reported in the way of distance flying, which just goes to show what very poor weather we have had. However, to make up for the lack of distance flying, height achievements in both single and two-seaters have been pushed up.

Single-seater absolute altitude.

2nd August. A. T. Morgan, Olympia, at Nympsfield, 16,300 ft.

This flight also counts for gain of altitude, 15,340 ft.

Two-seater absolute altitude.

2nd August. P. Scott and P. Collier, T-42B at Nympsfield, 16,400 ft.

This flight also counts for gain of altitude, 14,300 ft.

"There Always Has to Be a First Time"

LAUNCHING A GLIDER BY HELICOPTER

by Lieut.-Commander Humphry R. Dimock, R.N.V.R. (retd.)

The display described here, at which a launch of a glider in tow of a helicopter was demonstrated for the first time in Britain, took place at the Royal Naval Air Station at Lee-on-Solent, H.M.S. Daedalus, headquarters of the Fleet Air Arm. The helicopter was flown by Lieut. M. Fournel, R.N., with Lieut. W. Stanley as observer.

It was an exciting moment when I was first told of my nomination to demonstrate the launching of a glider by means of a helicopter at Lee Air Day on 9th August 1958, and I immediately thought of the vivid description which Peter Scott gave me of a helicopter tow in Poland—how the glider had been dangled on a string, so to speak, and then dropped. However, this was not to be done at the Show; all the Navy wanted was to demonstrate that a glider could be launched by a helicopter.

The glider was to be launched to 800 ft. and landed as far as possible away from the Show: the helicopter, too, and as quickly as possible, in order to get out of the way of other more important events.

On the practice day the tow line of 300 ft. was laid out and the ordinary gliding signals arranged, except that the helicopter was given a signal to rise two feet off the deck before taking up slack. The helicopter is one which is modified for minesweeping and has a very heavy towing attachment with a quick-release on the end.

The glider used was a T-21 Sedbergh side-by-side two-seater, and for co-pilot it was very nice to have my son Julian. This flight was also to be the test flight after rebuilding from a major crash; otherwise there would have been a flood of priority potential co-pilots. One of the men who had had a major part in the rebuilding volunteered out in a very definite manner! Our two wives (the two potential widow Dimocks!) sat in our car watching.

The pilot of the helicopter had been briefed to pretend that he was a Tiger Moth and behave accordingly. The initial part of the take-off was normal until we met the out-wash from the helicopter, which caused the machine to rise quickly. Lieut.-Comdr. J. S. Sproule, R.N., the commanding officer of the helicopter squadron, and a very famous *inter alia* glider pilot, was in charge of the operations, and he had suggested that the glider keep the helicopter as far above the horizon as the Tiger Moth would have been kept below the horizon in order that there should be no possibility of the tow rope fouling the tail rotor.

The helicopter speed was briefed to be 45 to 50 knots, and the climb at this speed was very steep, the green ball being at the top of the tube. The height of the release was arranged at the last minute before take-off to be 1,500 ft., but just before this altitude was reached, due to some thermal or turbulence in the atmosphere, I found myself at an angle of about 30° below the

level of the tow, and struggling (literally) in the down-wash from the helicopter. The altimeter was faulty and was moving in steps of 400 ft. to 500 ft. at a time. After clearing the down-wash I saw the altimeter needle rise suddenly to 2,100 ft., so cast off immediately. From a flying point of view everything was perfect, except that the air speed indicator was not registering more than 30 knots at any time, and now at the proper gliding speed registered zero—a minor matter, of course. Since the maximum height originally was to have been only 800 ft., I had not arranged for parachutes, and so I dare not put the machine under any strain other than a few gentle stalls.

There was to have been another practice flight on Friday, 8th August, but this was prevented by bad weather. At the final mass briefing on Saturday morning the Commander reiterated: "I cannot emphasise too strongly that the glider and the helicopter must come down as soon as possible and as far away as possible so that they do not interfere with other more important events."

On Saturday, 9th August, just before the take-off, however, a rating came across and said: "Please, Sir, Commander Air says that due to low cloud the next event is cancelled and will you please put up a show and make it last as long as possible." It came as a bombshell, and I thought of the wonderful spectacle of hanging inverted by the belly-hook from the helicopter, using the ailerons to do a peculiar type of slow roll, of the different types of loops, of the money and other things which would fall out of my pockets, and other aerobatics which would have been possible; but then I remembered that the pilot of the helicopter had been briefed to climb to 800 ft. in a straight line and then a quick circuit to above the take-off position for release at 800 ft. I remembered that we had no parachutes, that the machine had not been stressed and must not be stressed at under about 5,000 ft. The rating stood waiting for my reply as the take-off signal was given, and regretfully I had to say to him, "Tell the Commander Air that I shall only be able to do a few gentle stalls and stall-turns."

Without being able to re-brief the helicopter pilot, I hung on until 1,200 ft. was reached before releasing and then carried out the simple manoeuvres promised.

I kept thinking of what a disappointing show it must be in view of what it might have been. However, at the ensuing cocktail party I was frequently told that it was a "jolly good show."

Should any of our R.A.F. friends decide to emulate and improve on us, I would strongly advise a longer tow line so that the down-wash of the helicopter can be avoided. At 50 knots it felt as if the port wing of the glider was stalling with an awful shuddering. As a means of launching it is almost as quick as a winch launch, and is to be thoroughly recommended. As a means of retrieving, if a field is large enough to land in, it is large enough to fly out of, and an aerodrome is no longer required for gliding—any field will do.

Correspondence

WHO DISCOVERED THERMALS?

Dear Sir,

A few years ago I came across Hankin's book (referred to by Bill Coverdale in your issue of August 1958, p. 215) in the B.G.A. Library. After reading it from cover to cover, my impression was that Hankin had shown that birds were able to soar by a means which, however, he was unable to explain. He certainly discovered also the circumstances under which thermal soaring was possible but he was unable to explain the mechanism. It seemed clear to me that he thought that the bird itself contributed in some way to the conversion of solar energy into potential energy (height of bird), for he continually refers to such things as the colours of the feathers in the sunshine. He also specifically excludes from time to time the possibility that it was rising bodies of air which were supporting the birds, but his reasons are not valid, for the cases he quotes in support of his idea can be explained in other ways.

However, his observations are excellent, and no glider pilot has ever made such a careful study of soaring as he did. Knowing, as we do now, that it is thermals which are responsible, one can learn a great deal from his observations about thermals, and it is like reading a detective story to try to explain, in the light of present knowledge, the observations which he made. I had a go at this (*Quart. Journ. Roy. Met. Soc.*, Jan., 1954, p. 68) some time ago before the recent experiments on thermals in the laboratory were made, and feel that even more can be got from Hankin's book now than in 1954. I really think that he deserves the credit for the discovery of thermals because his record of the observations is unsurpassed. The proof that they were suitable for soaring in by gliders is another matter, and was presumably given by Wolf Hirth.

We must not confuse the discovery of the phenomenon with the explanation offered at the time. I think the explanation given by Ralph Barnaby of Hirth's flight in terms of heat stored in a wood is highly suspect, and in any case this is not the source of most thermals. Indeed, there is still a lot we don't know about thermals, so surely the first person to describe the phenomenon (whatever the explanation or names he gave to it) is its discoverer.

Unless we accept this criterion, what are we to say about *evening waves*? They used to be called *evening thermals* until they were properly explained as waves, but surely no-one would suggest that the giving of the correct explanation, several years after they had been soared in at Camphill, was the discovery of them!

But to return to Hankin: if any glider pilot can produce as good a record of observations as Hankin he will perform a most valuable service. For instance, we know very little about (1) "wind shadow thermals", (2) cloud streets and streets of thermals, (3) thermals near the ground, i.e., below, say, 200 metres, (4) dust devils, (5) the behaviour of thermals near to cloud base, (6) how thermals keep going up into the same cloud as it moves along in the wind—and many other phenomena. All my theorising in a recent book (*Natural Aerodynamics*) could be made to look rather silly by a modern sailplane pilot's diary of the quality of Hankin's. In the meantime we theoreticians have to do the best we can with laboratory experiments.

R. S. SCORER.

Dept. of Mathematics,
Imperial College of Science and Technology.

OUR NEW COVER

Dear Sir,

At first glance I thought it must be a rival magazine of inferior layout; secondly, I thought it was a pre-war gliding magazine, but then the date—August 1958—brought me up with a jolt and I saw that I was looking at the current number of SAILPLANE AND GLIDING.

What, I wondered, are the Committee doing? I presumed that they were using this cover to show us just how good the cover design used in recent years has been. But then I glanced inside and found that this was the winning entry in the cover design competition.

Really, Sir, this is a most retrograde step; I consider the cover is absolutely *ghastly* and not a worthy one for the normally good contents of the magazine. For heaven's sake, change it back to the previous one, *pronto*.

If you *want* to emphasise the word GLIDING rather than SAILPLANE, just reverse the "colour" of the wording on the old cover, and make SAILPLANE black and GLIDING white.

One other point: the number of founts used in the make-up seems unnecessary and gives an untidy result. May I suggest that a "gliding type" in the printing trade (there must be some!) is added to help with the selection of type and so make the magazine more attractive and easier to read!

DAPHNE A. POYNTER.

New Malden, Surrey.

[We would welcome further opinions on the new cover, including approving ones (if any). The use of different founts (i.e., kinds of type) for the titles of articles was introduced in Summer 1955 by a firm which took over the production and had a professional knowledge of founts; a few welcomed the change, none objected to it, and everybody else took no notice.—ED.]

Dear Sir,

I am sure you will want to know what your readers think of the new cover design on SAILPLANE and GLIDING, so I am writing to say that I strongly disapprove. My chief complaint is that it is drab. It lacks the wonderful splash of colour of the old design, which in my opinion in no way detracted from the photo. Secondly, the plain, upright writing is very dull by contrast with older copies of the magazine. Finally, I am sorry that so much emphasis has to be given to the price, which must surely mar any artistic beauty the cover might otherwise have.

J. N. STEVENSON,

Army Gliding Club.

Dear Editor,

I am writing to say how much I dislike the new cover of SAILPLANE AND GLIDING.

How anyone with an eye for design produces a cover with the "S" of Sailplane one colour and the rest of the word in another colour, I fail to see. The arrangement of the wording is poor, too. And as for the huge 2/6 in a circle, that is enough to put anyone off. Who wants to see the price that size?

Might I suggest that the title be set in a block of its own and then moved round the cover, depending on the subject in the photograph.

JILL WALKER.

London, W.8.

COMPARATIVE LAUNCHING COSTS

Sir,

The monetary figures quoted by Ann Welch in "It's All Yours" for August as being the comparative costs of winch launching and aero-towing seem rather misleading. They are not "operating costs" but appear to be simply the initial costs of providing the necessary equipment. Operating costs must surely include running costs, i.e., expenditure on fuel and oil, etc., and overhead charges such as insurance, repairs, annual C. of A. renewal and so on. No figures have been quoted for any of these items of cost.

Furthermore, according to her figures of the cost borne by ten pupils using each type of launching:—

30 winch launches produced 140 minutes at 1s. 0d., which equals £7, or 4s. 8d. per launch of average flight time of 4 mins. 40 secs.

10 aero-tows produced 220 minutes at 10d., which equals £9 3s. 4d., or 18s. 4d. per tow of average flight time of 22 mins.

Surely these are somewhat unusual charges for most British Clubs?

GODFREY HARWOOD.

Surrey Gliding Club.

MRS. WELCH ANSWERS

MRS. WELCH replies:—The figures quoted were not stated to be "operating costs", but were intended to be exactly what they said—the cost of equipment. They showed that a towing aeroplane could be obtained for less than a new winch outfit.

Obviously flying and launching charges are based on the cost of the equipment, the direct operating costs, and on overheads. Throughout the country, aero-towing charges are between 12s. 6d. and 17s. 6d. to 2,000 ft., with in some cases an additional charge of about 15s. per hour for the glider itself. Winch launches cost between 3s. and 5s. for an ordinary circuit. The figures which Mr. Harwood works out are, I should have thought, thoroughly typical for the country.

The real point is that there is not much difference in the actual cost per minute flown with either method of launch. Aero-towing has the advantage of a smaller operating crew, flexibility, and, above all, the reduction of fiddle.

Two-Pew-ology

by J. C. Neilan

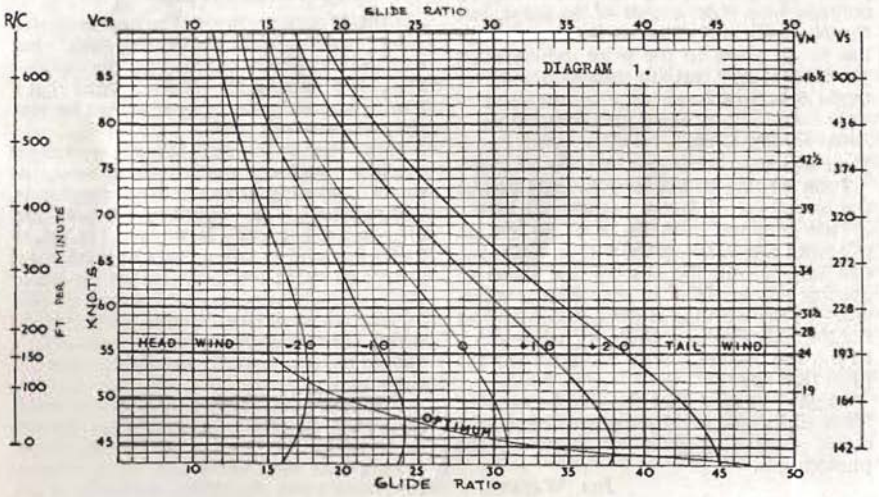
WHY have a two-seater when for the same cash you can have a most superior single-seater?

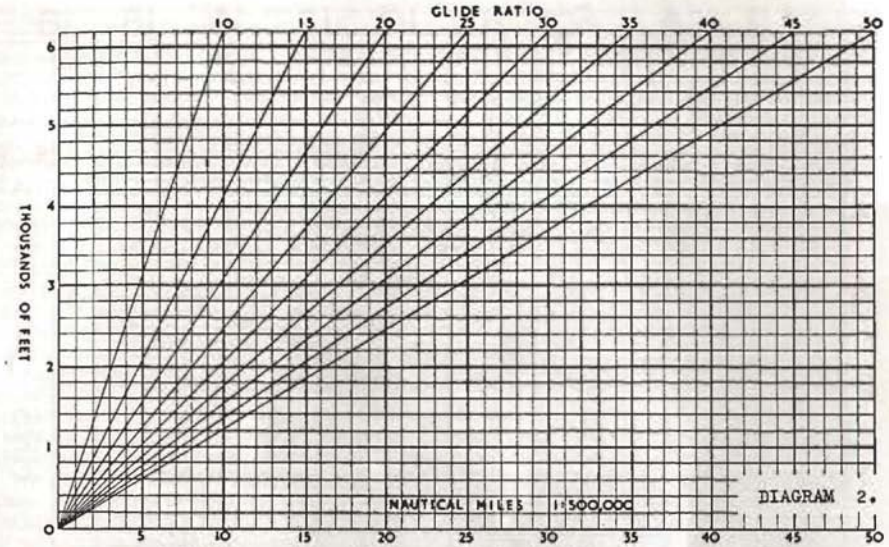
I must admit to having had qualms about it after having committed myself to part-ownership in "Beagle", but having enjoyed a two-pew season I can honestly say I have no regrets. A good two-seater like "Beagle" is good also when flown solo; in fact, the low sinking speed then available is fine for staying up in difficult conditions. Gold and Diamonds are comfortably within its limitations.

But there is a more subtle advantage to be had from flying two-up. Apart from the fact that twice as many people get fun out of each flight, there is a grand opportunity for each flight to be better than if it were a solo effort. The second occupant should not be merely a passenger. He should be fifty-per-cent of the total working crew, and is in a position to relieve the pilot of a lot of distracting work, work which is usually left undone and the results just guessed in solo flight. I am thinking particularly of normal thermal cross-country flight, in which the fumble factor can be so drastically reduced by close attention to obtaining the best rate of climb. Many pilots do not know what their rate of climb was, due either to the lack of opportunity or to their lack of practice in the art of making legible notes while flying. But there is no excuse for neglecting the making of notes in a two-seater. It is the ideal vehicle for this purpose.

I do not intend to hold forth on the theory of optimum cruising speeds. It is widely known and practised. It is also recognised that the factor having the greatest effect on cross-country speed is the achieved rate of climb, so concentration on thermal circling technique to get the best rate of climb is in fact more important than choosing the best cruising speed. In this respect the two-seater pilot is at a great advantage in not having to do any recording or calculating, but just concentrate on flying. While he is obtaining the maximum possible rate of climb in the thermal, his navigator or "Height Engineer" should be working out how to make the best of the height gained in the form of course to steer, speed to fly at and range.

To do this obviously requires that he





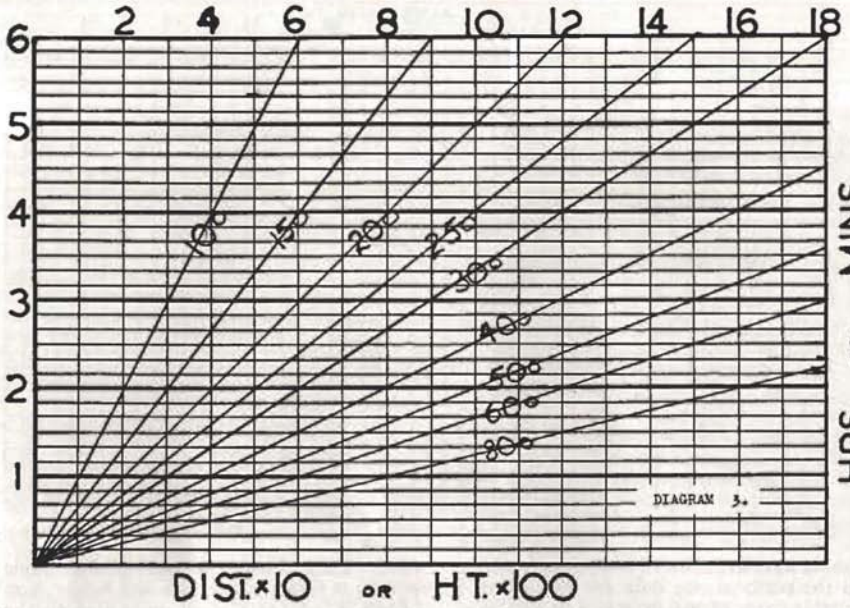
should have available in readily usable form all the performance data for the glider, a suitable form of log for entry and calculations, pencils, maps, altimeter, clock, preferably with stop-watch action, and either computors or some quick method of computing such as diagrams or tables.

There are several devices in common use for indicating the best speed to fly at, but few of them go quite far enough. The two factors forming a glider's performance are sinking speed and forward speed, which together result in a wide variety of gliding angles.

In an effort to get all possible gen on to one device I have evolved a sort of composite cruising chart which has everything on it except the kitchen sink—I mean the cu-nim sink. It is really two diagrams having a common scale, so that you can follow lines across from one to the other. The first diagram has curves on it which show the gliding angle throughout the speed range in selected head or tail wind components. In addition it has on it a curve showing the maximum possible gliding angle in the selected winds. It has three more scales which are allied to the forward speed (Vcr) scale, namely Rate of Climb (R/C), Average air cruising speed (Vm), and Sinking Speed (Vs). This diagram gives you the gliding angle at any airspeed in any wind. To find out what that gliding angle will do in terms of distance and height, you follow down the gliding angle line to the second diagram, which is just a series of selected gliding angles drawn against height and distance. To make the most of things the distance scale of this diagram is drawn identical with the scale of the map you use, so that you can place it on your map, measure your distance and see directly what height is needed.

I have not involved these diagrams in added down-currents as it gets too complicated. After all, down-currents don't last for ever, and you are never very far wrong by just adding another ten knots on for an obvious downcurrent, and allowing an extra bit of "safetv height" when working things out. By giving a scale of sinking speed as well as airspeed, you are able to see what Vs ought to be, and when it gets back to this you know you are through the down-current. You can then recalculate range from the new height. For use by a navigator it is convenient to mount diagram 1 above diagram 2 on one side of a card, and to put a diagram of groundspeeds, times and distances on the other, thus saving carrying a slide rule type of calculator. This diagram (Fig. 3) can also represent rates of climb by combining height gain with time.

Let us now see what happens. As soon as



the pilot starts circling the navigator taps his altimeter and starts timing the climb. On the way up he can note the gain in spot checks of a minute. The average will be considerably less due to fumbling at bottom and top, so he can estimate roughly what the rate will be. With this estimate he enters diagram 1 and moves horizontally across to the airspeed scale Vcr so that he can immediately tell the pilot the approximate speed to fly. He stops timing the climb only when the pilot leaves the lift, and repeats the process to find the exact speed to fly at. He then carries on across the diagram till he reaches the line representing the wind component. He then moves down the diagram to the gliding angle scale, and makes a note of it. Then on diagram 2 he follows down the appropriate slope till it intercepts either the height or the distance in which he is interested.

A problem which this device easily solves is that of when to stop climbing to make a dash for the goal or turning point. Let us assume we are climbing in a good cloud at 500 ft./min., and a turning point is 10 miles away, and must be rounded not above 3,000 ft. for recognition purposes. There is a 5 knots head wind component. First choose a minimum safe height at the turning point, say 2,000 ft. 500 ft./min. climb gives us a cruising speed of 78 knots, which gives a glide ratio of 16½ in this wind. That slope intercepts ten miles distance at 3,700 ft. Add minimum safety height 2,000 ft., or desired turning height 3,000 ft. to determine height at which to leave the cloud, viz.; minimum 5,700 ft., maximum 6,700 ft. Note that at 46½ knots giving maximum gliding ratio of 27½ the distance can be covered with a loss of only 2,300 ft., but we are not interested in such slow progress with good clouds like this one at hand.

Another pressing problem is presented to the would-be Channel-crossing pundit. He doesn't want to have to land before running into thermals at the other side, and he wants to reach them at not less than 2,000 ft. Further he expects a ten-mile belt of stable air from the coast before he thinks there'll be any worth-while thermals. Right, the problem is simple. The distance is Channel plus 10 = 32 nautical miles, safety height at end 2,000 ft. His rate of climb has averaged, say 200 ft./min., which gives him a best cruising speed of 57½ knots, with a

gliding ratio of 32½ with a ten knots tail component. Knock off the ½ for luck, and we have the height to glide at 6,200 ft., plus safety height 2,000 ft. equals 8,200 ft.

But, says the pundit, these clouds don't go that high. The tops are about 6,000 ft. O.K. let's examine the maximum glide ratio technique. This works out at ratio 38 at 44 knots. This intercepts 32 miles at 5,200 ft., which is still not enough to give us the required 2,000 ft. safety height. However, if he could climb up to 6,000 ft. and hold it while drifting out over the channel (giving 4,000 ft. usable, which would take him 24½ miles), he has only to drift 7½ miles to achieve his end. Thus, climbing from say 3,000 ft. to 6,000 ft. at 200 ft./min. takes 15 minutes which drifts him 2½ miles. He needs to hang on to the cloud for another thirty minutes for the task to be in the bag. I hope he has had a good look at the latest Airways map before trying this exercise!

We haven't so far examined the use of the scale Vm on the device. This is the theoretical mean cross-country speed in still air assuming a regular succession of climbs and glides and maintaining a steady average height band. It comes in very handy for Flight Planning. While few people do this adequately, there is no doubt that a flight previously planned has more chance of being effective. In competitive flying the met. forecast usually gives some idea of the expected strength of the thermals. This gives the pilot the chance of estimating his average rate of climb. A glance at the device shows his still air expected cross-country speed, and application of the wind component to this gives the ground speed. I give a flight plan for a 200 km. triangle below. Expect to glide in from 3,000 ft.

marks for being early or late. In such a task the competitors would have to pay much more attention to flight planning than is customary.

In drawing the curves for performance and glide ratio, I have purposely committed some pessimisms, in order to allow for the usual piloting inaccuracies. For instance I have reduced all glide ratios by one, and then when drawing the glide slopes, instead of drawing them from 6,080 ft. (= 1 nautical mile) I have drawn them from 6,200 ft., which gives you an extra safety height of 20 ft. per thousand.

To get back to the business of two-pew-ology, all this navigating and height engineering should be done by the man in the back, leaving the pilot with absolutely no excuse for not concentrating on flying as flawlessly as possible. A solo pilot could not spare the time from flying to go into all the details, without finishing up by finding he's pointing the wrong way, though even to him the device described or something similar should be of great help in reducing the fumble factor. This is not to say that the navigator should be just a slave. The harder he works the more he contributes to the success of the flight, and the laurels, if any, should be equally shared as they were equally earned. The limited amount of two-pew cross-country flying I have done myself has convinced me that a flight, the success of which has depended on combined efforts, is if anything more satisfying than a solo effort, and the memories of it are twice as useful if shared by two people.

The difference in performance between a single seater and a two seater should be to a large extent nullified by the two-seater pilot's ability to concentrate on perfect

Leg.	Dist.	Track	W/cpt.	R/C.	Vcr	Glide ratio	Vm.	G/S.	Time	Steer.
1	35½	293	—5	150	54	25½	23	18	118	288
2	36	049	+4	300	64	26	34	38	57	041
3a	25	173	—4	250	61	26	32	28	53½	193
3b	12½	173	—4		61	26		57	13½	183
	109							27	242	

I have not as yet seen it set, but no doubt in time we shall receive tasks such as a race with a declared time of arrival, with loss of

flying. It is the reduction of fumbles which makes the most difference. Two-pewists have the opportunity.

CLUB AND ASSOCIATION NEWS

READING through club news this month, it is apparent from most sources that clubs have been suffering from the mild winter we have had this summer! Although one club does quietly mention the fact that they are still without rain after seven weeks, and a sun which is almost too hot.

In spite of the widely different weather clubs still have much to report, both flying and site development.

As for reports in the next issue, I would like to remind Press Secretaries that club news must be typed double spaced on foolscap. Some reports have arrived written in longhand, and it is extremely difficult for printers to follow when setting type.

In future no handwritten reports can be accepted, also the final copy date must be strictly adhered to.

Reports for the December issue should be sent to:—S.E. Ambulance Station, New Cross Road, London, S.E.14, by first post, Wednesday, 15th October.

COLIN MOORE,
Club and Association News Editor.

ABERDEEN

THE first season at the new Dyce site has proved satisfactory in almost every way: the membership is growing steadily and the first C's gained on a club site are beginning to appear, the soaring possibilities seem to be good but it is difficult to explore far afield as we have not yet managed to find a sailplane. The T-31 has been working very hard during the past weeks for the Summer courses which over forty outsiders have attended as well as some Club members.

On the social side the Club Car Treasure Hunt on 2nd August was a great success, and the annual dinner and dance has now been fixed for 21st November.

A recent welcome visitor was Sir Roger Conant, who is taking a lively interest in our progress.

Will all gliding Sassenachs please note that they are most welcome if they find themselves in this part of the country.

J.P.W.

ACCRA

STATISTICS for the A.G.M. in August show 2,360 Tandem Tutor launches during our first year's flying and 556 B-Spatz launches in the five months since March. Certificates earned during this period were 13 B's and three C's. The Club is now well established with money in the bank and a new hangar almost completed.

Work in hand includes the clearing of a second runway to cope with the morning cross-wind and the building of a much-needed shelter at the launching point to enable all concerned, particularly the non-flying wives, to cope with the hot sunshine which will shortly be with us again.

Contrary to expectations, July provided some of our best thermals so far and 25th July saw our first Silver C leg when the Spatz took Gerry Burgess 34 miles eastwards along the coast in 52 minutes. Maximum height was 3,700 feet and the final thermal gave a steady three metres. Eastwards along the coast towards the town of Ada at the mouth of the Volta River is the only available route for straight Silver C flights. There is only one road in this direction and if conditions are looking good when the Spatz is seen to disappear towards the east, the retrieving crew merely follows this road until it meets up with glider, safe in the knowledge that the landing point will not be further than an agreed maximum of 40 miles from the launching point. (Topography beyond this distance is unfriendly anyway).

On the same day, Hans Soom, a recently soloed pilot, kept the Tandem Tutor up for 52 minutes, reaching 4,000 feet during the flight. August Bank Holiday week-end arrived and still there was no break in the dry spell which by then had lasted seven weeks. Both Karl Tiede and Ron Smee recorded gains of height on the barograph of exactly 1,000 metres on the Saturday and Sunday respectively, but both say they will wait until they exceed the 1,000 metres by something of a margin before claiming their Silver C height legs. Karl's particular thermal gave 2½-3½ metres all the way from 600 feet to 3,900 and was certainly the best thermal anybody has found here so far.

P.G.B.

ANDOVER

AIR Commodore D. W. Lane, C.B.E., R.A.F., who, until recently, was the Commandant of R.A.F. Staff College, Andover, joined with some 50 members of the Wessex Gliding and Soaring Club at the Globe Hotel, Andover, for a farewell party in honour of Sergeant Arthur Gough, who is being posted to Germany after three years' duty as the Club's Chief Flying Instructor.

Towards the latter part of the evening Air Commodore Lane made a fitting farewell speech to Sergeant Gough, and presented him with a carved and inlaid plaque of the Wessex Club crest as a token from the members.

Mrs. Gough, who leaves with her husband, was also suitably thanked for the worthy part she had played in assisting with the club's development. At this stage the opportunity was taken to make a mock presentation to Mrs. Gough; the gift consisted of eatables and etceteras skilfully made up to resemble a sailplane in flight. This was a meaningful and appropriate presentation as members have cause to be grateful to her for the many snacks she is called upon to provide at the oddest hours.

In reply to Air Commodore Lane, Sergeant Gough paid tribute to all those who had helped him to build up the club to its present position of eminence in the gliding world. He included the patient and hard-working voluntary instructors, ground crews, drivers, tug pilots and all the others whose individual efforts are essential to the operation of an efficient flying organisation.

Petty Officer Turton of *H.M.S. Aeriel*, Worthydown, who, on behalf of the R.N.A.S. members, presented Sgt. Gough with a cigarette case embellished with the crest of the R.N.A.S. Several farewell messages were received from members who were unable to attend.

It had been a busy day for Sgt. Gough, whose devotion to the sport of gliding was such that he had that same day been aero-towed to Exeter, where he gave polished aerobatic displays for the benefit of the R.A.F. Association South Western Area Air Display, after which he was aero-towed back to Andover just in time to change and prepare himself for the party at the Globe.

His successor is F./Lt. B. B. Sharman, who has been connected with gliding since 1944 and has served with the R.A.F. for 11 years. He is a qualified flying instructor on powered aircraft, having passed the Central Flying School Course in 1956 when he was awarded the Aerobatic Trophy. He has also held the post of Chief Flying Instructor to the Fassberg Gliding and Soaring Club, Germany.

F./Lt. Sharman, accompanied by his charming wife, received a hearty vote of support for the future from all the members present.

AVRO

ALTHOUGH the summer has been disappointing so far as soaring at Woodford is concerned, in many respects 1958 is likely to remain an important year in the club's history.

The club fleet has been worked hard and apart from C. of A. renewals, no flying time has been lost through unserviceability. First solos have been successfully made by H. Malbon, J. Glass, K. Ward and Miss J. Rhodes. Miss Rhodes is only the fourth lady member to do so. C certificates have been gained by R. Walker and J. Driver.

As in previous years the "Iron Curtain" was lifted to enable us to hold three visitors' days. These proved as popular as ever and altogether 90 visitors had their first taste of gliding in the T-31b.

A promising addition to the club's equipment was made at the end of May when the impressive V.8 launching vehicle came into operation. With a 7,000 feet runway at its disposal, regular 1,500-ft. launches are now feasible. The problem of preventing our would-be Fangios from exceeding its Mach limitations has, however, yet to be solved.

Also in May the chassis for our long-awaited trailer was delivered by Leasons. This signalled the start of an all-out effort to complete the trailer before the Summer Holidays. Largely due to the energies of Bill Scull the work was completed in time.

Highlight of the year was undoubtedly the visit to Sutton Bank with the Skylark II. This was the first time a club aircraft has been away from Woodford and eight members went along eager to collect Silver C legs. As there was no course running we had the site almost to ourselves and Yorkshire kindly allowed us full use of their facilities and even their Kite 2. Several five-hour attempts were made during the week but none was successful, despite some very early starts.

One or two attempts were made to "get away" but the weather defeated all except Tom Smith, who made an immaculate goal flight to visit his relatives at New Sheldon. Thus Tom gained his Silver distance and the honour of being the first to complete a cross-country flight in a club machine.

On the whole the week was voted a complete success and the future should see many similar expeditions.

P.A.C.

BELGIUM

TWO new clubs have taken up gliding, both starting with a Rhönlerche two-seater. One club is at the sea-side resort of Le Zoute, and the other at Alost. SABENA, Belgian Airlines have bought a Polish Bocian two-seater for use at the gliding centre at Temploux. The Ka-6b high-performance single-seater which is exhibited at the Universal Brussels Exhibition EXPO 58 will be used after the Exhibition has closed at the gliding centre at St-Hubert.

Mr. Shuppler, an instructor at the Gliding Centre at St. Hubert, made a flight of 350 km. during June in a Kranich II.

On 12th April Mr. Roose, a member of the Brussels Gliding Club C.N.A., made a flight of 475km. in a Spatz, flying from Temploux to Noyant in France, never getting above 1,300 metres. Two other members of the same club made distance flights the same day. Mr. Pisscort, on a Super-Spatz, flew 200km., and Mr. Defosse, on Spatz, 100km. A similar performance, but on a lesser scale, was made by three members of the Antwerp Gliding Club A.Z.M. when they all flew distances of more than 50 km. on 29th May: Mr. Dury, flying a Sohaj, Van Ishoven a Fauvel AV 36 and Sweerman a Spal 15.

BLACKPOOL AND FYLDE

WE have not appeared in these columns for several issues of SAILPLANE & GLIDING, being of the opinion that minor personal news items can be of little interest to all and sundry.

Spectacular performances in this coastal area are rather the prerogative of Blackpool's Golden Mile rather than at our somewhat anti-thermal aerodrome—very excellent as it is for primary training and instruction in aero-towing.

Our main item of news on this occasion is concerning the birth of a new hill site, known as Nickey Nook Fell. This hill is probably the most westerly extrusion of the Pennine Range and lies to the east of Scorton, near Garstang.

Many moons have waxed and waned since we commenced to build our hill site winch. The work was, however, completed several weeks ago and the winch thoroughly tested out on the aerodrome. It did not fail to behave in like manner to most prototypes cussed to the extreme. However, all is now well. It can be towed very easily by a private

car and launches even the two-seater in a highly satisfactory manner.

The glider trailer is most satisfactory and will transport either the T-21b or the Eon Baby. It rides even the roughest country lanes like a furniture van and does not look unlike one. It is a very good job of work and a credit to the members who designed and built it. Tony Kemsley designed it and the responsibility for building it was in his and Don Cardwell's capable hands, assisted by the keener members.

The great day eventually arrived, so last Sunday (10-8-58) we set out early and in great spirit for our new and, so far, untried hill site. Towing the trailer up the one in five hillside proved somewhat undignified for our willing Land-Rover. All four of its wheels continued to revolve even at the steepest point, but only the persuasion of Farmer Anderton's tractor enabled forward and upward progress to be resumed.

However, the pre-arranged site was reached, the aircraft assembled, the winch positioned and the cable towed out through the as yet uncleared tall bracken. The eagerly-awaited moment had arrived, the Eon Baby climbed steeply on the first of several test launches on Nickey Nook Fell.

Our C.F.I., Jack Aked, was delighted with the site even though he had to take-off and land in a natural clearing in between walls of bracken three to four feet high and less than sixty feet apart. The farmer has kindly offered to clear an area for us. There are two other sites on the same fell which can be available if required.

We are very pleased to welcome Tech. Sgt. Alec Lunn, who is a B.G.A. Inspector, as a flying member. We are also very pleased to have Sgt. Andy Gough as a temporary member.

J.S.A.

BRISTOL

AFTER all the last minute panics and despite the worst the weather could do to damp our spirits, National Gliding Week at Nympsfield was a great success and went off more smoothly than could have

PUBLICATIONS

"AUSTRALIAN GLIDING" — monthly journal of the Gliding Federation of Australia. Editor, Allan Ash. Subscription 30 shillings Australian, 24 shillings Sterling or 3.50 dollars U.S. and Canada. Write for free sample copy. "Australian Gliding", Mineside Post Office, Mount Isa, Queensland, Australia.

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

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

SLOPE SOARING with a radio control model sailplane is a fascinating pastime and a typical phase of aeromodelling. Read about this and other aeromodelling subjects in AEROMODELLER, the world's leading model magazine, published monthly, price 1/6d. MODEL AERONAUTICAL PRESS LTD., 38 Clarendon Road, Watford, Herts.

"SOARING"—Official organ of the Soaring Society of America. Edited by Lloyd M. Licher. Obtainable from Soaring Society of America, Inc. Box 66071, Los Angeles 66, California. Subscription $4.00 in North America and $5.00 elsewhere, apply to your Post Office for a form.

FOR SALE

BACK NUMBERS "Sailplane & Glider", July 1947—June 1950. Gibson, 13 Norwood Crescent, Belfast (repeat "Sailplane & Glider ').

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been hoped for a first attempt at running a full-scale competition. This was in no small way due to the very hard work put in by club members on the preparation an organisation of the event We are also indebted to the Tiger Club and the Oxford Aeroplane Club for aero-towing facilities.

Five days out of ten available were flyable and some good performances were put up, as can be seen elsewhere in this issue. Unfortunately the ridge refused to work, although some pilots were convinced that it should; they consequently became quite familiar with the fields at the top and the bottom.

In contrast to the contest week, the preceding week was superb. On Sunday, 20th July, after a front had cleared the site, Peter Scott, in the Eagle, and Peter Collier, in the Club Skylark, both set out for Yarmouth via Stanstead in Essex. However, neither succeeded in reaching the goal but Scott reached Southwold on the Suffolk Coast, only a few miles short. Collier reached Stanstead but caught up with the front and was forced down.

On the 23rd, Alan Yates took the Skylark to Dunstable, the first time this has been done from Nympsfield. The 24th appeared an out-and-return day; Scott reached Nottingham but came down at Broadway on the way back, and Collier got to Lasham and half way back again. Geoff Hearsey obtained his Silver C height and distance during a flight to Abingdon in the Olympia, and Ron Clarke got his height in the "fairground" Skylark. Earlier in the month Ray Bishop had completed his Silver C with a cross-country to Northampton and five hours on the ridge, the latter still eluding several height and distance men!

Otherwise, flying during June and July was fairly tame except for a spectacular Tutor prang, fortunately with only minor injury, just as the B.B.C. were looking round in preparation for a TV programme. The pilot has refused to repeat the manoeuvre for the live broadcast.

Gold C heights to order are becoming the rule now. On 12th August Peter Collier, in the Skylark, was winched into a cu-nim and reached 11,500 ft. but found on landing that the barograph hadn't revolved. After profane comments he was promptly relaunched and reached 12,000 ft., not once but twice, just to make sure. Distances seem a little more difficult though.

Meanwhile, the cloud and rain has descended yet again on the West Country and we await the next bright period.

A.L.S.

CORNISH

In spite of this being the foulest Summer any of us can remember, we have managed to raise 11 more A's and B's, eight more C's, five more Silver C Duration legs, and eight more members have converted to the Olympia. We have also had to increase our Courses from 8 to 12—and all of them fully booked. In spite of the weather only one of the Courses failed to reach the guaranteed minimum of launches, though it also rather curtailed flying for 18 Cadets from one of the youth organisations on an "Outward Bound" course locally. On the other hand, a course run by W. J. R. Robbins, one of our founders, not only gave plenty of launches for nine pupils but also fitted in 33 "joy rides" in the week.

The Club was again asked to provide a display on Naval Air Day at R.N.A.S. Culdrose, when, after a tow by Ted Berry, Bernard Warmington did some excellent aerobatics in the Olympia. Courteney Thomas, Tony Clarke-Lewis and Mike Armstrong are joining our band of Hon. Instructors, while two stalwarts, John Harris and Tony Lapham—both ab initios last year—are now under training. Pip Phillips is once again a private (and this time sole) owner, with a Baby Grunau. Mike Armstrong and Courteney Thomas

The flight office is an old ice-cream cart.

have joined the Tiger Syndicate, resulting in many more aero-tows (and "joy rides") being available. Our Ladies' Committee have also got off to a good start with a new Calor gas boiler and the Bar has improved and is now doing very well.

Tony Clarke-Lewis only joined us recently after not having flown for 12 years, but he soloed after only 15 duals, did a 43 minute C on his eighth solo and a Silver C duration leg on his ninth solo on his first flight in an Olympia. It is hardly surprising our C.F.I. quickly added him to our list of Instructors.

During the first two weeks of August we had Ann Welch staying on the airfield in her caravan and one week-end Lorne also flew down. Ann attended one of our social meetings during her stay and gave us a very stimulating talk about her trip to the World Championships in Poland, illustrated by slides, but the patch of weather she struck was dreadful, so she saw little of our site's potentialities.

C.M.-H.

COVENTRY

THE four-week summer camp at Edgehill has given the club the opportunity of testing the new runs which John Greenway has made possible by uprooting some of his hedges and other home-grown hazards. A small party having investigated earlier this year and reported favourably, the club arrived in full strength on 19th July. The shorter runs and need for caution in operating a number of aircraft have resulted in fewer launches and hours compared with last year, and the weather has not been quite so co-operative. However, some 1,450 launches and 220 hours were accomplished during the four weeks, including two Silver C legs: Alan King managing his five hours on the ridge in the Viking on 23rd July, and David O'Clarey gaining his height in the Prefect on 2nd August. This was the best day of the camp, with over 36 hours being logged, and was one of the days when we operated from a field belonging to a neighbour of John's, Lord Bearsted. This field is on the edge of the ridge, and Lord Bearsted's invitation to operate there is much appreciated.

Eric Smith, Bill Spicer and Mr. Hands went solo at Edgehill, and R. Price, Stan Kitchen and S. Cheadle gained their B certificates at Baginton, whilst Ken Morris has now achieved his C.

Our Secretary, Michael Hunt, has been trying hard but unsuccessfully to emulate the C.F.I. by completing his Gold C, taking the red Olympia to 9,200 ft. on 6th June, and to 9,400 ft. on 20th August, when he went on to land at Dunstable.

Ivor Tarver decided that the Coventry Aero Club s Air Day on 29th June would not stop him flying and flew off to Leicester, whilst Vic Carr, Michael Hunt and Doug Cunningham aerobatted before the public. Michael put on a repeat performance for the Air Pageant on 10th July.

Looking quite in keeping with the agricultural machinery parked around the Greenway s Farm was the brightly painted open trailer for the T-21. This magnificent piece of tubular steel space-framery was produced by Doug Cunningham, with help from brother Gus, in a very few weeks. The Humber two-drum winch has now given its first launches, and meets with general approval, although John Greenway still seems faintly puzzled when confronted with one forward speed and four speeds in reverse!

P.M.

DERBYSHIRE & LANCASHIRE

THE first completed Harbinger made its Camphill debut on Sunday, 3rd August, with our ex-C.F.I., Gerry Smith, at the controls. Congratulations to Fred and Dorothy Coleman in whose home this graceful two-seater was built. No doubt most readers will recollect that this design by Shenstone and Czerwinski was one of the entries in the B.G.A. two-seater design contest just over a decade ago. On the following day Fred and Harry Ashton, who for many years has helped to build it, enjoyed their first soaring flights in the new sailplane.

Since Whitsun, the private T-42 has amazed us by its penetration and it has made many tours of the Peak District and returned in the face of strong winds. On the 29th July, Carl Birkett and Michael Kaye reached 12,000 ft. a.m.s.l. in cumulus and then dived to Brough airfield some 58 miles away in only 40 minutes!

In the last issue we recorded Bob Frodsham's Silver C distance flight of 40 miles to Sherburn-in-Elmet, but he has since discovered that the height of his winch launch added to the height of Camphill

a.m.s.l. came to more than one per cent of 40 miles. He threw away a few thousand feet to land at this goal!

Phil Leach has again been running a series of happy courses and thanks to him and Bill Elrington, who is now responsible for club ab-initio training, we can record a batch of first solos. These were:—Carpenter, Osborne, Mosley, Riddall, Godlee, Mackensie, Baker, of which Osborne, Riddall and Mackensie achieved their C on the 28th July. On the same day Daphne Wales and Christina Mercer enjoyed their first soaring flights in the club Olympias. Godlee obtained his C before breakfast a week or so later.

In early June, Lawrence Robertson climbed 9,200 ft. in the Olympia "Peveril". Due to low cloud he could not return to Camphill and made an uphill landing on the edge of Hathersage Moor. The field was so slippery and steep that he and his sailplane slid backwards at about 10 m.p.h. —the grounded wing tip did not swing him round. Eventually he baled out and chased the rapidly retreating sailplane down the hill, catching it just before it reached an even steeper drop.

During the last course in July, Paul and Jose Newmark both completed their five-hour flights and exceeded the Silver C height, both in Tutors.

On Friday, 1st August, the Club Olympia "Speedwell II" was seriously damaged but we are much relieved to hear that the pilot, a visitor from the Kent Club, is making a good recovery.

During the same week we were glad to see George Bushell, John Drake and John Light with their Kite I from Dunstable. They had some good soaring in very strong winds and landed twice on the moor. Has a sailplane ever been known to land while moving backwards in a strong wind?

O.W.N.

EAST ANGLIAN R.A.F.

THE Club was formed in May 1957 and recently completed 220 hours flying for 2,000 launches. Our fleet has consisted of one T-31, a Tutor and an Eon Baby, but we shortly hope to increase this to five, with a Kranich and an Olympia. On the ground we have one serviceable winch, which we hope will stay as such, a 15-cwt. truck which has been misused since our tractor has been U/S, and an open trailer which proved itself at the R.A.F. Championships. Recently we acquired an old Austin car with which we hope to give the truck a rest. The tractor was always temperamental, so it was decided to give it an overhaul. Unfortunately it lasted only six retrieves before literally blowing itself apart. A couple of members took the truck to Andover in June to collect a long-awaited winch. This is in a bad state of repair, and many spare parts are required. Nevertheless, we are all keeping an eye open and hope to see it in use in the not too distant future. On reaching Andover, the truck promptly gave up and I, being one of the crew, hereby wish to thank Wessex for their help in getting it going again.

The Club operates at Duxford, and occasionally at Bassingbourn when the R.A.F. requires Duxford. It serves all surrounding stations and, consequently, work is spread out so that members from Duxford do not alone keep the Club rolling: for instance, Bassingbourn supplies many technically minded members—the trailer was built by them; Waterbeach deals with much of the paper work and statistical side with the help of some civilian members from Cambridge, and Duxford supplies the Treasurer and Secretary. For flying we normally rely on the winch, but sometimes have a Chipmunk which gives everyone aero-towing experience.

Fifteen "ab-initio" pupils have obtained their A and B certificates and we have had five members obtaining their C, though three have left us. We would have had more first solos except that the T-31 has been out of use twice. Last December it had an overhaul, and last June it was unfortunately crashed and put out of use for three weeks. Our training programme consequently suffered.

Our only other misfortune occurred at the R.A.F. Championships. We took the Eon Baby and were successful on the first competition day, our C.F.I., Ft./Lt.Donald Spottiswood gaining maximum points in our class by flying 48 miles to Odiham from South Cerney. On the second day Cpl. Steve Warwick-Fleming had to force land in a small field soon after releasing under a cu-nim; due to wet grass and a slight downward incline he was unable to stop before meeting a barbed wire fence, so putting us out of the Championships. Earlier, on a non-competition day, Don had his third attempt to complete his Silver

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C. It still eludes him: he landed after 4½ hours on the ridge at Roundway Hill, near Devizes. Just before the Championships Steve obtained a C category on an Instructors' Course, but has since been posted to 2nd T.A.F. We all wish to thank him for all the work he put in, in the Club's first trying year, and also congratulate him on attaining one leg of his Silver C soon after reaching Germany.

Only two other cross-country efforts have been made: last summer Ft./Lt. Ansley, trying for his height leg of his Silver C, failed and landed at Cambridge. In May this year John Strugnell flew in the Colchester direction and although reaching the sea, had to turn back inland as far as Colchester again before he was able to find a place to land and so could only register 42 miles in distance, failing by only a mile or two to achieve his Silver C distance. Both these flights were made in the Eon Baby. We are hoping, however, with the advent of the Olympia and perhaps the Kranich, to have more success in the near future.

M.A.P.

HANDLEY PAGE

Most of our efforts since our last news item in SAILPLANE & GLIDING have been in preparing for our first Competition Entry at the Western Region Soaring Week Competitions.

The preparation of the Rhönbussard included a C. of A., the designing and making of a new canopy by John Essex, our treasurer, the fitting of a new harness, a skid fairing and a Total Energy Variometer. Also a new Ground Handling Trolley was made and the Rhönbussard trailer was practically rebuilt before it was ready.

At Nympsfield Mike Wilson, who flew the Rhönbussard, came twelfth (equal) in the overall placing and won the B.G.A. Prize, awarded for the most meritorious performance of the week. He was flying the only pre-war sailplane entered—now just 20 years old—and during the week gained eighth place on one day, completing 111 miles to Peterborough, and on the next, sixth place after a flight of 43 miles to Snitterfield.

The Competitions, however, were overshadowed by the tragic death of Gillian Tyler at Lasham the week before. Gill was introduced to gliding at our Club, and gained her A and B certificates just before she left. She will always be remembered as one of our most keen and enthusiastic members and will be missed by all.

Flying at Radlett followed the usual training routine, coloured by the introduction of aero-towing as a regular feature.

L. to R.—L. Dowdall, J. King, P. Cunnison, M. Wilson, T. Newton, R. Janes and Pam Tophouse.

Most solo pilots have now been passed out for aero-towing, including all Rhönbussard pilots.

There were two highlights, the gaining of his A and B certificates by John King, and a Silver C height by Louis Dowdall.

Looking to the future, the Club has hopes of taking the Rhönbussard on visits to other sites, with a view to preparing more pilots for their Silver C's and even, perhaps, a Gold.

L.W.D.

KENT

AFTER a spate of first solos reported in August, we can now report a spate of five-hour duration flights—not by the same pilots, however. Eric Clegg and "Nobby" Clark enjoyed the relative comfort of the Olympia for their flights, on successive week-ends. Richard Parkinson sat it out in the Prefect and Roger Neame had the Syndicate Skylark, weighed down with biscuits and glucose for the ordeal. In fact he had an interesting time, as he found wave lift just beyond Bluebell Hill (near Rochester) and reached 3,100 ft. in very smooth lift. The ridge itself was giving very turbulent lift at that time.

On August Bank Holiday Monday, the club was represented at Ramsgate's Flying Show by the Syndicate Skylark. Mickey Gilbert sandwiched some aerobatics in between the Tiger Clubs Aeroplanes which provided the aero-tows and seethed over the aerodrome in non-stop variety.

Many of our stay-at-home members are coming to the conclusion that a belt of semi-liquid material is permanently stationed over Detling Aerodrome. A more adventurous member, however, has been able to refute this idea. He went to France for a fortnight, and although he was able to get airborne a few times, he came to the conclusion that the fluidity of the atmosphere must be attached to members themselves. It rains in France too, we gather!

M.G.

LASHAM

WITH deep regret we begin our report with a reminder of a tragic accident at Lasham on 20th July. Miss Gillian Tyler, who was a temporary member of the Club, died on 21st July from injuries received in attempting to land an Olympia in a field 1½ miles downwind of the aerodrome.

The flying news of the quarter was more or less concentrated into the National Gliding Week. Members scattered to Nympsfield, Dunstable and Portmoak and left almost nothing but the T-21s at Lasham. Full results of the various competitions appear elsewhere in this issue but we were particularly pleased that George Burton got his Gold C distance from Nympsfield to Great Yarmouth in his Olympia after several gallant attempts from Lasham. We also hope that Ted Shepherd's cloud-climb to 11,600 ft. was sufficiently well-observed at the start to qualify as a Gold C height leg.

Peter Frieburger, a visitor from Hamburg, distinguished himself by getting round the local Silver C triangle. This has only once before been achieved as a qualifying flight. We were also glad to welcome a number of visiting pilots from overseas clubs—Roger Forss and Siguro Berg from Sweden, Pierre Fauré from France, two members from the Gruppo Volo a Vela at Turin and Alfred Craddock from the East African Gliding Association.

B.H.

LONDON

THE main event of the past few weeks has, of course, been the National Gliding Week. These are reported elsewhere in this issue. However, a great deal of other very worthwhile soaring has been done. One of the best efforts recently was by young Phillip Jeffery, who is a Halton apprentice and one of our keenest members. Having just missed completing his Silver C in the Club Olympia with a flight to Market Harborough, due to an aero-tow and the one per cent rule, he set off again and flew to Martlesham Heath (80 miles) and got Gold C height on the way! Chuck Bentson reached 12,900 feet in the Sky to complete his Gold C; Douglas Bridson flew to Driffield in his Skylark II to complete his Gold C with one Diamond; Vic Ginn out-and-return to Bicester in his rebuilt Olympia; Mike Russell with two good efforts, Wallington-Baldock and return (50 miles) and Chinnor-Dunstable-Mawsley-Aylesbury-Hemel Hempstead-Luton and return (95 miles in seven hours 16 minutes in the Petrel); Mike Fairman, Oakley and back in his Meise; Hugh Wheatcroft a 50km. triangle in his Olympia (we will get him to land away from base one day!); Archie Erskine, Skylark III, to Lasham;

finally, one of our course members was flown around the Leighton Buzzard-Halton triangle in the T-21B, which just proves we give value on courses!

We are all very sorry to be losing John Drake, who is going to Adelaide. We expect the local club will be pleased to see him as he is a very keen type.

The new Slingsby Swallow was undergoing flight tests at Dunstable and made another interesting shape in the sky. The Club's boffins are experimenting with wire weak links in an attempt to evolve a really satisfactory and reliable type with a long life

The new car park, as foretold in our last notes, is complete—surely the first major gliding club project to finish on schedule!

P.F.

NEWCASTLE

In spite of the optimism of the forecasters, the weather at Usworth has varied from the fairly soarable to the downright horrible, and a scrutiny of the log shows that with a few exceptions flights have averaged about five minutes each, one of the exceptions being a flight in the T-21 on Saturday, 16th August, when Allan Pratt and Ray Selkirk were airborne for an hour and reached 3,000 feet in the process, but apart from that and a few by the Skylark III, there is very little "domestic" flying worthy of note.

The weather may have had something to do with it but there was an "exodus" of people from Usworth on 26th July all headed for Lasham in a search for silver and gold. The "prospecting" party consisted of Brian Hartness, Dave Wilson and Leo Cullinan with the Club Olympia, Andy Coulson and Jack Anderson with Andy's Skylark III, and Doug Collinson, Ian Paul and Les Kiloh with their Skylark II.

Due to the weather and vehicle unserviceability, no flying was possible until Thursday when Andy and Doug made the most of the marginal conditions, Doug covering 70 miles to a place near Northampton, while Andy did a 210 mile dog-leg Gold C distance flight Lasham-Leicester-Brundall, just a few miles short of his goal at Great Yarmouth. The Olympia was unfortunately suffering from variometer trouble and after some "seat of pants" flying by Brian Hartness he and Dave decided to try and

fix it, so the Olly was more or less grounded for most of the day.

Dave, however, did manage a couple of hours after a ten-mile upwind battle and a quick downwind dash back to the field. Friday was a complete clamp and while most of the party decided on a trip to London, Dave Wilson and Leo Cullinan paid a visit to the Moonrakers at Upavon where Dave renewed an old acquaintance of his R.A.F. days and also did some soaring in their Grunau.

Saturday was another marginal day and although Dave managed another couple of hours local soaring, it was decided to leave Lasham (with the Olly) on Sunday and spend Bank Holiday Monday at Sutton Bank, where three rather tired bods arrived at the unearthly hour of 2 a.m. to find out that the Yorkshire Club were holding an open day. An attempt by Dave to get his five hours was frustrated by the start of the flying display, but he did take part in the show and a good time was apparently had by all.

Taken as a whole, the week was not particularly successful, the total Olympia flying time being about 8½ hours, 4½ of those being at The Hub and the rest at Sutton Bank, while the main object of the trip, namely cross-country flying, was not achieved, but the thing that really put the lid on it was the news we got when we got back was that the weather at Usworth had been the best there had been in months.

Still, it was an experience for one member of the Olympia party at least, and we're all hoping for better luck next time.

L.A.C.

NORTHAMPTONSHIRE

CONDITIONS at Sywell have been very wet for the past few months and gliding time has been cut by more than half.

However, taking advantage of the weather for his annual inspection prior to issuing C.'s of A., our C.F.I. has produced a startling transformation by spraying the Tutor cream and red.

When the state of the ground allowed flying, an unofficial contest between certain members developed in the T-21. The duel, notably between D. King and F. Pozerskis, continues.

We were pleased to welcome Brenda Horsfield on Thursday, 21st July, when she landed at Sywell from Lasham at 17.40 B.S.T. with conditions deteriorating fast. Brenda was trying to reach Yarmouth, but luckily for us left it a little too late. A Tiger arrived from Lasham and towed her out at 19.50.

Our second C this year has been gained by J. Baker, who is one of the Club's enthusiastic members. Because of the unsuitability of a grass aerodrome in this area of clay, the committee have been negotiating for the use of a nearby disused 'drome with runways. So far negotiations are heartening—I hope some good news may be available for the next issue.

G.G.

POLISH

NEWS of our small and modest club seldom appear in print, so I take this opportunity to remind everyone that we do continue to exist as one of the smaller tentacles of the Giant Lasham Octopus. Our white and red Olympia, generally known as Poly-Oly, has been flying since 1st of March and by now logged over 300 launches (one-third of it being aero-tows) and flown over 100 hours. Our first point of this season was scored by George Ruskiewicz, who, on Good Friday, got his C, soaring for 22 mins. in weak lift off Dan-Air hangar. Second score went to Jan Kozubek, who, on 15th of June, got his Silver C height, having climbed to 4,300 feet from a miserable 700 feet winch launch. During the Whitsun Rally our Oly, flown by Ben Lastowski, was placed 13th on the first day. On the second day it was flown by young Ted Jerzycki and although no spectacular results were achieved, Ted was able to experience a new thrill: his first landing away from "home". The choice of field was prudent, the landing itself perfect, and the hospitality of nearby farmer literally intoxicating. On Sunday, 8th of June, we had our more serious occasion. On this day we remember our countrymen who, as members of the R.A.F., gave their lives in the Battle of Britain. Many people both Polish and British gathered by the white memorial stone in the corner of Northolt Airport, to lay flowers and say their prayers. We decided to pay a tribute in our own way: Ben flew our Olympia on tow to Northolt, circled over the monument for a few minutes, landed less than 60 yards away from it and laid a wreath on behalf of all of us. In this connection we would like to put on record our thanks to the appropriate authorities for granting us kind permission

The Polish Memorial at Northolt.

to enter London control zone, and to land on Northolt Airport; also to Cliff Dowdall, who was tug pilot on this occasion.

We were very happy to learn that the British team had a pleasant stay in our country during the World Championships, and we congratulate them on the splendid results achieved. Our Ted Jerzy, who this year spent his holidays in Poland for the first time since the war, visited Leszno as well as other gliding centres during June and did some flying there. More of us are planning to do this next year.

During the holidays most of us will be trying to do something towards our Silver C's and we all hope the weather will play its part.

J.S.R.

SCOTTISH G.U.

AN account of National Gliding Week at Portmoak appears elsewhere so there is no point in repeating any of it in these notes. From our point of view the Week was an enormous success, and if our visitors enjoyed themselves as much as we did, then all our efforts were well worth while. It was very pleasant to see all these obscure names we read of in SAILPLANE & GLIDING spring to life and become people.

We were very grateful indeed to the people who came such a very long way to take part in the Week's flying at Portmoak, and helped to make the event so enjoyable; and to John Findlater, who gave up a week's holiday to do the forecasting, which he did with considerable, though at times very depressing, success.

The day after the Week ended was a very good day and Geoffrey Stephenson rose with the dawn in the hope of making a long trip south, to Dunstable if possible. After a short wait on Bishop Hill he got away and vanished out of sight at a great altitude. However, half-an-hour later he came to earth in confusion on a playing-field in the middle of Edinburgh, foiled by the cold air downwind of the Forth estuary.

Basil Meads visited the site early in May and expressed himself very satisfied with progress. Since then quite a bit of further development has been done.

Between spasms of toil we have done quite a lot of flying, several times putting in more than fifty hours in a week-end. Already this year, in fact, we have flown more than 500 hrs., which beats our previous year's best ever by more than 150 hrs.

Bill Lawson reached 8,000 ft. with his wife Dorothy in the Eagle in April, in the Wave, but since then it has been very coy, and apart from a 6,000 ft. climb by Andrew Thorburn on 16th June, there has been little real wave soaring. Tom Docherty got to 9,600 ft. in cloud in a Gold C height attempt, landing eventually at Blair Atholl, about 40 miles away. The only other recent cross-country of note was a flight by Charlie Ross to Kilberry, in the Mull of Kintyre, 93 miles. This is the longest flight so far this year. Unfortunately it terminated on a wall, which inflicted the first major damage on the Olympia since we bought it seven years ago.

The Courses have filled up well again this year and have produced a number of new members.

We are deeply sorry to have to report the death of one of our members, Jack Maclean, in an accident to the Prefect on 17th August.

W.S.A.

SOUTH AFRICA

RENEWED enthusiasm for the Club's long-debated move from Collondale Airport, East London, to the disused Ciskei Airport, five miles from King William's Town and 38 miles inland, has been whipped up by the confirmation of the existence of a standing wave system there.

Flying took place at Ciskei on 3rd August

and Ivone Kirkpatrick and Beau Pautz returned after a flight in the Rhönschwalbe (Schleicher Ka 2) two-seater to report indications of a wave system originating from the Amatola Mountains, 17 miles to windward. Johnny Andrews and Ron Shone were towed off by Ken Brown in the Tiger to 5,500 ft. towards the Amatolas and encountered wave lift, which kept them airborne for 2¾ hrs. and took them to 10,000 ft. a.s.l. (8,000 ft. above ground).

Wind direction was not good for a well-defined wave system, being confused by eddies and other local low-level effects, and the wind died away late in the afternoon.

Members are looking forward, however, to the strong, steady north-westerlies of October-November which tumble over the Amatolas, producing magnificent, clear-cut lenticulars straight from a meteorology text book, marshalled rigidly like soldiers for 40 miles to the leeward of the Amatolas.

After several years of operation in monotonous, dead-air conditions at East London, the new site at Ciskei promises to be "heaven" for the Club and the "top dogs" are hungering after delivery by "Sling." of our T-45 "Swallow" to exploit the system.

Plans are afoot for raising funds to buy oxygen for the new bird. It will be needed! The wave system will be progressively explored and in all probability we will have all-the-year-round soaring including thermal stuff in the long, hot summers.

Other activities in the Club include the building of a trailer for the two-seater and the Swallow by a team led by John Spink.

Roll on the T-45. B.G.P.

SOUTHDOWN

SINCE our last report, six Silver C legs have been completed—two height, two duration and two distance.

At the Mynd camp, Peter Wildbur in the Olympia reached 4,000 ft., and Mike Meeks in the Tutor 3,750 ft. On the last day, Bill Williams in the Tutor, and Jim Hawkins in the more closeted comfort of the Olympia, gained their five-hour duration legs. Other notable flights, were made by David "Bog" Harris who exceeded 3,000 ft. in the Tutor on three occasions, and by Dickie Reed who gained his C Certificate by a first soaring flight to 4,300 ft.

At the end of July, the Olympia was taken on a mid-week expedition to Lasham.

A 50-mile cross-country gave Ray Marshall the last leg of his Silver C. The next day a 46-mile cross-country gave Peter Staff his distance, and a nippy retrieve allowed Ron Walker to be launched the same evening for a cross-country which the late hour ended after 17 miles.

Plans for rationalising the Club fleet are becoming a reality with the recent acquisition of a second Olympia, replacing one of our two Tutors and the Cadet which have now been sold. With the second Olympia the Club's flying activities will be widened, and negotiations are underway to establish aerotowing facilities from fields at Golden Cross, near Firle.

Since recently publicising our facilities for maintenance and repair work, we have completed our first C. of A. for a Skylark syndicate.

Our annual Social this year is at the Langford Hotel, Hove, on Saturday 25th October. If you can come along and join in, you will be made very welcome.

R.M.

TAUNTON VALE

FLYING only one day out of seven, we haven't been very lucky with much soaring weather, but Monty Dore got the Club's first C with a 20-minute flight in July. Two of our instructors have been exploring the ridge in a Tutor, but so far no-one has been able to soar for more than 10 to 15 minutes. Later we hope to modify our launching method, and then we shall be able to reach the ridge more easily and see if five-hour duration legs are possible.

Recently Mr. Ducan, our local M.P., and the Mayor of Taunton, paid us a visit, when Mr. Ducan presented the "White Trophy" which is to be awarded to the best annual pupil or for the best flight of the year. Both gentlemen enjoyed their first glider flights and didn't mind the rough conditions.

At last, and thanks in particular to Miss Kelsy and Mrs. Wannamaker, our Club-room is now brightly decorated and comfortably furnished. Also congratulations to Miss Kelsey on being our first woman soloist. She did some power flying pre-war but is now a confirmed glider pilot.

Sam Tolman and Mr. Hobkirk ran our two Holiday Courses which, considering the awful weather, were quite successful. Four pupils went solo and many more went away hoping to return next year, and the general feeling was that a good time had been had by all.

Mr. and Mrs. Burns, from Lasham, plus their Skylark III, spent the first course week with us, the idea being a cross-country from S.W. to the East; something, which we understand, has not been done before from these parts. Again the weather was unkind, but, nevertheless, all is planned for an attempt at a future date.

P.E.B.

YORKSHIRE

ALTHOUGH we were forced to cancel National Gliding Week due to lack of entries, members who had fixed their holidays for the period had a first-class gliding week with plenty of west wind and some wave. The Clubhouse was crowded and all available aircraft were flying. A party from the Avro Club spent the week with us, bringing along a Skylark III. A number of members of Newcastle Club brought along a Sky and Kite 1. Lionel Alaxander, from Cambridge, managed to fly in four new types of aircraft in three days.

We were given great assistance by a party of Air Scouts from Pudsey, near Leeds. They were encamped in the car park, and were very good at pushing gliders around, signalling, etc. They were all rewarded by a flight in the T-21. We shall be very pleased to see them again.

During the week the Avro Skylark flew 34 miles to Shildon. B. Goldsborough, in the Kite 2, flew 24 miles to Marton, including a climb to 6,000 feet., but, alas—no barograph! Chris Riddell, in the Skylark I, climbed 10,000 feet in cu-nim. He had a barograph. Five-hour flights were made by Ron Pledge, Louis Creignton, Tony Hawkins and Vic Wright.

On Bank Holiday Monday we had an Open Day. Poor weather in the early part of the day kept down the crowds, but the thousands or so who attended spent a very enjoyable day, with aerobatic displays, a race, and fly past of eight types of Slingsby gliders. Joy-riding in the two-seaters went on until dusk. As a result of the effort, everybody had a good time, and the Club made a fair profit. George Hinchliffe added to the interest by his splendid commentary over the loud speakers.

The next high spot was the visit of the B.B.C. on the 9th of August, when we took a place in "Sports Roundup". This was all great fun. The Clubhouse was turned into an electronic shambles, with aerials, black boxes, grey boxes, batteries, generators, wire and things filling every corner. The whole thing was quite informal, and everybody enjoyed it immensely. Who knows, we may be on TV next!

Our resident instructor, the redoubtable Henry, is working hard on the aircraft. He is at present fitting spoilers to one of the Tutors, and making a canopy for the T-21. Both winches are now fitted with solid wire, which works well once everybody has mastered the technique. We are hoping to convert the big winch to two-drum during the winter.

One of our problems now is the condition of the airfield. The wet weather of the past two years, together with the increased launching rate, has made the field very boggy, and many schemes are mooted for improving matters. The main trouble is cost, but no doubt someone will get the answer one day.

In the meantime, we are planning a super retrieving car, guaranteed to go through a foot of mud. Needless to say, it will be made out of Ford bits and Dexion!

E.H.

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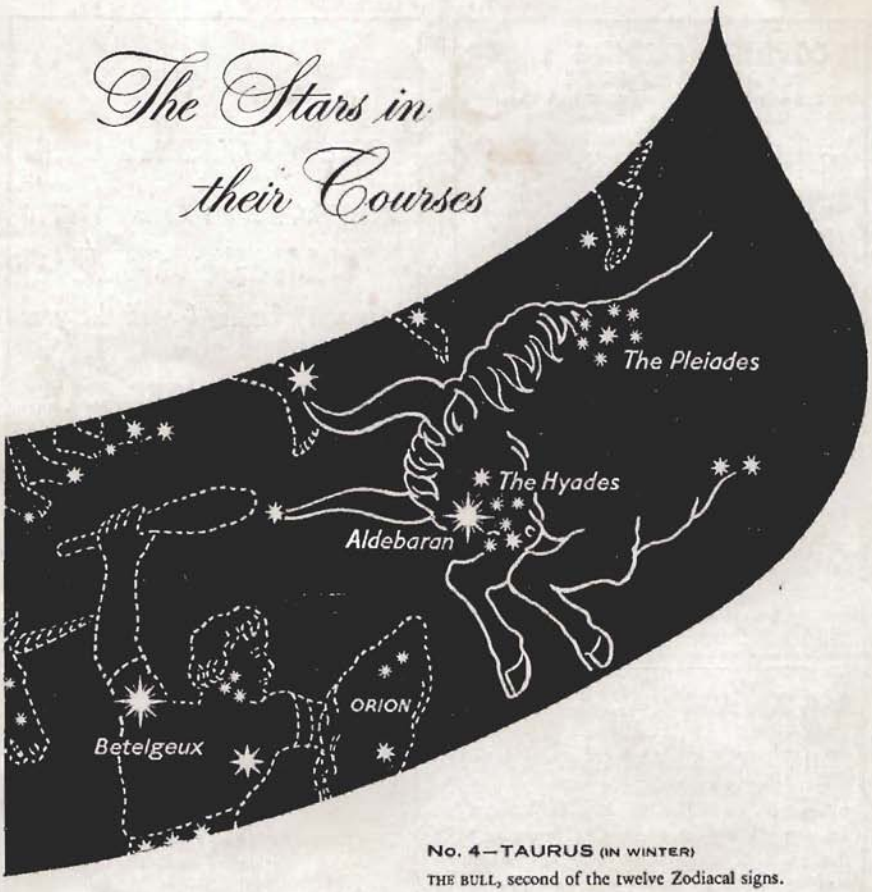

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