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Cover photograph: The Swallow won for the Cornish Club by Noel Ellis in the Swallow Competition, Southern Region; photographed by George Collins from a Blanik over Perranporth.
Block by courtesy of W. D. & H. O. Wills.

Published by the British Gliding Association, 75 Victoria Street, London, S.W.1. Sullivan 7548/9
Printed by The Amberley Press, Farnham, Surrey.

Vol. XVIII No. 5



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WIN A SWALLOW

By M. C. BARKER, winner of the Northern Region

IN retrospect it is a strange kaleidoscope of late-night swotting; flying; the kids asking where Daddy has gone all these weeks; learning aerotows one week-end; a fight to the death with the innards of an Ottfur release; where would you land if the rope broke now?; Oh lor! it's all cornfield, those are the flaps you have opened; ten C.F.I.'s in collars and ties, and the music of Ann Welch's voice calling my name.

It was a competition for beginners. We were told at the beginning that only now that we were solo could we really start to learn to fly. At the time this cut little ice with me. With two hours' solo in my log-book it seemed the pundits were in for a shock. Having since achieved the titles of Capstan-bottom-knocker, Grottyfield-selector and Skid-gnurgler Extra-ordinary at the Court of Camphill, and only just made 61 per cent of the marks available in the Finals, I am now clearly aware of the truth of those remarks.

The syllabus covered Air Law, Meteorology, Navigation, Trailers, D.I.'s, Winch-driving and Equipment generally, and throughout all of this—Safety.

Safety in the air, on the ground and in circuit planning.

I used to think making a Capstan spin was difficult, but since reading all last year's accident reports I find it's really quite easy. Pretend we are on the cross-wind leg and short of height. Hold the nose up gently (so we don't get too low). Now let's turn with lots of rudder and just a little aileron (don't want to touch the wing on the trees). Oops! the wing's dropping, stick hard the other way . . . and round she goes just like a top! It apparently happens to several better pilots than us beginners — every year. Please may I never get so clever that I don't have to concentrate on my landings.

Came the Finals at Lasham. The weather was unkind, so we started with an hour-long paper rather like a difficult Bronze only with one horrid difference —instead of "is it A, B or C?" we had to write the answers. This made it unbelievably difficult—we actually needed to know!

The weather improving, we did the flying tests. Being first and wishing to appear conscientious, I found myself making sure that the tug-pilot, grizzled with aeons of flying to two thousand up-wind and back, fully understood the necessary signals. I wonder if that was why he waved us off in cloud?

Spin and recovery, continuous medium turns, come out on a north heading, fly at 40 knots, now make use of your time in the air, rejoin the circuit when you are ready, you cannot land there—it's blocked.

That wasn't too bad, but worse was to come on the morrow!

The day of practical tests was gruelling. Five sessions each of 45 minutes with a short break between. Each test was divided into two tasks, with 22 minutes allowed per task.

Ray Stafford Allen had "fixed" his Capstan prior to D.I. and gave us an Ottfur release in pieces to assemble.

A glider trailer very badly stowed and in (dare I say it—"typically") roadworthy condition to be checked, driven and reversed around an island; followed by two eye-splices, one with a thimble, made up our second test.

On then to the marquee to D.I. a parachute (last packed in 1965), smoke a barograph and connect an A.S.I. and Vario. Read off the gain of height on this barograph chart, connect the batteries to give 13½ volts on the Turn and Slip, and sort out Medapolam, 7×19

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wire, spruce, birch ply and an H.T. bolt.

Lunch. . . .

Now you are flying from Netherthorpe to Skegness to Carnaby and back —with a wind of 15 knots from 310°. Here is a protractor and dividers. The pundits can guess the rest. Six bits of map, mainly 1-in., and no names. Find them on the ½ million. Reeling out from this session, into the offices and on to a paper on Met. What kind of cloud is this?—looks like a raincloud to me. Here is the weather forecast—draw the fronts on the chart (if you can!).

No one spoke much at tea-time. . . .

Sunday morning—the Interview. The first shall be last to make it fair. Two hours and no fingernails later I'm shown to a caravan. What's this? No bright light, no truncheons. Then the long-awaited luncheon—and I couldn't eat a thing!

The real value of the competition lay in the fact that so many C.F.I.'s and competitors started the course. There must have been some head-scratching by the C.F.I.'s, and all of us competitors are the better for having tried. W. D. & H. O. Wills in offering Swallows gave us a prize which was really worth working for. The closeness of the final marks shows just how hard everyone tried, and what a bit of luck it was to win. I won't pretend that it isn't nice to have that blue and white Swallow back at Camphill, and to realise how pleased everyone is about it all, but the reward for me is not just that we won it. Like all the other competitors, I couldn't really lose. The concentrated attention to flying and theory have produced an added skill and safety-consciousness which must surely be the real dividend for us, and the general fall-out of knowledge throughout the movement ought in the long run to make a nasty dent in Roger Neaves' graphs.

For those of us who made it to the Final and hob-nobbed with the gods and goddesses of the gliding world for three days, the biggest problem will be getting things in perspective again. We are still only Swallow pilots with a few hours' solo and an awful lot yet to learn. It will be difficult at times for us and our clubs to remember this, but remember it we must, or much of the benefit of the competition will be lost.

And what of next year? Well, how about the B.G.A. running the practical tests as a travelling circus? It would be worth its weight in gold, particularly the Capstan — I shudder when I think of what we missed out. Or what about the syllabus forming the basis of a fortnight's course for pilots with less than 20 hours' solo? How about a competition for C.F.I.'s? How about you going back on to the 31, lad? . . .

POLISH NATIONALS 4th - 18th June

By J. POMIANOWSKI

Translated and condensed from *Skrzydlata Polska* by Jan Mikulski

BECAUSE of preparations for next year's World Championships, this year's National Championships were not held at Leszno for the first time in the last ten years.

The site chosen, Lisie Katy (Foxes' Corner) is a high-performance gliding centre situated near Grudziadz, and the organisation of the championships was mainly carried out by members of that club and people connected with it.

Thirty-nine competitors took part with foreign entries from U.S.S.R. (flying A-15's), East Germany (Fokas) and Yugoslavia (Delfins). (All the Poles flew Fokas.)

Flying commenced on Sunday, 4th June, immediately after the opening ceremony. With a cloudbase of 6,000 ft. and lift of the order of 5 m./s., a 206-km. triangular race was set. Open Class Champion Jan Wroblewski set the pace with a win at 80.4 km./h. Of the 11 pilots who failed to complete, the most "noteworthy" ones were Makula (114 km.), Popiel (164 km.) and Adamek (117 km.).

The next contest day, 6th June, saw rather variable thermal conditions. The task, a 203-km. out-and-return, was completed by all but four pilots, but times between start and finish lines differed greatly despite the relative shortness of the course. Manfred Blauert (East Germany) won with 83 km./h. Popiel (78.85 km./h.) and Adamek (78.41 km./h.) managed to improve their overall positions somewhat, but Makula (59.32 km./h.) was still trailing. Wroblewski came 34th on this day with 55.53 km./h.

Bad weather on the 7th and 8th made task-flying impossible. On the 9th June, however, the weather looked very promising from early in the morning, and so first take-off was set for 0900 hours, the task being a 413-km. out-and-return. Speeds varied from 80.89 km./h. for the winner, Kazimierz Gorzkiewicz, to 58.03 km./h. Among the four pilots who failed to complete was the well-known Russian Vladimir Chuvikov.

The 10th June started nice and sunny at first, but high cover spreading rapidly from the south gave the tasksetter, Walenty Hardt, enough warning that conditions were bound to deteriorate, so he abandoned a rather ambitious triangle [distance not known. ED.] and set a more modest one, a repeat of the first day's task, 206-km. triangle. Even so, the weather did not come up to expectations, and those who took off late had difficulties in staying airborne in an increasingly strong wind. Only 13 competitors completed the task, which was won by Miroslaw Krolikowski (66.75 km./h.), who was already the leading scorer of the contest.

The next three days were again hampered by bad weather.

On the 14th June conditions improved a little as "Lows" moved away. A modest 193-km. out-and-return was set, as thermal activity would not be very widespread.

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However, cloud streets formed along the course, and pilots leading in this race rushed forwards, led by Wroblewski (on leave from hospital where he had been admitted with influenza), who managed to win the day with 83.91 km./h. Immediately after his landing an ambulance took him back to hospital, where he soon completely recovered. All but four pilots completed the task.

On the 16th June, last but one day of the championships, in rather poor weather with low cumulus clouds and poorly defined bases, a 300-km. triangle was set. Around noon the weather allowed pilots to leave base, although great difficulties faced many of them in the strong crosswind. Among the first unlucky ones to land were Makula and Witek (both 89 km.). After the second turning-point conditions improved considerably and it looked as if after all some competitors would reach the finishing line. Alas, the influence of sea breeze killed all thermals and nobody made it back to base. The two winners, Wroblewski and Kepka, both covered 285 km.

The 17th June, being the last contest day, started with still generally poor weather. Again a repeat task was set, 193-km. out-and-return as on the 14th June. As it turned out, the conditions also proved similar to those on the 14th with cloud streets, etc. Only two pilots failed to complete this task, which was won by Adamek with the fastest speed of the whole championships: 91 km./h.

FINAL RESULTS:

		Pts.
1.	Krolikowski	6643
2.	Rudienskij (U.S.S.R.)	6599
3.	Wroblewski	6375
4.	Nolte (East Germany)	6278
5.	Pieczewski	6209
6.	Blauert (East Germany)	6074
9.	Popiel	5883
12.	Adamek	5426
15.	Witek	5173
17.	Kepka	5048
27.	Makula	4085

WHITHER THE MOTOR GLIDER?

By D. H. G. INCE

IN recent issues of SAILPLANE & GLIDING, there have been a number of articles about motor gliders and powered training. In the last few years there has also been a remarkable growth in the number of motor glider projects, and there are several examples of the breed in full production—the majority, as it happens, in France and Western Germany.

In the British gliding movement our views about the desirability of powered training as a method are well established and the only real point of debate concerns the sort of aircraft which is likely to be most suitable. However, the motor glider as such is a very different issue, and although it has been around for many years it has never really caught on. Usually it has been a modified version of some current glider with an engine bolted somewhere on the outside. Generally it has represented the worst of both worlds—to the power pilot a flimsy and underpowered device with indifferent handling characteristics; to the glider pilot a degraded, ungainly and even ugly version of his favourite mount with vastly inferior performance. As a result it has been only a few enthusiasts to whom the concept of the motor glider has seemed so worthwhile that they have been willing to accept what was otherwise a thoroughly bad compromise. Unjustly, perhaps, their activity has been regarded by the majority as that of some strange lunatic fringe.

Nevertheless, before dismissing the pre-occupation with motor gliders as yet another passing fashion, let us examine the present situation a little more closely.

In the first place aircraft are now available, or under development, which not only cover a wide range of characteristics and performance but which are also very different to those strange motor gliders of the past.

At one extreme is the RF 4 in quantity

production — a clean, single-seat, low-wing monoplane with retractable undercarriage and tractor engine installation. Of the current motor gliders it is closest to an aeroplane in appearance and performance. The RF 4 has a cruising speed of 110 m.p.h. and a still-air range of 400-plus miles; it is nevertheless capable of being flown as a glider (max. L/D 1:20, min. sink 4 ft./sec.) and has carried out quite a few cross-country soaring flights with the engine shut down.

Typical of possibilities at the other end of the scale, a version of the Schempp-Hirth Cirrus is now being studied which would be identical in appearance to the existing sailplane and would have the same performance as the latter carrying part water ballast. Based on a retractable power egg with a 2-cylinder 4-stroke engine and with a gliding angle of 1:44, this concept should surely convince even the most dyed-in-the-wool gliding purist that the time is fast approaching when he will be able to enjoy the benefits of self-launching and retrieving without any significant loss of performance.

For those who feel that a powered Cirrus—or maybe a powered HP-14—is likely to be pie in the sky (financially), examples are already in production of several aircraft with max. L/D in the range 1:25 to 1:30 plus, and with minimum sink between 2 and 3 ft./sec. Notable amongst these are the motorised version of the Scheibe SF 27 with its retractable 26-h.p. 2-stroke engine, and Monsieur Fauvel's AV 221 two-seater and his AV 45 single-seater.

Further evidence of things to come in the medium performance bracket — roughly equivalent to our present thoughts on sport class sailplanes—can be seen in Rudolf Kaiser's K-11 and K-12 developments and in the all-metal Ak-1, which is being built at the Karlsruhe Institute of Technology, also in Germany.

So much for the aircraft, and we in Britain should take due note that the majority of this work in recent years has been carried out in France, Germany and the USA.

The second factor of importance is that we live in an era of increasing affluence, an era in which many more people are both able and willing to pay for greater convenience and less dependence on others. Nowadays the yachtsman who is becalmed in mid-channel on Sunday is only too happy to turn on his auxiliary engine in order to get ashore in time for the office desk on Monday morning. Some years ago he would have shuddered at the idea of an engine at all. Now he is able to put to sea more often, secure in the knowledge that his engine is there to fall back on. Perhaps he would have stopped sailing years ago but for the engine itself. That there is a parallel here to gliding is only too plain to see. "But," some of you may say, "if Mr. Affluent Society has no motor and gives up gliding, that's his loss — not ours!" Is this really true? Surely we already lose far too many valuable club members and experienced pilots—and why?—because the majority, as their jobs and their responsibilities become more demanding, are unable or unwilling to continue with a sport which requires and frustrates far too much of their spare time.

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the life blood of our movement, and today, whether we like it or not, we lose them. Motor gliders could change all this; they could even bring a new lease of life to that most frustrated club member of all — the week-end family man—who simply wants to fly for fun without turning his whole family upside down in the process.

It is significant that these are essentially similar to many of the arguments in favour of powered training—and are pupils who have enjoyed the benefits of powered training really going to be satisfied in later life with traditional methods of glider launching and retrieval?

Finally, and this is probably the most significant factor of all, there is the ever-present threat of extermination to gliding as we know it—by controlled airspace. Already this imposes the most severe restrictions on our cross-country and competition flying, and all the evidence known to us suggests that tomorrow can only be worse. However, the motor glider equipped with radio and backed by a suitable operational and competition framework could provide gliding with a new lease of life even in the face of restrictions which might otherwise be utterly disastrous.

Against this background one can visualise the growth of an entirely new gliding activity—with pilots learning to fly and going solo on powered aircraft or special powered trainers (such as the RF 5). Subsequently these same pilots would move up the scale flying solo motor gliders of gradually increasing (glider) performance.

Cross-country and competition flying would assume a new pattern, yet drawing extensively on the old; radio, cameras, barographs, with event markers and auxiliary motors being the essential tools.

Consider the situation where a competition site is immediately upwind of some forbidden airspace—the wind is too strong and/or convection too weak or cloud amounts too great and/or bases too low for a successful first crosswind leg. With present-day aircraft (as we know only too well!) this means no task or no contest. With motor gliders it becomes possible to fly under power—as necessary—to an offset starting point —contest starts would then be made by crossing a specified starting line below a stated maximum height, engines shut down and retracted.

Consider a race in which one leg of the course must cross a complex of airfields whose traffic zones are forbidden and which are so situated that these form a continuous barrier across the country —with conventional present-day gliders no task could be set.

With motor gliders, pilots unable to maintain height above any of the traffic zones using natural lift, would be able to start their engines in order to do so. Points penalties would, of course, be awarded based on some function of engine running time and height gained under power.

Consider the dilemma of a pilot who is marginally short of height on his final glide. Does he extend his engine, thus immediately increasing drag, and start it up?—incurring a points penalty in the process—or does he hang on until the last possible moment, risking failure to complete the course? There doesn't really seem to be much loss of "cliff hanging" tension on the final glide because one is now equipped with an outboard motor!

Enough, however, of the emotional aspects!—is all this a crank's view; or only a pipe dream; or a realistic future development born of necessity combined with the technical means to achieve it? It is sufficient to say that the factors involved, the amount of time and effort already being devoted to the subject and the results so far achieved—although, alas, not in this country—must command our attention.

Is the gliding movement going to grasp the opportunity, or is it content to be overtaken by events and therefore ultimately to hand over the torch—and in the process to lose for future gliding enthusiasts perhaps much of what has been built up painstakingly over the years?

If we *are* going to act, the time is *now*.

* * *

(Although the author is Chairman of the Powered Trainer Co-ordinating Committee, he wishes to stress that the views expressed are personal ones and do not necessarily reflect or represent B.G.A. official policy.)

DON'T CLEAN THE FLIES OFF THE LEADING EDGE or ON WINNING THE NORTHERNS — 1st - 9th July

By CHRIS LOVELL

THERE is an article in SAILPLANE & GLIDING of October, 1964, called "The Art of Coarse Gliding". This being my first competition, my sort of gliding rather falls into this category. A trailer door lost its catch on the first day, the safety rope quickly vanished but I found another in my car boot. I never had a chance to wash the glider because the weather was so good, so as the competition progressed a considerable collection of assorted flies gathered upon the leading edge as well as much moisture-streaked dust.

The ground radio just maintained interest in my progress thanks to an H.T. supply consisting of "ye olde H.T. wireless batteries" replacing the failed power converter, etc., etc.

Early this year I recruited some stalwart B.B.C. colleagues to crew for me and by early summer all was organised (?) with Surrey and Hants Skylark 4 No. 327 booked for the week. I had the Friday before the competition off work to travel up, so on Thursday I made my way to Lasham to collect the sailplane. Friday dawned clear and calm, so a snap decision was made to attempt to fly to Camphill.

Launched at 11.30, I set off under one of those gliding skies that always seem to happen to the other chap. It appeared that cumulus dotted the inversion at 3,500 ft. (all heights a.s.l.) from Hampshire to Perth, and the trip was uneventful. In 5 hrs. 20 mins. (27 m.p.h.) I arrived at a deserted Camphill at 800 ft., but during about 45 minutes of local soaring a car drove to the windsock post and hoisted the appropriate indicator, which then hung despondently straight down.

Next day, Saturday, 1st July, dawned bright, calm, but hazy. The task was a race to Rearsby via Rufforth, total distance 218 km. A 1,200 ft. launch put me into a good lift and, with four knots up all round, a splendid trip seemed forthcoming. A light S.W. breeze set us all away north-east, but poor visibility didn't help matters, so with much "I am at x,000 ft. in cloud over. . . ." on 130,4 mc/s, a climb to 6,500 was made just north of the airway near Barnsley.

Churning through cloud smelling strongly of iron ore and gasworks for twenty minutes failed to reveal the ground; it then became very dark and spotted with rain, but a glimpse of a crossroads between dense forests put me about 15 miles S.W. of Rufforth. After a short detour to wrongly identified Marston Moor, enough height remained just to reach Rufforth and land there. I was the first at the turning point, but later Zotov in his SHK cruised round in the clag and headed south. Don Snodgrass did the same, then Alan Beckett landed at Rufforth as well.

I was third for the day by virtue of Alan's 95 per cent handicap. Tea in the splendid Ouse Bus and we were on our way back for Sunday's task.

A 20-knot westerly after a weak cold front greeted us at briefing on the second day. Superb visibility accompanied the forecast of good lift to 5,000 ft., and probable waves in the lee of the Pennines. The task was to fly to Netherthorpe, near Worksop, then along a line through Richmond (Yorkshire). All were away by 1200 hrs. and a splendid dash to the turning point sent me on my way north.

The wind strength was stronger than forecast, I think — probably 25 knots, about 280°, the course being 330° or so, more or less up the A.1. The visibility was extreme, so much so that the coastline from The Wash to Berwick was clearly identifiable from 5,000 ft. Upon this glider pilot's paradise almost the entire "Northerns" fleet cruised north until at around 1900 hrs., in an increasing W.N.W. wind of 30 knots or more, a decision had to be made whether to cross the border into Scotland and uncertain landing country or land at an airstrip I had spotted on top of a hill near Otterburn in Northumberland.

Radio messages had confirmed that 966 and 468 were down a few miles behind me and no one else appeared to be

very close, so a landing near where I was seemed sensible despite my 4,000 ft. That airstrip looked tempting with men on it and a helicopter doing circuits, but at that moment, while looking idly at the A.68, I spied a trailer stationary beside the road. "Must be one of Portmoak's or Northumbrian," I thought, but after a bit of an examination it looked rather as though it was being towed by a grey Rover like mine. Having lost a little height with the brakes I noticed a grey patch on the front of the trailer (undercoat covering an earlier encounter on a steep hill some months before). "It's mine," I shouted to myself, and at that moment two bodies emerged from the car and ran about over the road and waved frantically! An incredible bit of luck with no radio contact had brought my crew to my landing spot. Down I came and "selected" the only field in the valley. I hill-soared a bit while the trailer reversed in the road and then made a landing beside the road at Redesdale Army Camp.

I had flown 170 miles and we were back at Camphill by 0150 hrs.! This was probably the best flight of the competition, with hill, thermal and wave soaring all helping my progress.

There were radio reports of gliders in wave over the whole country and a kind soul at Sutton Bank tried his best to get several of us into wave over Leeming; I managed 500 ft. above the cumulus, then fell out—he was at 9,000. . . .! I had won and just pulled into overall lead by 77 points.

Monday, 3rd July, was gusty, showery and generally horrible—we were all launched to fly to Husbands Bosworth, I think, but most of the gliders were soaring every available bit of rock facing the wind. Most barograph traces had more below the base line than above, including mine when I was hill-soaring a housing estate at Belper for about half an hour. It's a wonder no one collected any TV aerials, but some had postcards of Chatsworth House. I landed at Derby; had I gone another three miles or so, it would have been a contest because Mike Armstrong had managed to get about 50 miles!

The next day, Tuesday, 4th July, gave us a regular Camphill milkrun—a race to Ingoldmells, 138.5 km. Conditions seemed to be good, and after crossing the startline at 2,600 ft., I went straight up at 8 knots to 7,000 ft., and with a 15-knot westerly behind me had a straight glide to near Gamston; but I wasted time choosing wrong clouds, thus losing height quickly. In the end Mike Armstrong and myself sort of pair-circled to about Lincoln, where at 3,000 ft. it was time to think about finishing lines and final glides. I'm not a believer in calculators in general, and I'm sure if I had one on this trip I would probably not have reached the goal or landed in the sea—the tide was in. The visibility was quite good—about 15 miles, but the airfield at Skegness is very difficult to find and several final glides were started, the last one of which was a tour of the coastline, then an impressive but useless 80 knots for the last 200 yards!

Thirteen gliders arrived, including the SHK, but an unfortunate non-sighting at the start line gave Zotov only six points more than me. My little lead was whittled down to a mere 41 points.

The good weather continuing next day gave us a race of 98.5 km. The first leg to Darley Moor airfield was into wind,

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and the second to Gamston was almost downwind, there being about ten-knot S.S.W. wind.

Conditions were good but a bit patchy, and moderate speed was made to the first turning point. I nearly landed six miles short of Darley Moor when I sank to 1,400 ft. over rather high ground, but I struggled up out of a sunny south-facing bowl on a hillside. Along the second leg, cloud streets at 3,500 ft. gave good speed prospects, but not being as observant as I ought to have been, I missed one for a bit and sank rapidly to Mansfield along a street of sink! A good thermal there took me to the base of a street, whereupon I lost no height to the finishing line. I then became confused over wind direction and did some very untidy circuitry before landing downwind, much to Mike Armstrong's surprise, who was first there. He was fastest, I was second, 1 h. 44 mins., I think.

Don Snodgrass unfortunately damaged his Dart in towing out to the launch point and the SHK was slower than I on this trip, putting Zotov 7th on the day, so my lead was increased somewhat to 310 points.

July 6th, next day, was also promising from the start, and once again a task was set despite pilot and crew mutterings of how many miles and how much petrol and what about closed circuit because we were all tired, etc., etc., This task turned out to be just what my crew wanted — Free Distance via Husbands Bosworth!

The forecast was ten knots south to south-west wind and good thermals except north of the Camphill parallel, where some residual strato-cu might make cumulus overdevelop. Many pilots thought of flying east into East Anglia, but my decision was influenced by the ten-knot S.S.W. wind and the lack of retrieve petrol money. I only had to get beyond a line east-west through Rufforth to beat the East Anglians.

An uneventful trip to Husbands Bosworth, with some difficulty here and there in getting good climbs, sent me off north again. Zotov had declared Catterick for a 300-km. goal, so I half expected to see him, as I was using all the cumulus in sight, which weren't many. However, the day wore on, and one final climb to 3,000 ft., under what appeared to be quite useless black soggy stratus, took me right over my crew on the north end of the Doncaster bypass, where with their five-mile radio range they could just contact me. They followed me as I cruised up the A.1 (over the slow lane at 42 knots!), and then, running out of height above the road, I turned in to land beside the Wentbridge Auto Grill, ten miles north of Doncaster. All Portmoak expeditions have stopped there at sometime for a meal! My crew and Zotov's helped to de-rig 327, and we all went to have tea and talk. The café manager was also very interested, explaining that a glider landed there once before, etc., etc. I started back and Zotov's crew phoned back later and discovered that he had changed his mind and had landed in Sandringham estate, Norfolk!

Briefing on July 7th—the 6th contest day—raised a sigh of relief for travel-weary pilots and crews: a 118.5-km. triangle, Hucknall (Notts.), Darley Moor and Camphill, was set. Conditions did not look good at all, but I was launched to cloud base, about 2,700 ft., and into a 15-knot southerly wind. Visibility was diabolical—about three miles. The cloud base went up a bit, and I was off on what turned out to be a very nerve-racking flight at times. About half an hour was spent scraping crosswind to East Moor, the last mass of high ground to the east of Camphill, where No. 415 and myself spent some 20 minutes at 700-1,000 ft. above the heather, just maintaining altitude under a very ugly sky.

Burning my boats, I pushed out into the sunshine to the east and found strong lift to 3,000 ft., but I lost all that returning to track after drifting nearly to

Sheffield. About three hours of struggle at never very great altitudes took me within reach of Hucknall but not in sight. Much searching in thick haze then revealed the airfield literally two miles ahead. I nearly rounded it several times but was forced to circle in weak lift. Finally I got round and headed into a blue patch and surprisingly found lift in many places. Visibility here was a little better in the sunshine, but then thick haze surrounded the Darley Moor area, so that on arrival there I could only just make out the marker. It would have been extremely doubtful whether photographic evidence would have been any good at all because of the darkness under the cloud as well as the one-mile visibility.

Twenty minutes from Darley Moor and I was on the ground at Camphill—4 hrs. 7 mins. for the 65 miles or so! I was the only one round, so the crew had their well-earned rest.

A cold front passed during the night and the next day was brilliantly sunny, and with a very strong W.N.W. wind blowing, a large rotor cloud sat right over the hangar. We stood watching it churn round and round and noticed some lenticular formations above. Splendid, but what do we do for a task? Met. gave us 30 knots west to north-west and good cumulus, as well as some wave, so a 178-km. race to Dunstable was set. It was very rough on the ground, making rigging a problem, but in the end I was sent aloft—halfway up the launch I hit a severe bump and accidentally released at 200 ft., over the middle of the airfield with 35 knots wind! I dived at the slope and, losing no height at all, I hit the front edge of the rotor over the windsock and climbed at eight knots, not moving forward at all over the ground. This climb continued until a short trip into wind in cloud took me straight into wave lift of five knots. Many others were also in the wave and a splendid sight developed, with the country around covered in lenticular-like strato-cumulus and cloudless sky above.

The climb continued, but then decision had to be made—cross the start-line at the proper altitude or try for Gold C height. Three hours later, having fallen in and out of wave, I passed 10,000 ft. gain of height, finally getting a gain of 10,500 ft. or so. As far as I could see, nearly everyone reached 7,000 ft. to 10,000 ft. before they left,



Waves to the west of Camphill on 8th July; seen from 12,000 ft. a.s.l., cloud 5,000 ft. Photo : Chris Lovell.

and at one time six gliders were all tacking up and down around 9,000 ft.

Gliders were at 10,000 ft. and more over the whole country, according to radio reports, but it took me ages to find out that the higher up you go the more forward you have to be to stay in lift!

A straight glide through cloud brought me to between Lasham and Rugby. The waves were killing the thermals to some extent, but a few strong thermals brought me in to a landing at Dunstable. About eight gliders arrived, I think. My time from leaving Camphill was the fastest—2 hrs. 6 mins.—but I was almost the longest airborne, so I was 6th. However, the SHK did not land at Dunstable, so in fact increased my lead to 1,018 points.

The next day it was decided to call it a competition, and prizes, etc., were presented and speeches were made. Conditions still appeared to be good, so what about a flight back to Lasham?

A 15-knot W.N.W. wind blew with good visibility. 7,000 ft. in the wave, which was still over the site, set me on my way, and after 4 hrs. 10 mins. a final glide to Lasham completed the flight in good conditions over the whole course.

Many factors contributed to my success; the greatest, I think, were the Camphill organisation, which was absolutely first-class, the most able crew one could wish for—thanks, Denis and Eric, you did a splendid job, and Stan for trailing me to and from Lasham—and the superb weather, with some definitely 18-metre Skylark 4 days. My Gold C height claim on the Dunstable trip was accepted, and even at Lasham waves were working at 8,000 ft. on that day.

Whatever else I do in the gliding world, the 1967 Northerns at Camphill will always remain a very high peak in my life.

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Pilot(s)	*H'cap %*	*Sailplane*	1	2	3	4	5	6	7	*Total Pts.*
1. C. D. Lovell	100	Skylark 4	859	1000	964	864	1000	640	792	6119
2. D. V. Zotov	95	SHK	1000	788	970	619	888	268	568	5101
3. V. F. G. Tull	100	Skylark 3F	797	916	899	520	795	293	830	5050
4. M. S. Armstrong	100	Skylark 4	650	611	844	1000	480	287	833	4705
5. D. Hatch	100	Dart 15	534	536	851	544	956	0	1000	4421
6. J. Przewlocki	95	Dart 17R	507	834	739	790	715	0	822	4407
7. E. C. Neighbour D. Pillans	105	Oly. 463	463	953	886	480	401	0	137	3320
8. B. B. C. Watson Patricia Watson	100	Skylark 4	0	674	285	732	939	222	402	3254
9. B. D. Jackson	105	Oly. 463	618	563	682	637	308	—	429	3237
10. A. Beckett	95	Dart 17R	816	878	648	0	363	177	337	3219
11. D. C. Snodgrass	95	Dart 17	882	900	1000	—	38	16	91	2927
12. T. F. Smith	100	Skylark 4	751	483	55	446	19	0	847	2601
13. D. H. Millett	100	Skylark 3	789	0	567	455	287	0	380	2478
14. D. J. Crabb	100	Dart 15	488	655	373	631	0	0	315	2462
15. R. Cousins	95	Dart 17R	309	335	593	494	363	0	171	2265
16. J. Bower	100	Ka-6CR	751	576	145	—	—	—	—	1472
17. G. Richards	100	Skylark 4	325	500	386	0	0	0	0	1211
18. G. C. MacPherson	100	Skylark 4	658	46	0	0	310	—	—	1014

ZELL IN SUMMER

By RICHARD FORTESCUE. (Cambridge University Gliding Club)

ZELL-AM-SEE, in the Austrian Alps, is known to visitors from many countries as a particularly beautiful skiing and walking centre. One can also swim, sail and water-ski on the lake. But above all, one can SOAR. Members of the Cambridge club have trailed gliders 800 miles out and 800 miles back, both this summer and last, and the general opinion is that gliding from Zell is the most enjoyable flying that one can have. We have not broken records; we acknowledge that our old rivals from Imperial College were there before us. But if sheer enjoyment is what you want from your gliding, you may like to hear more of this way of getting it.

The first excitement in a flight from Zell is the marvellous panorama over snow-covered mountains in the Grossglockner group. Nobody has yet failed, on his first good day, to use up all his available film in one fell swoop endeavouring to record as much as possible of this fantastic experience. And the stimulation is added to by the feeling that this view has been achieved by virtue of a certain skill and ability of one's own, just as a climber gets added satisfaction by arriving where the cable-cars do not go. It would almost be worth the 800-mile trail just for this first flight.

After this, the next thrills are the long Alpine cross-countries. No doubt the 100 per cent gliderman would rank these highest of all. One might suppose that the views on longer flights would be even better than when "local soaring". Perhaps they are, for more experienced pilots, but the Alpine beginner is apt to be so concerned with his immediate battle against gravity on these occasions that the view does not always get the attention it deserves. On the good days, one stays up by courtesy of a set of thermals generated by the mountains. They are virtually fixed in location, but any one may "switch off" for varying intervals during the soarable part of the day. There is actually a map showing the main, standard, thermals at Zell. But I doubt if this is much used; very often they are marked by cu, which, on a really good day, form a cloudbase at 10,000-12,000 ft. a.s.l. One can sometimes see this cloudbase clearly defined along the Alps when there is nothing but anticyclonic blue over the plain of Bavaria to the north.

As usual, there is a "milk run" for the long flights. It goes almost due west from Zell to the Arlberg (just on 200 km.), keeping to the south-facing north sides of the Salzach, Inn and Stanzer valleys. There is generally little wind, even at 10,000 ft., on soarable days in summer, so "out-and-return" is the usual declaration. If one's ambition is 500 km., however, one tries to overfly Zell, after the return, to the airfield at Aigen-in-Ennstal, about 100 km. further east. Often the most awkward part of the "run" is crossing the Inn and Ziller valleys on the way back to Zell. There is never any lift over valleys, and these two crossings tend to be uphill from slightly lower to higher mountains.

There must have been eight or nine successful 300 km. "goals" achieved on this run while we were at Zell this summer. A school two-seater did 400 km., and one character got his 500 km. Finally, a new Austrian out-and-return record of 640 km. was achieved. This remarkable flight was made, in a Diamant, by Dr. Alf Schubert, who also won the Austrian Nationals this year. He is a vet. from a neighbouring village, and on this occasion took off at about 9.30 a.m., first on the line. He then flew to Oberalp, just short of Andermatt, in Switzerland, and returned some time be-

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tween 4 and 6 p.m., while we were all too busy local soaring to notice.

Being inexperienced, we were cautious about these long cross-countries over the mountains. They are, of course, not quite as hairy as they seemed at first. Anyone sensible keeps within gliding range of an inhabited valley. You do *not* chance a snow-field-landing with the probability of deep-freezing there before a helicopter can pick you up. "Gliding range" with 7,000-8,000 ft. clearance above most valley levels is not a great restriction. You just have to watch and make sure that nothing too high gets between you and the valley into which you would have to escape.

A more intractable problem is that of damage if a field-landing did have to be made. In addition to the normal risks of outlandings in the U.K., one generally has quite a list of special hazards to bear in mind. Fields tend to be small and rough. It is almost impossible to tell whether the wind is up or down the valley. Grass fields may be fitted out with 18-inch-high posts, zarebas of wire, or irrigation ditches; being often mown by scythe, there is no objection to such devices from the farmer's point of view. But if you choose what you hope will be turnips or beet, it may identify itself, on your final leg, as 7-ft.-high maize. Approaches are almost always well wired with H.T. cables, if not with further cables stretched from mountain-top to valley, to transport hay and/or skiers. Close to Zell, the grass is relatively snag-free. But Cambridge policy was to keep pretty well within range of fields previously examined from the ground (finding these provided a good occupation for duff days). We built up a chain covering virtually all of the 300-km. flight, which did not prevent it from still being a very exciting event. In fact, these fields never were used; the only two away landings were at Innsbruck airfield.

During our stays in June, July and August, to the tune of about 80 days in all, about one day in two was soarable at Zell. One in four had a cloudbase around 3,000 metres or more, which is high enough to fly around the high mountains and get the real views. On average, one in six or seven days seemed good enough (to us) to venture across country beyond the 50-km. range of our own valley.

But local soaring was always fun. One could explore side valleys and fly around corners in them. One could fly down a ski-run on the glacier, grandly overtaking good skiers. One could hop over sheer 5,000-ft. walls of rock with razor-like top edges, going near enough to produce the same feeling that one gets from too cold a cold shower. John flew low over a herd of deer, probably closer to them than one could have got in any other way. Raouf outclimbed a group of mountaineers ascending the same rock-face by rope and pitons.

I had a private eagle-hunt. He was well centred in the strongest lift and passed me like our C.F.I. in the T-21. But at cloudbase, I got on his tail in a swoop out over the valley and found the 463 a lot faster on a straight glide. I got close enough, before he noticed, to have an impression of a great size of bird and rather fragile perspex. But just then he looked back over his wings (in exactly the way we can *never* do) and peeled off to port in evasive action that would have gladdened the heart of any instructor from the Central Flying School.

The one real snag about Zell is the rain. Not all unsoarable days are rainy, but a great many are. (There are also sometimes vicious thunderstorms on soaring days.) The place is green and fresh even in August and there is no corn in this valley. So one does not need met. statistics to prove a heavy precipitation level. In fact, the surrounding mountains constitute one of the great hydro-electric areas of Europe. Nobody really found a good way of spending a real "washed out" day, and one tends to retire to night life in the evening to drown one's sorrows.

At such times, glider pilots were usually to be found at one or all of the haunts. These varied from teenage-teeming, U/V-lit, bars with music at about the sound level of a 707 take-off, to the Grand Hotel, stately and sometimes excessively spacious. A run round the haunts was apt to produce a total consumption of five or six quarter-litre glasses of wine, which turned out to be bad for pilot serviceability next day if the rain had then stopped. If you are sensitive to such things, a great asset on these rounds is the fact that Austrian

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girls often wear dirndls. Not being properly qualified in this field, I can only say that these are exquisitely shaped dresses worn with gay coloured aprons. The skirts are of exactly the most artistic length and the blouses have necklines cut to exactly the most artistic depth. Some characters found this last so fascinating that quite a discussion arose on the relative merits of monocoque fabric-covered construction in the stress-carrying regions.

Other nice things about Zell are the Alpine Segelflugschule and its staff, who are in charge of flying and towing, and the Fliegerheim, where one lives. The C.F.I., Guido Achtleitner, could get a job instructing personnel managers on human relations. He is an absolute master at controlling 30 impatient visiting pilots, all anxious to be aero-towed at the same moment, with entire amiability. (Guido used to be at Innsbruck, by the way; he was in charge on a historic day when they winch-launched 70 gliders which vanished into the airway, 50 returning later with 5,000-metre heights. At the peak period, using three cables, they got 35 off inside the hour.) The Fliegerheim is about three times the size of any equivalent in England It is also CLEAN, and has a superb showerroom. Nothing is better, after 5 hours grilling at 11,000 ft., than to stand under a torrent of water, at the right temperature, for just as long as you like.

When are we going again? Well, someone forgot about aero-tows when he fixed that £50 limit. But if anyone knows a system not already on the Bank of England's list, we would be glad to invite him to Cambridge to give us a short talk.

Addendum.—During our stays, nobody actually flew over the Grossglockner massif to land at Lienz A/F in the East Tyrol. There is a big area of snow to cross, and the retrieve would involve an expensive toll for the Glocknerstrasse or Felbertauern tunnel. It is salutary to remember, however, that this flight was first achieved by Heini Dittmar in, I believe, 1936.

REGIONALS IN A CAPSTAN

By RAY STAFFORD ALLEN

PERSONALLY I much prefer to do my motoring with a companion. Motoring by oneself becomes boring with nobody to talk to, and it has always been a mystery to me why people generally do not seem to feel the same about gliding.

Cross-country gliding in Regional Competitions in two-seaters is the most terrific fun, and the Capstan is one of the best adapted two-seaters for the purpose.

Ideally you want a team of four people. Two can then fly, and two can drive the retrieve car, and by this means everybody can get a fair amount of flying. You do not condemn the crew to the perpetual task of driving the car day after day, and it is much easier to recruit willing volunteers if they know that they will get a bit of the flying.

Now it is no use pretending that the Capstan is a hot ship that can hold its own with Darts, etc., but conversely one should bear in mind that it has quite a good performance cross-country - wise, once its limitations are realised. Only in the most exceptional conditions, such as on final glides, etc., can you use interthermal speeds of more than about 60 knots, as, at these higher speeds, the penalty of punching a large hole through the air for the big fuselage becomes apparent. However, at speeds below 60 knots, the glide angle of the Capstan is a lot better than most people think. I usually reckon on 27 for best glide at about 45 to 50 knots; this seems to work out about right. Perhaps the very nose-down attitude of the machine and the magnificent forward view tend to give the impression that the thing is coming downhill faster than it actually is.

For cloud flying you could hardly ask for a nicer machine. It is very stable, and you can nearly leave it to itself as far

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as the elevator is concerned, once you have got the machine nicely trimmed. I use a turn-and-slip only at present, but I am thinking of fitting a horizon when I can get round to it, but it does not seem to get into trouble in cloud readily. Most of the trouble is me, as I find that I tend to get into mental knots after a short spell of blind flying.

For popping the thing down into small fields, again one could hardly ask for a better machine. The brakes are huge and powerful, and there is a good wheel-brake, though one must remember that when the ground is wet, the wheel-brake, like all the strap-type brakes, is not very effective. The forward view of the landing ground makes approaches easy. You do not need to worry if there are cows in the field that you have chosen, because you never need leave the machine on its own. One of you goes to telephone, while the other makes anti-cow noises until the crew arrives.

Perhaps because the machine is large, and probably very rarely de-rigged in most clubs, there seems to be the idea that it is difficult to rig and de-rig, but this is the exact opposite of the case. It can be rigged easily by three people, and de-rigged by two—yes, *two*. This means that the two pilots can normally have the machine laid out in pieces for the crew to load into the trailer as soon as the trailer arrives. It is true that the wing roots are fairly heavy, and for convenience I use a shoulder sling for carrying them, but they are not as heavy as the ends of Skylark centre-sections.

It might be of interest to describe the drill for de-rigging by two people.

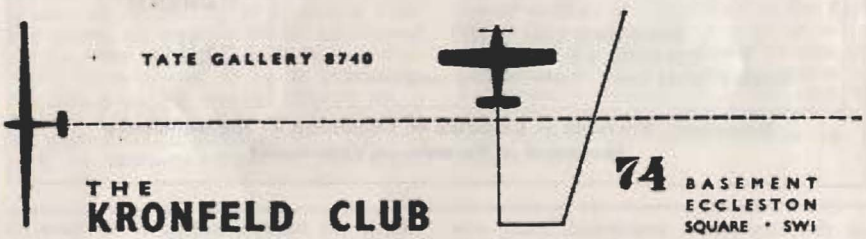
First you remove the tailplane and the two wing-root fairings, take out the brake and aileron pip pins and remove the safety pins from the three spar pins on each side. One man then pushes up under the spar on the "up" side wing and the other draws the top spar pin. This wing will then hinge down and lie on the ground. You both then come round to the root and, with one on the leading edge and one on the trailing edge, you draw the lower main spar pin and the nose pin and lift that wing right off the fuselage and, pivoting it on the wing tip rubbing blocks, swing it away

from the fuselage and lie it on the ground. Going round to the other side, you do the same thing to the other wing, but in this case you do not need to pivot the wing at all as the fuselage can be allowed to lean over the other way, and it will stand up of its own accord leaning over on the bottom longeron, allowing you sufficient room to lie the wing down on the ground in exactly the position where it came off.

The whole secret of the operation rests on two facts: one, each wing is entirely separate in itself and only has to be coupled to the fuselage and not to the other wing; and two, the fuselage will stand up of its own accord.

I am pleased to see that Slingsby's new two-seater has some of these advantages, though in this case it would probably be necessary to make up some simple form of folding "dead man" to hold the fuselage upright when de-rigging.

Finally, I would like to leave you with one thought. Do you fly in competitions for fun or to become National Champion? If the latter, then of course you need the hottest ship you can get. If the former, I can assure you that two-seater flying offers you the greatest fun you can find.



THE winter season opens with the Annual Wine and Cheese Party on Wednesday, 4th October, from 8 p.m. Tickets 10s at the door, visitors welcome. Eat and drink to your heart's content, but come early as supplies are not unlimited.

Wednesday, 25th October, sees the opening of the Kronfeld Aviation Art Society Annual Exhibition by Squadron Leader Ray Hannah, leader of the famous R.A.F. Red Arrow Aerobatic Team. After the official opening he has promised a short talk on the Red Arrows, so this should be a most interesting evening.

Again visitors are very welcome; admission will be by Exhibition catalogue, price 2s. The Exhibition, the ninth to be held in the club, will be open daily until 11th November, 6.30 p.m. to 10 p.m.; Wednesdays, 3 p.m. to 10 p.m.; Saturdays, 3 p.m. to 5 p.m.

As 1968 is the 50th anniversary of the R.A.F., there is a special competition section this year for paintings on the subject.

You are reminded that almost all the paintings in the Exhibition are offered for sale, many at very reasonable prices of between five and twenty-five guineas, and every sale made through the club does help us. Y.C.B.

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

Sept.	27	Pot-holing to Mountaineering by Tom Sage, the balloonist—with slides.
Oct.	4	Annual Wine and Cheese Party. Tickets 10s. each at the door.
„	11	First World War films.
„	18	Annual General Meetings, followed by Leonardo Da Vinci film.
„	25	Opening of Aviation Art Exhibition by Sqn. Ldr. Ray Hannah.
Nov.	1	Exhibition continues.
„	8	Exhibition continues.

AVIATION ART SOCIETY

On Tuesday, 24th October, the Society will hold its first dinner at the Eccleston Hotel, following the private view of the 1967 Annual Exhibition. Admission to the private view will be by invitation and details about this and tickets to the dinner (price 35s. each) may be obtained from the Hon. Secretary, Mrs. Bonham, 14 Little Brownings, London, S.E.23, or telephone 699 9390.

Guests at the dinner will include the judges of the competition, Frank Wootton and Michael Ramsden, Editor of "Flight International". The competition prizes will be presented at the dinner. Entry forms for this exhibition must be in by the 2nd October, and pictures must be handed in by 12th October.

Y. C. B.

BGA NEWS

Annual General Meeting

The British Gliding Association's Annual General Meeting will be held on the 9th March, 1968. The venue will be announced later.

National Class Championships, 1968

At the August Council meeting it was agreed that:

(a) The SPORT CLASS championship will be held in June (probably from 1st-10th June at Lasham.

(b) The OPEN CLASS championship will be held in August (probably from 24th August to 2nd September at Husbands Bosworth).

(c) In the OPEN CLASS:

(i) The daily and final results will be produced, and the National Open Class Champion declared, using *unhandicapped* scores.

(ii) An "Index of Performance" Award will be made to the pilot who finishes in 1st position when handicapping is applied to the scores.

(iii) For *rating* purposes handicapping will be applied to the results.

(d) In both National Class championships TEAM ENTRIES will be accepted.

(e) Within the SPORT CLASS *unhandicapped* scores will be used to determine the winner of the *Standard* Class who will receive an Award. (As already agreed *handicapped* scores will determine the National Sport Class Champion.)

U.K. Records

ANNE BURNS will be the first pilot to claim the 400-km. Triangle record which was introduced in August, 1966. On 5th August she flew her SHK from Lasham, Leominster, Northampton, to Lasham in 6 hrs. 40 mins., total distance 414 km.

GEORGE BURTON broke his own 100-km. Triangle record on 20th August. Speed approximately 86.4 km./h.

Both records are subject to homologation.

South African Nationals

This event will be held at Kimberley or Bloemfontein from 31st December until 13th January, 1968. Entrance fee R70 (£35 sterling). Team entries accepted. Apply for further information: The Aero Club of South Africa, P.O. Box 2312, Johannesburg, South Africa, by 1st November.

THE SOLO GLIDER PILOT

Published by the British Gliding Association and compiled especially for the W.D. & H.O.WILLS SWALLOW COMPETITION is now available at 2/6 including postage.

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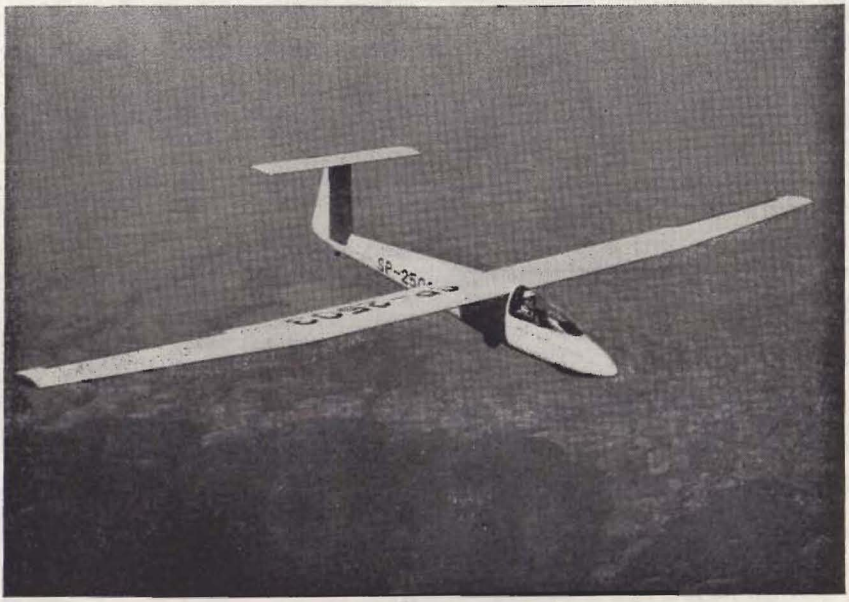
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LASHAM REGIONALS 22nd - 30th July

By JOHN BARROWS

NATIONAL Champion Nick Goodhart opened the competitions and set the first task—a 165-km. race to South Marston via Banbury Cross in splendid conditions. Of the 17 pilots who flew, 14 reached the goal, and with 6-kt. thermals there were some fast times, Bill Kronfeld (Dart 17R) winning the day with about 72 km./h., followed by Cornell and Barrows.

Kronfeld, who used several cloud climbs to speed him on his way, was unobserved at the finish as the observer hadn't expected anyone so soon, and in any case was looking the wrong way. So Bill landed and pointed him in the right direction!

Day 2—Wally Kahn, "guest" tasksetter for the day, ordained a 195-km. triangle —the Australian mark in the chalk S.W. of Salisbury, Uffington White Horse, Lasham, and then distance along a line through Salisbury.

At 1 p.m. this seemed ambitious, as most pilots had still not got away, but later the weather brewed up to make it a superb task. Half the field fell down on the first and second legs, but eight completed the triangle and carried on west in good evening thermals with a 5,000-ft. cloudbase.

Bill Kronfeld won again, landing near Sherborne with about 293 km., while Joe Przewlocki, Ian Paul, Chris Day and John Barrows all ended up in the Mere-Shaftesbury area with 265 to 275 km., each to gain over 900 points with landings as late as 8 p.m.

The day had its dramas, with two gliders damaged in field landings and Barrows charged by a herd of Charollais steers led by a black bull. After a last-ditch stand at the glider, a farmworker informed "Ah, they nasty beggars—trampled a man to death near 'ere not long since."

Day 3—Ann Welch set the task—by telephone from home—a 305-km. race to Great Yarmouth via Kettering. The field set off like time machines, with such radio chatter as "Hardly worth stopping for this one—it's only five knots!" But only for the first hour. Unforecast clamp shut off the sun after about 50 miles, and pilots who had reached Bicester in just over an hour were soon scraping in anything they could find. Of these only Joe Przewlocki found a way through to turn Kettering at 1,800 ft. On the second leg he could make little sense of "square, oblong or hexagonal" thermals, was twice down to 600 ft., and only regained launch height near Norwich. On his final glide to Yarmouth, however, there were 6-kt. thermals; said Joe, "and I could hear choirs of angels singing". This magnificent scrape put Joe into the overall lead.

Two later starters, Bill Wills and Tony Watson, made good use of their 15-metre machines to cross the duff area and turn Kettering later. Bill finished S.E. of Peterborough and Tony came down near Ely, unfortunately damaging his glider in a hedge. Bill Kronfeld broke his undercarriage this day, but the combination of an epic dash to Kirbymoorside overnight and "no task" next day kept him very much in the contest.

Jill Walker, crewing for Jonathan Eccles, heard with foreboding her pilot direct her to a 15-storey block of flats in the middle of Bletchley, but he was safe in a playing field nearby, and Jill got a police motorcade escort out of town with sirens, flashing lights and all the trimmings.

Day 4—On a blue thermal day, with a sea breeze due to cross Lasham in early afternoon, the task was a race to Dunstable via Bicester, about 125 km. The first leg proved difficult, but cumulus appeared half-way round the course to make things easier. Chris Day landed after two contest launches when the Lasham sky was almost dead and others were on final glides into Dunstable. He decided to abandon but was persuaded to have a last attempt. Setting off from the top of the launch for Basingstoke at 3.38 p.m., he then made the fastest time to the "other place"—nearly 60 km./h.

Ten out of seventeen reached the goal, Tony Burton, an early starter, making second fastest time in his Skylark 4. Joe

Przwelocki landed just short through hurrying his final glide.

During the race someone was heard to radio Mike Gee (call sign "Piggy"): "No, Piggy—London Airport is not a grass field—it has big concrete runways!"

Day 5—After another scrubbed day, due to 7/8 stratus and 25-kt. wind blowing straight into the London Control Zone, Wally Kahn told pilots at briefing that the Met-men really seemed in a flat spin as to what was going on "because there's too much weather".

Under a hopeless-looking sky, with 7/8 strato-cu at midday, free distance was set and despondent pilots selected start times from about 1.20 p.m. onwards. But just before 2 p.m. the sky broke and good thermals developed in a 10-15-kt. westerly.

Most of the field chose to go in an arc from S.W. to N.W., where better conditions were forecast, but all were brought down in increasing headwinds and high cover. Of this group, Barrows went furthest with 130 km. to near Ross-on-Wye, but failed to find forecast wave from the Welsh mountains. Burton, reduced to soaring Cleeve Hill in a wind of 20 kts., suddenly had the lift collapse on him and thought it might have been a wave trough.

Ian Paul and Kronfeld went north and found cracking conditions. Paul, who reached Cranwell to win the day with 210 km., found conditions as good as he had ever flown in for a couple of hours —big, cloud-marked thermals "in which I didn't bother to turn until the vario hit 6 to 8 knots". Kronfeld's flight to Boston airfield won him the competition, and Docherty and Corbett made third and fourth best distances.

More drama this day when Ted Stark landed unobserved right inside the heavily guarded top security section of an American early-warning radar complex near Bedford. He entered a building packed with electronics, saw a phone, dialled "O" and asked "Where am I?" Result—an emergency alert and the arrest of Ted. But they later let him change a 10s note into American money to buy a ten-cent mug of coffee, and he regained Lasham showing a dollar bill in place of a landing certificate.

Although the last two days were rained off, the comps. were voted a great success, and pilots reckoned no praise too high for contest director Martin Seth-Smith, who, with a minimum of helpers, did so much to make it so. In fact, they bought him a bottle of Scotch.

The running of a Regionals at Lasham so soon after the Nationals was something of an experiment, but in the event more than the usual number of courses and normal club gliding were carried on alongside the competition with complete success.

The table of final results will be published in the December issue.

HUSBANDS BOSWORTH 15th - 23rd July

Recollections by TOM ZEALLEY

WE had eight cracking good contest days, each with 3 or 4 hours' flying, while the ninth, a rest day, gave a couple of hours' enjoyable and relaxing local soaring. The last Sunday provided an appropriate finishing flourish: an out-and-return in which almost everyone got back, the scores computed in record time, and the prizegiving ceremony starting at 5 p.m. and finishing in comfortable time for us all to go home.

I suppose I must expect to look back through several years of "Splasham", "Dunstapuddle" and "Damphill" to "Hus-Bos, 1967"—the standard by which I shall now judge a really good gliding championship.

Photographic turning-points meant visits to a number of interesting cathedrals for the competitors — a pleasant change from the monotonous airfields; but bad photos meant hours of tedious scrutinising for the organisers.

Radio, that other modern wonder, is becoming almost universal (75 per cent of the Hus-Bos competitors had it).

Apart from making life a bit easier for the crews and keeping the pilot in touch with his competitors' fortunes, it also provides diversion — and in diverse tongues. I recall the broad Scots voice pointing out the "wee loch" and making me wonder whether my navigation had taken me that far north; and the silence-producing occasion when a Brum accent gave instructions about the blunt end of a rag-man's trumpet! But radio can, of course, also be irritating!

Tasks and scores are shown in the table. Justin Wills' performance stood out brilliantly! He scored maximum points on four days out of eight, and on another day was only "beaten" by his handicap. He reached Sutton Bank on day four when cu-nims brought most pilots down well short. He and Mike Johnson were the only ones to photograph Ely Cathedral (the second turning point) in torrential rain on day eight. He and Barry Atkinson were the only ones to get back on day one—another day of big cu development and "clag" late in the afternoon. He was the . . . etc., etc.

If the weather was good, so were the place and the people. The site had ample space, except perhaps on one day when we had an unusually strong southerly wind. The organisers (the Leicester and Coventry Clubs) were not just efficient and well-prepared but friendly and helpful too.

But above all we rejoiced in the wide-open air spaces: tasks were set over a great sweep of countryside—from Sutton Bank in the north to Skegness in the N.E., Ely in the S.E. and Cranfield in the south—never once did we have to even skirt an airway. We had the freedom of the skies—as high as we had the skill to climb.

I want to go back!

FINAL RESULTS: Central Regionals (Husbands Bosworth)

	Pilot(s)	*H'cap* % *Sailplane*	1	2	3	4	5	6	7	8	*Total Pts.*
1.	T. J. Wills	95 Dart 17R	520	285	1000	820	470	1000	886	964	5945
2.	M. W. Johnson	95 SHK	128	496	903	427	666	919	1000	910	5449
3.	G. B. Atkinson	95 Dart 17R	496	286	732	548	969	811	626	964	5432
4.	T. S. Zealley	100 Ka-6E	382	67	685	356	1000	635	765	1000	4890
5.	L. E. Frank	100 Skylark 4	190	190	750	538	597	988	700	913	4866
6.	D. W. Lilburn	100 Skylark 4	339	80	981	253	492	641	765	944	4495
7.	A. W. F. Edwards	105 Olympia 460	212	273	828	349	696	343	791	728	4220
8.	N. C. Morland, J. L. Smoker	100 Skylark 4	55	172	652	305	570	394	683	846	3677
9.	T. P. Docherty	95 Dart 17R	50	0	630	3	752	716	538	879	3568
10.	J. Collins, R. Bradley	100 Skylark 3F	110	8	223	261	701	672	694	531	3200
11.	R. C. Stafford Allen	120 T-49	76	72	0	0	759	381	849	881	3018
12.	R. O. Willett	100 Skylark 4	50	137	232	311	379	480	712	697	2998
13.	D. Connolly, P. Treadaway	100 Dart 15	0	0	543	243	794	0	687	704	2971
14=	M. A. Horan, P. Hurwitz	100 Skylark 4	3	19	409	253	333	698	600	563	2878
14=	F. B. Reilly	100 Skylark 3F	—	206	525	0	515	854	700	41	2841
16.	K. W. Haynes, D. Waring	100 Ka-6CR	111	81	433	9	393	854	652	251	2784
17.	B. W. Brighton, N. Revell	100 Dart 15	107	0	628	0	705	0	558	586	2584
18.	C. Falkingbridge, D. Sadler	100 Skylark 4	64	19	306	58	492	0	694	789	2422
19.	A. B. Covington	100 Skylark 3B	0	8	590	0	133	245	667	713	2356
20.	P. J. Partridge, F. W. Fay	95 Dart 17R	70	18	0	0	468	0	682	634	1902
21.	N. K. Manley, R. G. Gardner	100 Skylark 4	93	17	56	0	523	278	627	150	1206
22.	V. J. Hurd, R. J. Smith	100 Ka-6CR	74	6	0	0	0	177	294	604	1155
23.	R. B. Larkinson, A. B. Adams	105 Olympia 463	0	0	0	536	0	61	211	808
24.	R. Wood	115 Skylark 1	0	0	0	43	0	235	195	473
25.	P. G. Purdie	100 Ka-6	107	26	0	—	—	—	—	—	133

TASKS.—1, 202-km. triangle; 2, free distance; 3, 124-km. race; 4, 200-km. race; 5, 112-km. out-and-return; 6, cat's cradle; 7, 210-km. triangle; 8, 100-km. out-and-return.

AS IF BY MAGIC

By J. C. RIDDELL

AT the start of any serious bout of thinking, it is necessary to state the problem. Let's try: "Why doesn't our club have a Dart to fly like those rich lads in the next county?" Notice the concealed envy conveyed by the word "rich", suggesting that those people down the road have found a hole in the ground full of money. Lucky chaps! But there is more to it than just that: so read on.

What is the purpose for which the club exists? Is the membership closed, to be available to the employees of some firm or institution? In such circumstances the members are only required to provide the running costs of the equipment and form a relatively small group. The problem of making ends meet is not too difficult, if charges are balanced with activity and committees.

But I am really concerned with the open membership club, where the membership is open to all comers. It exists to attract members from the Great British Public who often have a choice of club within 30 miles of their home. Such people look for adventure first of all, but soon take a critical look at the flying they get and the equipment available; the confidence that the instructors generate; that proper care is being taken of their lives.

There is a fundamental difference between clubs in this country in that they are divided between flat site and hill site operation. In the first case, the club receives the majority of its income from selling launches; and in the second case, the club is concerned to sell time in the air. There are one or two who mix it, but I'm taking my example from a flat site operation to show, I trust, a simple home truth.

Take a look at this club:

This club has a large disused field, and has developed to the point where it has two two-seater aircraft and two solo aircraft. The membership is now 80 souls and they pay a subscription of £10 p.a. There is one winch which gives 4,000 launches p.a. and there are 450 hours' flying per year on club aircraft.

My slide-rule now comes into focus. A lightning calculation shows that, as the average circuit-flying time is 5 mins., there are 115 hours' soaring achieved in the year on club aircraft. A further check on the club records shows that they fly on 80 days in the year, and that the two-seaters achieve 2,500 launches p.a. There are 375 air experience flights and 250 check flights p.a. for pupils by instructors. Last year 40 people went solo.

Putting it in table form:

Number of two-seater launches ..		2,500
Less Air Experience flights	375	
Less Check flights	250	625
Total of training flights		1,875

This total shows us that the average time to solo is 1,875:40 pupils, which is 47 circuits to solo stage. Clearly the instructors are quite good. In passing, the average number of circuits that you can ask an honorary instructor to do is 300, so there are six of them, and I would think that they keep at it pretty well.

What about the cash position?:

The winch charges are 5s. per launch and £1 per hour soaring.

Income from two-seaters:		
30 hours soaring at £1 p.h.	£30	
2,500 launches at 5s.	£625	£655
Income from the single-seaters is likewise:		
1,500 launches at 5s.	£375	
85 hours at £1 p.h.	£85	£460

Thus the total income from flying is £1,115, and no doubt everyone is fairly happy and there is some wild talk of buying a Dart or cutting the launch fee to 4s.

The other side of the Account:

With reluctance the Treasurer produces figures to show that neither are possible because the outgoings are as follows:

Depreciation at 5% of first cost each	£50 p.a.
Insurance each at £10 per £100 ..	£100 p.a.
C. of A. cost each	£75 p.a.
Routine maintenance, etc.	£45 p.a.
Total cost of each two-seater	£270 p.a.

The sum for the single-seaters looks

much the same, but they are each valued at £800.

Depreciation at 5% of first cost on £800	£40 p.a.
Insurance each at £10 per £100	£80 p.a.
C. of A. cost each	£50 p.a.
Maintenance (dope, tyres, small repairs)	£30 p.a.
Total cost of each single-seater	£200 p.a.

Launching costs:

The club owns a respectable and reliable winch which was made by two hallowed members, and which the club paid for at a cost of £400. Because it is in constant use, the Treasurer prudently depreciates it at 20 per cent in the fond hope that they can buy another in five years' time.

The winch costs are as follows:

Depreciation at 20% on first cost	£80 p.a.
Diesel fuel at 1s. 3d. per gallon and 2½ launches per gallon	£100 p.a.
Launching wire at 2d. per launch	£33 p.a.
Parachute cost at 4d. per launch	£66 p.a.
Winch maintenance at 1s. 6d. per launch	£200 p.a.
Tractor fuel at 6d. per launch	£100 p.a.
Tractor depreciation on cost £100 at 20%	£20 p.a.
Tractor maintenance at 3d. per launch	£50 p.a.
So the total cost of launching comes to	£549 p.a.

As there are 4,000 launches p.a., the cost of each launch is £649: 4,000 which is 3s. 3d. per launch.

Additional costs:

Unhappily, the payout hasn't stopped. The field is rented, there is the cost of stationery, postage, paper, small additional insurances, telephone rental, electricity to the clubroom, small loss on the annual dinner, that all have to be met from club funds:

Hire of field		£150 p.a.
Additional insurances		£20 p.a.
Annual dinner loss		£15 p.a.
Administration and postage		£50 p.a.
Telephone rental less money collected		£10 p.a.
Electricity		£20 p.a.
		£265 p.a.

The Balance:		
Income from flying	£1,115	
Income from subscriptions	£800	£1,915
Cost of two-seaters	£540	
Cost of single-seaters	£400	
Launching costs	£649	
Additional costs	£265	£1,854
So the surplus looks a bit slim		£51

Frankly, I feel that these people are a bit near the breadline; Darts seem as far away as ever. The Committee are plunged into gloom, and ugly words are heard in the bar. There is talk of a drive for more members, of surcharging all new members £10 on joining, of increasing the launch fee to 7s. 6d., cutting back on maintenance of the equipment. Fortunately, among the newer members there is an intelligent business man who has met this problem with his own company, and he comes up with this solution.

The solution:

First of all he divided up the costs in a different way. There are those fixed costs which the club has to pay to safeguard its field, its equipment and the interests of its members. Then there are those variable costs which are incurred in direct proportion to the usage of the equipment.

Fixed Costs:	
Hire of field	£150
Aircraft Insurances	£360
Extra insurances	£20
C.'s of A.	£250
Depreciation on aircraft	£180
Administration expenses	£115
Total	£1,155

Now this member really had the bit between his teeth, and noticed that the membership averaged 50 launches p.a. over the recent year, and this gave an average income per flight of 9s. 7d. as he added in the subscription proportion, for the very good reason that if you don't give members enough flying they wander off to other sports.

He also said that the only source of income was flying, and that certain costs were incurred each flight; they were the variable costs that totalled more, the more flying you did.

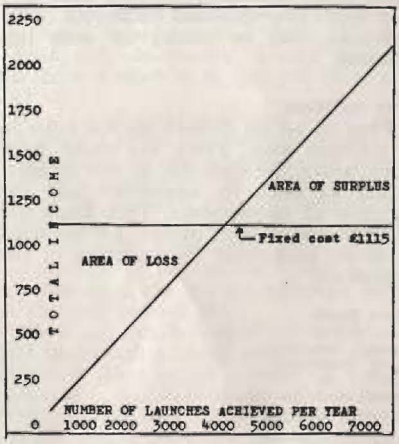
These were listed:—

Variable Costs:	
Diesel fuel	6d.
Launching wire	2d.
Parachute and weak link	4d.
Winch maintenance	1s. 0d.
Tractor fuel	6d.
Tractor maintenance	3d.
Aircraft maintenance	9d.
This gave a total per launch	3s. 6d.

It should be noted that this is not quite

the same cost of 3s. 3d. which the Treasurer gave, as charges have not been apportioned in quite the same way, but as they have been included in the fixed cost table they are considered in the total picture just the same.

Our member then realised that he had a contribution of 6s. 1d to club funds from each launch, that is 9s. 7d. less 3s. 6d., so he then plotted a graph.



Results:

Income from:		Gross Surplus
1,000 launches	£304	−£851
2,000 launches	£608	−£547
3,000 launches	£912	−£243
4,000 launches	£1,216	+£51
5,000 launches	£1,520	+£365
6,000 launches	£1,824	+£669
7,000 launches	£2,128	+£973

The club committee were sceptical but agreed to give it a try, and set a target of 6,000 launches, which they reached. Membership grew and reached 145. The bank manager was sympathetic and let them have a small overdraft. That, together with a 50 per cent grant from the Ministry, produced the Dart. The fellows in the next county were very envious and asked who their benefactor was.

What happened to the member who had shown the way? He was taken over by a large combine and moved from the area to Head Office. He hasn't time for gliding now. Still, he had made his magic.

LIGHTNING STRIKE ON DART METAL/WOOD BONDED SPAR

THE following extract from a report on the lightning strike suffered by my Dart, as recorded in the last issues of SAILPLANE & GLIDING, is of interest, as it seems to indicate that this type of spar may reduce the risk of catastrophic damage from this cause; and consequently that an all-metal aircraft may further reduce this risk.

"Whilst visual inspection carried out by Slingsby's revealed no extensive damage, they naturally gave consideration to possible deterioration of the spar and metal/timber bonding. Accordingly they requested a more critical examination to be carried out and with this in mind they sent six samples to various test laboratories for thorough examination and analysis. Reports from the separate laboratories have now been received and their analysis shows that no deterioration has been caused to the wood, metal and metal/timber bonding other than that which was visually observed by them during their own inspection. It is highly gratifying to note the action taken by Slingsby Sailplanes in having a rigorous examination carried out. The satisfactory result of these various test examinations appears to confirm that the metal boom has taken most of the heat and conducted it away rapidly."

Since all-metal powered aircraft are quite frequently struck with minimal damage, I am inclined to think that the risk on all-metal gliders (perhaps fitted with wing-tip wicks) will become acceptable again, but this is purely a personal view. I am certainly not recommending anyone to try! Whether or not the aircraft and its pilot are physically damaged, the flash and the bang associated with a strike are alarming enough to carry the possibility of affecting the pilot's judgment and capacity to carry on in difficult conditions, without loss of control.

P. A. WILLS.

FRENCH MOUNTAIN COMPETITION

By HUMPHRY DIMOCK

HAVING seen pictures and heard so much about gliding amongst mountains, and having been a little disappointed at not gliding amongst the Swiss Alps two years ago when in competitions there, when the invitation came via the BGA to fly in the French Alps competitions I applied at once and was accepted.

Several pages could be filled with details of correspondence and preparation, but there is no room here for that, so I must just describe the flying and a few incidents. My wife and a young, strong friend, Jeff, came as crew. None of us spoke more than schoolboy French, but somehow we managed to speak to all the other nationalities, Austrian, Belgian, German and Italian. There were 24 gliders entered.

The competitions were from 17th to 25th June from a fairly new aerodrome called Vinon sur Verdon, which is on the alluvial plain at the confluence of the Verdon with the Durance, 850 ft. a.s.l. The aerodrome is stony and dusty; very little grows on it except sweet-smelling wild thyme. Every day could have been a competition day, but none was set on the first or last days.

Unfortunately the complete results were not published before we left, and although the organisers promised to send them, they have not arrived yet. I will just have to run through my knee-pad notes. Part of the preparation was to read that which Wally Wallington wrote in his book "Meteorology for Glider Pilots" about anabatic winds in the Swiss Alps. He quotes that for a 42° slope the best anabatic wind is found between 25 yards-35 yards perpendicularly from the slope. This puts the wing-tip 100 ft. from the slope. The local pilots explained to me that for the vertical and overhanging slopes a 15-metre span was better than an 18-metre, as one could get nearer to the rocks! Then one flies with one eye looking forward and the other watching the wing shadow, which should be 6 ft. below the wing for safety! There were many perpendicular and overhanging slopes. Take-off was by aeroplane to 2,400 ft. above site. A very stout nylon rope was used without any weak link. I made a weak link up for use by myself, and used it. Thermals above the aerodrome mostly go to 6,000 ft. above ground.

The first day was a warm-up and the take-off was delayed too long. A short task of 28 miles to Le Pont in the east and return. I made the 28 miles in 21 minutes, and after photographing the turning point, I spotted a group of gliders much lower than myself, 4 miles beyond the turning point on the face of a mountain rising to 6,000 ft. a.s.l. From up there I hoped to return in a straight glide. The anabatic wind which I had expected on that mountain turned out to be a katabatic wind! I then saw some of the gliders landing in the gorge below, so I hastily flew towards the last bit of sunshine on some lower mountains. This sunshine disappeared before I reached it, but I gained another 1,000 ft. in a dying thermal. There were no grass fields on which to land, just crops of various sorts and many fields of lavender bushes. My crop was lentils, only 15 inches high. The retrieve could fill a page of descriptions; it was awful.

The second day was a simple task, up a mountain valley 36 miles and return, and after landing to do it again if one wished to do so.

I did the 72 miles in exactly 72 minutes, using cloud thermals, and felt pleased with myself. The clouds had disappeared and my radio had failed, so I called it a day, but was disappointed to learn that I was only 5th. I could have done much better if I had done my sliderule homework beforehand, as the arithmetic for the final glide had to be done in the cockpit. I arrived with 1,000 ft. in hand.

I should explain here the mild difficulty of correlating a map of 1/200,000 in kilometres by measuring in inches with a ruler and converting to a ¼-inch map (1/250,000) for comparison, and then to nautical miles to work with knots on the J.W. calculator and the A.S.I. Then the heights on the map in metres have to be converted to feet. I

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long for the day when everything besides currency is decimalised, including the clock. Just think how simple it would be to have a 10-hour day with 100 minutes to the hour and 100 seconds to the minute!

The third day was out-and-return across the mountains, 200 km. total. When 30 km. from the turning point storms had gathered in my path, and large drops of rain fell. At La Jarvie I selected a field and lowered my wheel and was about to open the brakes when the Crossfell audio screamed and I was able to wind up to cloudbase at 8,000 ft. I had not been able to get the rules fully interpreted beforehand, and hoped that if I photographed La Jarvie, 5,000 ft. a.s.l. I would get some score, as if I had landed there. From here I could see Digne and beyond that the sunshine about 15 miles away, so after taking the photograph I returned to Vinon, having watched another glider land in the field previously selected (the only one available!). I was told that this was a mountain flying competition and that I should have gone over the next ridge under the storms to the turning point. My score was a duck. However, I was still 10th out of 24.

The fourth day was a 152-km. triangle via Le Pont and La Jarvie. It was gorgeous weather and all the anabatics worked. Navigation was no problem as all the objects are so big—mountains, lakes and valleys, and I now knew both turning points. My time was not wonderful, 2 hours 11 minutes, and the leader did it in 1 hour 50 minutes. The scenery is so beautiful, and I took some coloured photos. On one 8,000-ft. ridge I saw two pairs of skis abandoned. Why? There was no ski slope that I could see within gliding distance, let alone walking!

The fifth day was very similar to the fourth, over much the same course. This was to have been my day, last off and first back, time 2 hours 15 minutes, but somebody started later and beat me by 9 minutes. Patsy was very excited on the radio when I gave my E.T.A. before anybody else. We used 129.9 mc./s. and had the air to ourselves; nobody else in that region used our frequency. It was on this day when I felt so happy on the first leg on seeing three glider-marked

thermals ahead that I passed a two-seater glider in the competition at 100 knots and caused the two pilots to wonder what was wrong with their machine when they saw me disappear ahead of them and upwards by comparison! They told me afterwards that they examined everything and did a complete cockpit check, even opening and closing brakes!

On the sixth day good thermals were not expected and the task was to do a 38-mile course four times. There was a 30-knot wind blowing towards the turning point! I landed at St. Auban aerodrome near the turning point with five others, one of whom was J. P. Weiss, the owner of a Cessna as well as an Austria glider. He hitched a lift back in my car, and we came across a nursery orchard of pear trees where nine gliders had landed. The farmer was reputed to have said (in French, of course), "Shades of Arnhem. I thought the war had come back." As I had flown Weiss's Cessna before, he asked me to fly him back and tow him home, which I did.

The seventh and last day was another triangle, nearly 200 miles. Nobody made it. I landed 5,000 ft. a.s.l. near Le Vernet, where in a new chalet I was entertained with real Scotch whisky on the rocks. I chose the only grass field which I had seen at any time in the Alps, and consider that I was very lucky to have had only one landing in a cultivated field. The long journey back was round first one corner at 20 m.p.h. only to find another 20 m.p.h. corner ahead until we reached the valley of the Durance.

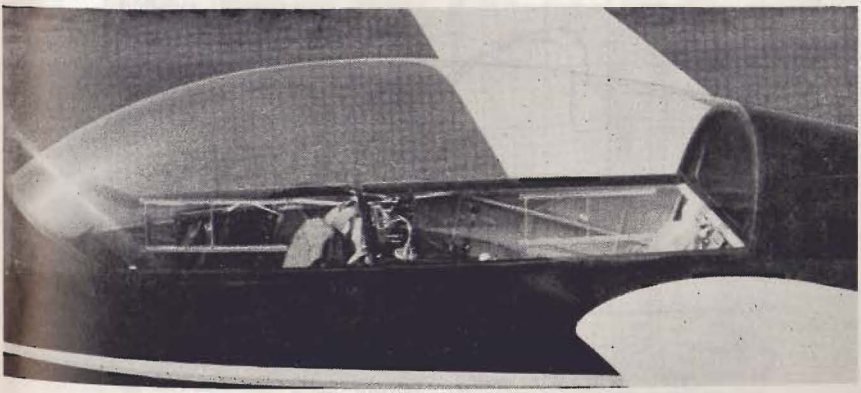
At Vinon the usual daily temperature was 38° C. (100° F.) in the shade, and we resided in tents near a cold water pump, which was the communal centre of the encampment.

Although the cost per hour flying would be rather high (the ferry fare alone was nearly £100), of one thing I am very sure: if I can go back next year I will most certainly do so.

THE AS-K 13

By JOHN JEFFRIES

FOLLOWING on from the enormously successful K 7 design of Rudolph Kaiser, Alexander Schleicher has now produced another two-seater, also designed by Rudolph Kaiser, the AS-K 13. In the new design, the firm have set out to rectify the shortcomings which years of constant use and thousands of hours' flying in the K 7 have shown to be necessary to bring it in line with up-to-date conceptions of an "all through"



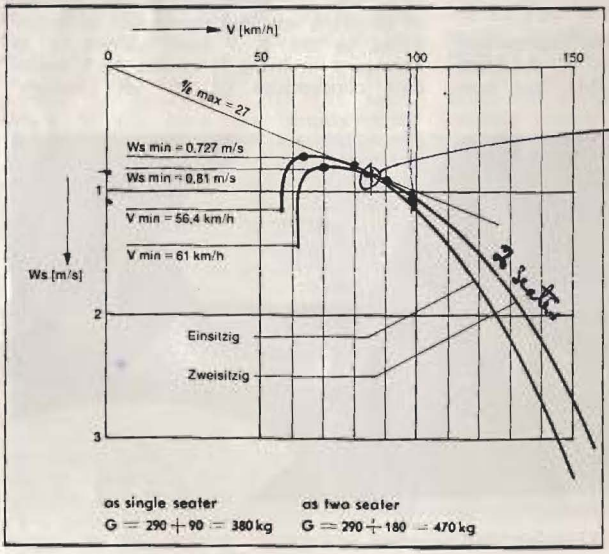
Showing the one-piece canopy.

training two-seater. At the same time, many of the basic constructional principles of the K 7 design, which in practice proved so successful, have been retained.

On initial inspection of the K 13 with its steel-tube fuselage and conventional wooden wings and tailplane, one is struck by the extreme simplicity and obvious ruggedness of the machine as a whole. Indeed, a D.I. reveals that practically every single piece of the fuselage structure and the control circuits therein can be seen at a glance without removing any component or opening any inspection ports whatsoever. With the exception of the trimmer and rudder, all other control runs are straight through push-pull rod operated with nylon bearings at the control junctions, and are virtually adjustment and maintenance free. Although the fabric-covered fuselage would appear at first sight to be rather vulnerable, practical usage has shown this to be otherwise, even in day-to-day club use.

On stepping into the K 13, the immediate impression is of the spacious proportions of both cockpits and the really remarkable all-round visibility that has been achieved by the swept-forward shoulder-wing layout and the large, almost completely optically flawless one-piece canopy. It is even possible to see the outboard foot or so of the tailplane when strapped into the rear seat, and at least part of all other control surfaces, including the trimmer but excepting the rudder. A couple of inches more leg room in the front cockpit would be desirable for really tall pilots, but in spite of the fact that the only control adjustment is on the rudder pedals (front cockpit only), the controls in both cockpits can be operated perfectly satisfactorily by pilots of widely varying shapes and sizes.

In flight the impressions are that you are flying a single-seater. The stick forces fore and aft are light, even fully out of trim, and the rudder is both light and effective. Lateral stick loads are slightly higher than those on the K 7, but the rate of roll is equally fast. At low speed the K 13 is very docile and gives plenty of stall warning in the form of gentle buffeting. Although reluctant to spin from sloppy slow turns, fully-developed spins can be executed for demonstration and practice purposes. Throughout the whole speed range of the glider, both pilots can hear each other perfectly well at normal conversational level, even with the clear vision panels open. The



Polar curves of the AS-K 13 for one-up and two-up.

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visibility from the back seat is such that after a short while you forget that you are sitting in tandem and the vision is perfectly adequate in crowded hill or thermal conditions.

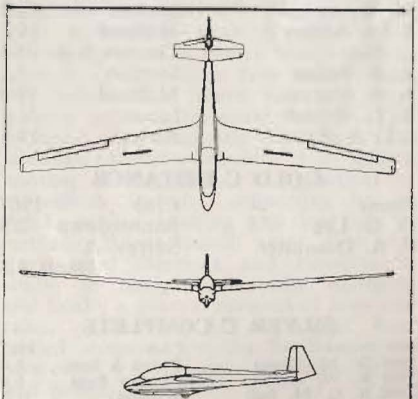
In spite of the relatively high wing loading, the K 13 will circle comfortably in thermals at very moderate speeds and high angles of bank, and seems quite capable of holding its own with gliders of superior theoretical performance. In the glider you get the rare feeling that the manufacturers' published polars are pessimistic, and although the K 13 is basically intended as a training glider, its overall performance is certainly quite adequate for all but the upper echelons of competitive flying.

Fitted with a shock-absorbed landing gear and wheel brake as standard, the K 13 is well suited to the rather severe treatment to which it is likely to be subjected at some of the physically smaller and rougher sites in this country. Ground handling is a pleasure with the glider almost balanced on the wheel when empty, although the rather high weight on the front skid when loaded partly detracts from this. Launches on the near C. of G. hook coupled with the relatively low structural weight of the machine guarantees high winch launches even at low airspeeds, whilst the nose hook makes "hands off" aerotows possible.

In its primary rôle as an instructional machine, the K 13's docility, soaring ability, particularly in poor conditions, its good performance, even when flown badly, and its ability to withstand very rough treatment on take-offs and landings, should earn it even greater popularity than its predecessor.

Technical Data

Span	52.50 ft.
Length	26.80 ft.
Wing area	188.00 sq. ft.
Aspect ratio	1 : 14.6
Empty weight	640.00 lbs.
Payload	420.00 lbs.
All-up weight	1060.00 lbs.
Wing loading: solo	4.45 lbs./sq. ft.
Wing loading: two-up	5.50 lbs./sq. ft.
Minimum speed: solo	35 m.p.h.
Minimum speed: two-up	38 m.p.h.
Maximum speed	125 m.p.h.
Winch launch	62 m.p.h.
Aerotow	87 m.p.h.
Minimum sink: solo	2.30 ft./sec.
Minimum sink: two-up	2.62 ft./sec.
Glide ratio	27 : 1



AS-K 13

GLIDING CERTIFICATES

DIAMOND GAIN OF HEIGHT

No.	Name	Club	1967
3/61	C. C. Ross	Scottish	18.3
3/62	I. L. A. Eyers	Airways	18.3
3/63	E. B. Jerzycki	Polish AFA	11.3

DIAMOND GOAL

No.	Name	Club	1967
2/224	W. Stachowiak	Polish AFA	1.7.66
2/225	D. G. Lee	Bannerdown	2.5
2/226	D. S. Innes	Moonrakers	29.5
2/227	S. N. Hart	Four Coun.	29.5
2/228	J. J. Ellis	Airways	9.5
2/229	R. A. Foot	Heron	9.6
2/230	D. S. Wiggles-worth	Cambridge	21.6
2/231	T. W. E. Corbett	Midland	21.6

GOLD C COMPLETE

No.	Name	Club	1967
174	S. N. Hart	Four Coun.	29.5
175	J. J. Ellis	Airways	9.5
176	J. Cardiff	London	2.6
177	D. S. Wiggles-worth	Cambridge	21.6
178	T. W. E. Corbett	Midland	21.6
179	E. B. Jerzycki	Polish AFA	11.3

GOLD C GAIN OF HEIGHT

Name	Club	1967
W. Stachowiak	Polish AFA	1.7.66
M. Westwood	Bristol	23.3
J. M. Anstey	Midland	18.3
L. Beer	Thames Val.	21.3
A. R. Milne	Scottish	2.1
A. R. Caveen	Midland	19.3
R. D. Willett	Leics.	11.6
I. L. A. Eyers	Airways	18.3

GOLD C DISTANCE

Name	Club	1967
D. G. Lee	Bannerdown	2.5
P. A. Desoutter	Surrey & Hants	3.5

SILVER C COMPLETE

No.	Name	Club	1967
1944	D. M. Dixon	Devon & Som.	8.6
1981	R. W. Asplin	Handley Page	6.6
1982	R. G. M. Bull	Midland	31.5
1983	E. J. Pratt	Nimbus	4.6
1984	C. Donaldson	Four Counties	29.5
1985	D. H. Ford	Swindon	9.5
1986	A. B. Covington	Coventry	22.4
1987	H. Hill	Yorkshire	30.5
1988	R. J. Maclagan	Eagle	21.5
1989	P. O. E. Trubshaw	Bath & Wilts	31.5
1990	D. Waring	Coventry	1.6
1991	P. Grenet	Airways	9.5
1992	K. W. Haynes	Coventry	20.5
1993	J. E. Parkes	Coventry	29.5
1994	E. L. Conway	Surrey & Hants	18.4
1995	G. M. Hill	Ulster & Shorts	9.6
1996	R. M. Wilson	Surrey & Hants	9.6
1997	G. F. Rock	616 G.S.	9.6
1998	P. E. L. Whittle	Leicestershire	6.6
1999	G. J. R. Costello	Bicester	10.6
2000	R. Partridge (Mrs.)	Midland	31.5
2001	B. Hopkins	Nakuru	23.4
2002	A. J. Marshall	Dorset	9.6
2003	G. B. Castle	London	30.4
2004	A. M. Tomalin	Fenland	23.4
2005	B. Weare	Devon & Som.	31.5
2006	N. J. Paine	Thames Valley	5.4
2007	J. G. Heath	613 G.S.	13.6
2008	S. F. Kingswood	London	3.5
2009	A. E. Stenhouse	Airways	1.6
2010	G. F. Fuller	618 G.S.	18.6
2011	S. M. Green	East Midland	3.5
2012	R. H. Wright	Bath & Wilts	2.6
2013	D. E. Cadisch	London	8.7
2014	T. D. Neilson	Swindon	9.7
2015	M. J. A. Mells	Surrey & Hants	11.7
2016	J. A. Little	Cheviots	21.6
2017	J. Williams	Coventry	30.6
2018	R. D. Skitt	Avro	7.6
2019	R. E. Miers	Midland	9.6
2020	R. Wishart	Bicester	9.7
2021	T. C. Woodhouse	Coventry	11.6
2022	R. G. Pitman	Kent	9.7
2023	R. E. Styles	East Midland	28.6
2024	J. Isaac	Yorkshire	2.7
2025	P. H. Guest	London	4.7
2026	R. L. Clarkson	Airways	10.7
2027	R. L. Harvey	Oxford	9.7
2028	J. W. Read	Handley Page	9.7
2029	D. M. J. Wood	Thames Valley	22.7
2030	D. L. G. Watkins	616 G.S.	13.6
2031	J. W. Wynch	643 G.S.	9.7
2032	C. J. N. Waller	Four Counties	12.4
2033	D. R. Carson	Midland	8.7
2034	A. J. Stone	Cambridge Univ.	21.6
2035	D. T. Bailey	Leicestershire	11.7
2036	M. A. Cole	Heron	22.7

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THE WILLS GLIDER PILOT COMPETITION

By ANN WELCH

ON 30th July two pilots, who in March were just solo, were pleased to be able to each hand a brand-new Swallow glider to their club C.F.I. The two were Michael Barker, of the Derby and Lancs. G.C. (C.F.I., Eric Boyle), who won the Northern competition, and Noel Ellis, of the Cornish G.C. (C.F.I., George Collins), who won the Southern. Tom Snoddy (Ulster and Shorts), Peter Luckett (Kent), Peter Oglesby (Ouse) and David West (Imperial College) won barographs for their clubs, and all these pilots won free continuation flying for themselves.

The Finals at Lasham were the culmination of a competition sponsored by W. D. & H. O. Wills to find the two best-trained club pilots in Britain (North and South). 55 clubs entered 235 pilots who, at the time of entry, had done at least one solo flight, but not more than 10 hours' solo flying. They had to be under 40, but not be aeroplane pilots.

On entry, each candidate received a copy of "The Solo Glider Pilot", a training book produced by Wills, and their C.F.I.'s received the first training syllabus. This contained a planned programme aimed at accurate flying, good airmanship and competence at dealing with flight emergencies; on the practical side, good ground handling had to be learnt, as well as winch or tow car driving, making up a launch cable, and doping on a fabric patch. All to be covered in eight weeks.

At the end of this period C.F.I.'s received flight, practical and written test papers through which they put their own candidates and selected the best two if a Full Member club, and one if an Associate club. This produced 61 semi-finalists from 47 clubs.

These C.F.I.'s were then sent the second training syllabus for completion in a further eight weeks. The flying requirements called for precision in general flying, accurate circling, steep approaches over obstacles and controlled slow flying; effective map reading in the air was also required. On the practical side, candidates were expected to learn how to de-rig a glider, carry out Daily Inspections on gliders and winches, splice rope, interpret synoptic charts, recognise clouds and use a compass.

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Hants.

The semi-finals were held on Saturday, 1st July, at 10 clubs which had given up their own flying for the day to become test centres. The examiners were 10 members of the B.G.A. Instructors' Panel, with assistants that they had nominated. All the candidates and the 20 examiners arrived on time at 0900 hours, some of them having travelled over 100 miles to get there. The weather was kind —just—and by working until midnight the examiners got their six candidates through flying, practical and written tests, and had marked them.

So now there were 10. The pilots placed top at each centre would go forward to the Finals in four weeks' time, but before that there was the third training syllabus to work through. This included crosswind and simulated field landings, accurate circling and joining another circling glider. The practical requirements included connecting up an A.S.I., trailer backing and learning to run an efficient launch point. For met. there were thermals and cumulus to study; in navigation, vector triangles; and finally a general revision of laws and rules, particularly in respect of controlled airspace. But the Swallows were now close, a five to one chance for North and South.

The Finals lasted three days, to give maximum weather insurance, and by

good fortune the day arranged for the flying was the only good one. Candidates flew with two independent examiners, John Everitt, the National Coach, and Sqn. Ldr. Douglas Bridson, R.A.F., in the Capstan and Blanik respectively. Both flights were by aero-tow, and the flying tests accounted for 50 per cent of the total marks. The written test, 15 per cent of the total, was also done on this day, and was much more difficult than that of the Semi-finals.

Saturday was devoted to the five practical tests. In the airworthiness section (Ray Stafford Allen) there was a "faulty" T-49 to be inspected, and an Ottfur release to assemble (no one did!). Trailers (Jim Wade): there was a car and trailer to be prepared for the road at night, and then reversed round some awkward corners, and a tow rope to be spliced up. Then there was the equipment section (Harold Drew) with a parachute to inspect and adjust, a barograph to be made ready, and a chart gain-of-height to be measured, a turn-and-slip indicator with a pile of batteries and a switch to be assembled, an A.S.I. and variometer to be connected up, and finally items such as spruce and high-tensile steel bolts to be identified. In navigation (L. Welch) there were calculations to be worked out, and nameless features on large-scale map cut-outs to be located on the half million air map. In met. (John Brenner) there were weather maps to be drawn, explanations of thermal development to be written and clouds to be identified. The practical tests total accounted for 25 per cent of all marks.

At the end of this day it was obvious that the gliding movement contained some really excellent up-and-coming pilots of immense stamina, and that having survived the marathon of tests so far, each of them was deserving of a Swallow.

On the Sunday morning the candidates had a short interview with the final judging panel—Air Chief Marshal Sir Theodore MacEvoy, Vice-President of the B.G.A., and the Chairmen of the Technical and Flying Committees, Frank Irving and Roger Barrett. Then it was over, except for the magnificent lunch given by Wills to the candidates, their C.F.I.'s and the Finals and Semi-finals examiners and their assistants, and, of course, the announcement of the winners.

There is no doubt that the club which took away the prizes got a just reward. The Cornish Club, as an example, worked as a unit to give their candidates the best chance, sharing out the training



Six semi-finalists at work at the Bristol Club site, under the eye of the invigilator. Photo : Roy Procter.

between instructors and members so as to cover it all really fully. Originally the club had put in four entries, but two of them, Noel Ellis and John Daniel, had tied at each stage, so they finally tossed and Ellis went forward to the Finals; but John Daniel came along, too, to encourage him, and when the club won the Swallow, it was the other two candidates who drove overnight to collect it. Truly a fine club effort. When I saw Noel Ellis at his own club a week later, far from resting on his success, he was putting in a hard week-end's work erecting the new club hangar.

It is only left to say now that the pilot training, and the work of testing, examining and checking, was done almost entirely by volunteers giving up their own time. They, and W. D. & H. O. Wills, who sponsored the competition and provided prizes of such usefulness and value to the clubs, are to be sincerely thanked.

Nort'ern Region		A 500	B. 150	C 50	D 50	E 50	F 50	G 50	H 100	*Total* 1000
1. M. Barker	Derby & Lancs.	258	96	21	37	25	46	37½	78	€08½
2. T. Snoddy	Ulster & Shorts	286	98	22	31	22	44	29	65	597
3. P. Oglesby	Ouse	274	98½	21	29	27	45	28½	63	586
4. T. Gore	Worcs.	298	84	19	29	10	45	27½	70	582½
5. R. Brown	Lincs.	282	92	24	37	16	31	27	53	562
Southern Region										
1. N. Ellis	Cornish	336	74	17	46	16	45	18½	62	614
2. P. Luckett	Kent	253	96	27	35	34	45	34½	63	587½
3. D. West	Imperial Col.	2.3	108	10	26	33	45	30	70	585
4. D. Wyllie	Surrey & Hants.	251	107	21	33	29	38	28	75	582
5. T. Webster	Dorset	237	75½	23	42	14	38	18½	€3	511

Column A = Flying; B = Written; C = Airworthiness; D = Trailers; E = Navigation; F = Equipment; G = Meterology; H = Interview.

RAF GERMANY REGIONALS 8th - 23rd July

By PETE DAWSON

THIS year's contest was held at the Army Air Corps airfield at Detmold, which has a reputation akin to Manchester's and is sometimes known as "Wetmold". However, apart from two rainy days, the weather was quite the opposite, and on a possible 13 days, six contest days were achieved.

There were to have been 19 entries but, owing to the "extingencies of the Service", etc., only the minimum of 15 contestants were available to start contest flying on the Monday. This number was reduced to 14 when one of the Ka-6s pranged during its first contest launch!

11th July.—Free Distance. Weather: weak thermals, light variable wind, strong inversion at 2,000 ft.

The Swallows had difficulty in staying airborne and none were able to get away. Jerry Wheeler managed to fly 180 km.—there is always one who goes far!

The next three days were of blazing sunshine and little or no thermal activity; the 15th was a day of pouring rain.

16th July.—Cat's Cradle. Weather: 10-knot westerly, weak thermals to 2,000-2,500 ft., large areas of strato-cu.

Unfortunately the forecast was right and the maximum distance flown was 59 km. by Alan Somerville. Jerry Wheeler was not far behind and his 115 per cent handicap won him the day.

17th July. — 170-km. Out-and-Return. Weather: light N.E., moderate thermals to 4,000 ft.

Don Austin and Alan Somerville finished 42 seconds apart! Don winning with 37.8 km./h. and Alan 37.7 km./h.

20th July.—114-km. Triangle. Weather: 5-10-knot westerly, with a risk of thunderstorms in the afternoon and evening.



Jeremy Wheeler in the winning Ka-7

Only Don Austin completed this task, but Jerry Wheeler almost made it—only 11 km. short.

21st July.—195-km. Triangle. Weather: inversion at 2,000 ft., moderate thermals and a 5-10-knot westerly again.

A large sheet of stratus on the final leg prevented any aircraft from completing the task. Jerry Wheeler won again on handicap.

22nd July.—210-km. Triangle. Weather: forecast wind 10 knots W.S.W. but actual 10 knots E.N.E., good thermals to 4,000 ft.

Three pilots completed this task, with Alan Somerville making the fastest time at 37.9 km./h., Danny Kay at 37.8 and Jerry Wheeler at 34.6 km./h. Once again Jerry's 115 per cent won him the day.

Thanks go to the Army for the use of Detmold airfield; perhaps it is fitting that two of their representatives take the top places.

FINAL RESULTS

Pilot	*H'cap %*	*Sailplane*	1	2	3	4	5	6	*Total Points*
1. J. H. Wheeler	115	Ka-7	197	197	834	446	435	435	2544
2. A. Somerville	100	Ka-6	10	190	999	311	398	392	2300
3. D. C. Austin	100	Austria SH	19	10	1000	563	270	283	2145
4. B. Kay	100	Ka-6	9	131	687	383	268	391	1869
5. D. A. Bowley	120	Swallow	0	0	487	0	66	71	644
6. M. J. Baker	115	Ka-7	0	0	374	0	54	62	490
7. A. H. Whiffen	105	Oly 463	92	113	0	184	13	62	464
8. I. L. Smith	110	Skylark 2	11	49	259	0	79	31	429
9. R. J. Maclagan	120	Swallow	5	23	282	0	0	50	360
10. R. A. Barrett	120	Swallow	0	0	238	0	0	0	238
11. R. O. Parker	110	Skylark 2	0	0	70	0	13	0	83
12. E. J. Pratt	120	Swallow	—	11	0	0	0	70	82
13. J. McIntyre	120	Swallow	0	0	0	0	50	0	50
14. = C. C. Foot	100	Ka-6	0	—	—	—	—	—	0
14. = P. J. Kelly	120	Swallow	0	—	—	0	0	0	0

PRODUCT REVIEW

The Weller Temperature Controlled Soldering Iron

"There is always work, and tools to work withal, for those who will".
(James Russell Lowell)

MUCH of the fettling of gliders is concerned with connecting up electric devices in newer and sometimes better ways, not to mention hurried repairs after one's well-meaning friends have helped de-rig by pulling on all accessible wires.

Weller Electric, Ltd., have come to our rescue by manufacturing a 12-volt Temperature Controlled Iron. Not that 12 volt or temperature control are separately new, but the Weller TCP-1 Soldering Pencil combines both of these features with a simple and potentially very reliable novelty.

The 12-volt 3-amp element is switched

on by a magnet inside the shank, attracting itself to a nickel iron disc on the base of the bit. When the bit is heated to the desired temperature, this nickel iron disc loses its permeability and the magnet lets it go, so switching off the current. When the bit cools, it is once more attracted, and current switched on. By selecting suitable alloys of nickel and iron for the disc, the Curie point as it is called can be chosen as 260°, 315°, 370° or 430°, and various different bit shapes are available. So by just changing bits only, one can alter from a tiny cone tip suitable for printed circuit work at 260°C to a hefty chisel-shaped blade for metal work at 430°C (suitable for the special aluminium solder now available). The bits are iron plated for long life, and should not be filed, a wipe on a wet cleaning sponge being sufficient. So far the one supplied for evaluation has responded well to this treatment.

Why should it be particularly suitable for the gliding fraternity? The 12-volt feature (24-, 42- and 50-volt models are also made) means that a car or glider battery can supply it, and one isn't dependent on the mains, though a transformer will also allow it to be used at home if required, where again the low voltage is good from the safety aspect. The temperature control allows choice of operating temperature, which will be maintained even in a draught, without the danger of overheat if used in confined spaces. Incidentally, it enables the iron to heat up rapidly from cold. The iron comes with a length of silicon rubber-covered 3-core cable, and one can rest the hot iron on its own cable without the spectacular effect usually achieved by performing this manoeuvre on a P.V.C.-covered cable.

The iron alone weighs 1¾ ozs. and is well balanced, so relatively inaccessible joints can be made without too much exasperation. I have found it particularly easy to use for delicate instrument and integrated circuit work, and can recommend it to anyone who does this type of work on his glider or professionally.

R. BRETT-KNOWLES.
B.G.A. Radio Co-ordinator.

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GEOLOGY AND GLIDING

By MARTIN SIMONS

IN a rather casual fashion glider pilots have long been aware that the nature of the rock underlying the country over which they fly has some influence on thermals. Gliding clubs, in their advertising, speak of "Good thermals from the quick-drying chalk soil", and certain areas such as the Vale of Pewsey and the Fens are occasionally said to be rather unproductive of lift. The major textbooks mention soils and sometimes strata, but it is many years since anyone has really looked into this matter carefully.

In "Gliding and Advanced Soaring", published in 1947, a chapter on "Some Geological Influences" by A. C. Douglas (Ann Welch) appeared, and with it a map showing that many pre-war cross-country flights had taken place along outcrops of sandy or chalky rocks.

It is possible that the choice of Lasham as a site for gliding was influenced by this map, for from the neighbourhood of Salisbury Plain and the Alton Plateau the chalk outcrops stretch away to the north-east, the east, the south-east and the south-west, while a short hop away the Cotswold limestone escarpment runs north and then north-eastwards far into Yorkshire. How far the success of Lasham and other chalk-sited clubs like Dunstable has been due to their sub-stratum remains a matter for conjecture. Proximity to London, encouraging large membership and hence a larger number of cross-country attempts, would statistically tend to swamp such other effects.

A number of flights this summer, however, suggest to the present writer that it is time we did look more closely at the ground. On one occasion along the leg from Leicester East to Bury St. Edmunds, the Fens, lying across the route, were completely clear of cloud and compelled a diversion south of track which finished back at Dunstable again. Over the Downs, thermals went on boiling up to 5,000 ft. until after 7 p.m. Another time, after a long scrape across the clay vale of Oxford, with feeble and broken thermals to less than 3,000 ft., the Cotswolds produced six knots regularly to 5,000 ft. in cloud. This flight, however, ended later in the London clay around Newbury, although there were still thermals over the chalk. It is often noticeable that, early in the day, clouds form first over chalk or limestone and only later appear over clay lands.

Before rushing out to buy the latest editions of the geological map, however, a note of caution must be sounded. The sun's rays cannot penetrate very far into the ground, and even the farmer's plough does not do much more than furrow the top few inches of soil. It is, if anything, the top few inches that matter to us, and the ordinary geological map, unfortunately, can be very misleading because geologists are as a rule much more interested in the deeper-lying material than in the top. They often, in fact, mark "Chalk" on their maps when in truth there is no chalk within twenty or more feet of the surface.

The accompanying map, taken from the Geographical Journal of March, 1963, shows that most of Britain is mantled with layers of what the geologist calls "drift"! For example, where the simplified map in the 1947 gliding book shows much of East Anglia as "Chalk", the drift map indicates that this chalk is buried and, in most places, buried very deep, under something else. The drift in this large area is actually, like most of the rest, mixed clayey material laid down not so long ago, geologically speaking, by the major ice sheets that covered Britain north of Dunstable. However, the East Anglian Heights show up clear of drift, so they might perhaps form a good thermic route to The Wash between the silt and clay of the Fens on one side and the so-called "Boulder Clay" of East Anglia on the other. Get across The Wash, and follow the chalk to Flamborough.

It so happens that most of the higher land in Southern and Eastern England is either chalk or limestone country, largely free from drift, as the white patches on the map show. Perhaps, therefore, what we are really doing is getting thermals off higher ground which would, perhaps, occur equally well if the

hills were made of sandstone or granite.

It would be interesting to know if the high granite and sandstone regions of the South-West Peninsula yield better thermals than, for example, the drift-covered and ill-drained Somerset Levels and Vale of Blackmore.

In the West Midlands, the drift pattern is very complex, but the Vale of York and the Lancashire and Cheshire plains show up as mainly drift, and that usually means clay of one sort or another. The Pennines, with their Millstone Grits, ancient limestones and often shaley valleys, might be better, in most conditions, than the flatter lands on either side. But then, on the tops, there are often blanket bogs of peat—surely not good thermal generators?

The Cotswolds and the "Jurassic" series of rocks are largely free from drift. This outcrop begins in Dorset and sweeps via Bath and Nympsfield through Husbands Bosworth and north to Sutton Bank and Carlton Moor. However, while the Cotswold limestone probably resembles chalk in its thermic properties, the outcrop north and east of Moreton-in-the-Marsh changes radically. The geologists persist, annoyingly, in calling it "oolitic limestone", but, as members of the Coventry Club know, it is actually oolitic ironstone, a reddish, rather friable sandy material. Does one find the thermals weaker north of Moreton, or is there no difference?

North of Market Weighton in Yorkshire the Jurassic changes its character again to form the high limestone and sandstone escarpments of the North York Moors. Are the thermals over Slingsby's, in the clay vale of Pickering, weaker than over the chalk of the Wolds or the Corallian limestone of Whitestone cliff and Hambleton Hills?

Northern Ireland, on the drift map, looks poor thermal country, for although there is basalt below, there is much boulder clay above. Scotland, it seems, is in a sad plight, for everything is either 4,000 ft. above sea level or it is drift covered. But then, they say, thermals are obsolete up there.

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"HUIT JOURS D'ANGERS"

Countries and number of pilots participating this year included: Belgium 11, Denmark 1, France 26, Germany 9, Great Britain 3, Poland 1, Switzerland 4.

"STOP."

"Ist good!"

"Nein. There. Look."

"Oui. L'aile touche la bas."

Closely packing gliders into a hangar in five different languages with seven different nations in a highly competitive competition is enough to strain any international relations. Especially on one evening when the last glider in was half de-rigged then rigged again, locking all the other gliders into the hangar. Somehow no gliders were damaged, but many new friends were made.

Most days the gliders were back in the hangar by five o'clock, however thermic it happened to be. Then the pilots and crews would relax with a cold drink and discuss the day's flying. It was also the time to discuss new gliders; Cirrus, Phoebus 17, HP-14, and who would be flying them in Poland next year. The Belgians, whose Nationals had been a wash-out, were using d'Angers to choose their team.

Briefing, between 0900 and 1000, was held in a small hangar each morning, and was comprehensively given by the met. man, who spoke French and English. When he had finished, someone would translate it into German.

The tasks were normally of the closed circuit variety, using photographic evidence. Barographs had to be signed by the C.F.I. or President (no cloud-flying was permitted) and these were collected immediately after the pilot landed, and if a pilot had broken the law, disqualification could follow.

Take-off was sometimes immediately after briefing, and for this reason all gliders had to be on the grid before briefing. Nine Commadore and a Storch carried out the towing, and the moment Mons. Hersan waved his red flag everything sprang to life — which suddenly had become rather serious, especially if one's pilot had left something important, like his maps, in the car. Why? Because there is a continuous stream of tugs flying at head height, dropping ropes between the cars and gliders. Having dropped their ropes they do a tight turn, or in one case a stall turn, land on the other side of the glider, pick up a rope and glider and take off again. There were several incidents with gliders who couldn't release off tow; in the end most pilots used oblong shackles instead of the rather uneven and not very circular rings provided. (George Burton mentions his incident below.)

Checking one's glider over the start line was sometimes very hot work; on one day the temperature reached 33° C. and one of the British crew learnt something about the sun's power. I regretted not having taken a long-sleeved shirt for such occasions!

While the pilots were suffering from heat and overwork in their cockpits along the course, we had time to shop, visit the Loire or go swimming. The nearby pool was always inviting and catered for everybody, including small children.

One day we were so enjoying the pool that we were rather fascinated by a Ka-6, wing-tips bent down, that streaked across the sky. Two Edelweiss were in hot pursuit and gaining. They passed on either side of the Ka-6, joined up in front and disappeared. Suddenly we woke up. They were coming back and we were not on the airfield. Back in the car, we turned on the radio; almost immediately we heard "Snipe final gliding" (Simon Redman) and "Katie crossing line" (George Burton), "Was Katie observed?" "Katie base, just checking," but it would be a few minutes before Katie base could reach the finish line.

On the day that everyone had to land out, we collected Simon Redman's landing report, which said: Redman, 427. Tel. 231, Rossay near Loudrun. When we arrived it became clear that no glider had ever been there but we were given full details of a military aircraft which had crashed there three days before. Two policemen arrived and decided that they knew where the English glider was. It turned out to be French! The police offered to call the number we had been

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Due to its many flight qualities under varying thermic conditions, Bocian is suitable for all types of performance flights. The pilots' seats are in tandem, and there are coupled control columns, which make the glider ideal for basic training.

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MOTOIMPORT

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given . . . it did not exist. The time was now 8.45 p.m.; we decided to eat. We rang the airfield and explained our trouble. Would they ring us back if the pilot rang again? Yes. He rang 20 minutes later, but the message was not passed on. At 10.30 p.m. we left to try two tiny villages with similarly pronounced names about six miles away. The first village appeared to be three farms only. We called over the radio. A faint reply. He was at the second village a mile and a half away.

By moonlight we could just see the glider. It sat across a very rough track, its nose and tail touching opposite corn fields. At 1.30 a.m. we were back on the airfield. There was no one there, so we dropped the trailer outside the workshops and set off for our hotel. On the way something that sounded rather fundamental went wrong with the car. Gearbox perhaps?

Next morning we limped back to the airfield and put our wings in the workshop. One wing had hit six fence posts, but there was no serious damage, and this was soon put right. Once Simon was airborne again, we had the car seen to, and for the cost of 40 francs we were mobile again.

At prizegiving there were prizes for everyone. Tiny bottles of Cointreau for the crews, including two-year-old John Burton. Then the banquet. Shouts for Anita to sing. But we had to go and say goodbyes and thank you's.

Monsieur Hersan asked me to take a message back. Next year he would like Britain to send an official team with many pilots and good gliders!

ELIZABETH DOUGLAS

* * *

The Flying

The eleventh "Huit jours d'Angers" had the best weather, and in consequence the best flying, of any I have been to in the past five years. This competition is developing into a truly European event, and this time there were 55 competitors; the French entry made up less than 50 per cent of the list.

Flying began on Saturday with a 160-km. triangle. Conditions were fair, but as usual the task was underset (marks being heavily weighted for speed); the organisers hope that most of the field will complete the task, which of course they did, and in about 2 hrs. 15 mins. With conditions improving throughout the day, several competitors went round again to improve their times. We treated the exercise as more of a holiday and went swimming.

The better conditions continued on Sunday, and a 300-km. triangle was set. The task was still underset, so that the problem was not how early to start, but how late. The advantages are twofold for a late start: first, thermals are stronger, and second, more thermals are marked by the early starters. Average times for the triangle were about 4½ hrs.

Flying continued on every day with mostly blue thermals and long (airborne) waiting for the best conditions. Three launches are allowed from landing back on the airfield, but none after landing out. This is another discouragement against setting off too early; however, the fifth day was the exception—the task was a 209-km. triangle, but the forecast was the worst we had had. We launched into an overcast sky, and it was obvious the task had to be treated as one of distance. We drifted away with 2-knot thermals and a cloudbase of 3,000 ft. On the second leg things improved and I began to think we might even make it; however, on the final leg there was a marked deterioration and cloudbase came down to 2,300 ft. No cloud-flying is allowed, so no progress was possible.



"Le petit" Burton in the cockpit of father's Dart.

The next day is worth a comment if only because of its lost chances. It was a 500-km. triangle day if ever I saw one, but for some reason briefing was delayed until 10.45, with first take-off at 11.45, and in consequence only a 235-km. triangle was set. Despite the late start this was still an underset task.

My first launch was quite exciting. I reached the 1,600-ft. release height and the tug duly waved me off. I pulled the knob but nothing happened. I nearly yanked the panel out of its fixings whilst yawing and pitching the glider, but still no effect, so I then wildly rocked the glider from 45° to 45° in the recognised signal and prayed that the tug was not going to dive vertically down, as was their usual manoeuvre. The tug pilot was, however, on the ball and saw my signal. I then opened my brakes and was expertly towed down to a few feet over the boundary fence when the tug pilot released and I was able to land ahead, still with the rope attached. There are no weak links in the French ropes and I estimate their breaking strain at several tons.

After the second launch I discovered that conditions were excellent. Cloudbase was at 6,000 ft. and thermals 6 to 8 knots. Once started, I completed in 2 hrs. 43 mins. at an average speed of 55 m.p.h. Simon Redman was a few m.p.h. slower, but he had his revenge next day when he beat me by a similar margin.

Among the gliders taking part were: BS-1, Libelle, Foka 4, SHK, Edelweiss, Vasama, Phoebus, Elfe, etc. The Standard Class is now definitely outclassed by the Open, with perhaps the Phoebus coming closest in glide performance. However, it seems to have problems in its climb which are said to be solved in the 17-metre version.

Seiler (Switzerland) won in the Elfe, which overall seems to be very similar to the SHK. The BS-1 undoubtedly had the highest overall performance, as it demonstrated on one day by being half an hour faster than the second glider; however, it suffered somewhat from inconsistency.

All in all, an excellent competition, and thanks are due to the chief organisers, Messrs. Hersan and Bellanger, and Madame Brogarde; if the French will have me, I should be delighted to return when I next have the opportunity.

GEORGE BURTON

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Final Leading Results

1 Seiler (Switzerland)	Super Elfe	1000 (1)	1000 (1)	1000 (1)	1000 (1)	810 (3)	882 (7)	661 (16)	6353
2 Burton (G.B.)	Dart 17R	793 (10)	873 (6)	983 (2)	915 (4)	729 (6)	989 (2)	716 (6=)	5998
3 Ragot (France)	Edelweiss	995 (2)	899 (3)	881 (8)	865 (11)	610 (18)	846 (9)	716 (6=)	5812
4 Baumgartner (Switzerland)	SHK	864 (6)	726 (30)	904 (5)	995 (2)	567 (23)	905 (5)	725 (5)	5686
5 Popiel (Poland)	Foka 4	735 (16)	874 (5)	910 (3=)	906 (5)	614 (13)	705 (30)	727 (4)	5471
6 Penaud (France)	Edelweiss	873 (5)	894 (4)	785 (14)	848 (15)	367 (40)	1000 (1)	700 (10)	5467
7 Glockl (Germany)	Phoebus	873 (8)	794 (17)	902 (6)	391 (38)	876 (1)	981 (3)	715 (8)	5462
8 Cartry (France)	Edelweiss	774 (11)	819 (13)	762 (17)	862 (12)	562 (28)	967 (4)	693 (11)	5359
9 Redman (G.B.)	SHK	760 (12)	784 (21)	910 (3=)	926 (3)	324 (41)	836 (11)	768 (2)	5308
10 Bottcher (Germany)	BS-1	893 (4)	799 (15)	851 (9)	890 (9)	0	872 (8)	1000 (1)	5305

KITTIWAKE PROGRESS

KITTIWAKE I made its first flight at Lasham during the period of the Nationals. Since then about 20 hours of flight testing have been done, and this includes a couple of tows. Kittiwake has turned out to be a delightful aircraft to fly, with good positive controls and an excellent view. This is confirmed by the other dozen or so pilots who have flown her! Climb performance appears to be about as predicted when allowance has been made for the (inevitable?) higher empty weight than estimated.

Development work has included fitting a hydraulic piston damper to the nose leg, and some work on the cowling and cooling system. No adjustments have been required to the controls. The flaps are extremely powerful and a rate of descent of 2,300 ft./min. power off has been measured.

Discussions seem to show that despite the apparent financial advantages of a single-seater for towing, most people want a two-seater on the basis of increased utilisation. This in turn will mean a bigger engine. So we hope to build a second Kittiwake soon with two seats and a bigger engine.

What we really want is someone to order the first one: we can then have it built by a firm.

ROY G. PROCTER.



OBITUARY

Lt. Col. George Tuson

GEORGE TUSON became chairman of the Cornish Gliding Club in 1965 after being a valued member and instructor for several years previously. He continued to give much time and thought to the well-being, both of the club itself and even more especially to any individual member or visitor who sought his aid. Up to the time of his sudden and unexpected death on 15th August, he maintained this interest and leadership, which we had all come to rely upon, and his loss will be felt by all our members and by many past course members to whom he became a personal friend.

We are sorry that he could not have been with us to see the completion of the new hangar, which is another great step forward for the club of which he was justifiably so proud and which reflected the progressive outlook of his committee. Having worked with him very closely during the whole of the time he was with us, I can only refer with gratitude to his unfailing courtesy and seemingly inexhaustible patience which invariably solved the most obdurate problems.

That we shall greatly miss him is obvious, but to his wife and relations we would simply say that to all of us he will always be remembered as part of the club itself.

G.T.C.

BOOK REVIEW

Kites : an Historical Survey, by CLIVE HART. Published by Faber & Faber, London, 1967. Price 70s.

THIS well-produced and erudite book on the world's first motorless aircraft is commended in a preface by Charles Gibbs-Smith, who writes: "It may seem curious that until now there has never appeared an authoritative history of the kite."

Another curious fact is that it seems to have only been invented once, in China, and spread from there to the rest of the world. There are two rival theories on the origin of inventions which cause civilisation to advance: Lord Raglan thought they were the unique inspirations of single exceptionally gifted geniuses, while the more common belief is that, when the time is ripe for a new invention to appear, many people are capable of inventing it, and if one doesn't, another will. Aeroplanes undoubtedly come into the second category; and as for gliders, with the example of the birds to copy, any fool can think up the idea of fixing wing surfaces to his arms—and fools they were, for they would always leap off the highest building in sight instead of making preliminary test flights from a table or balcony.

But there is absolutely no certain evidence, from this book, that kites were ever invented independently outside China; consequently one inclines to the idea that even there the kite had a single inventor, though the author does not discuss this point.

Though the author mentions "two-and-a-half thousand years" as the probable span of kite history, the earliest authenticated report was in 200 B.C. Within four years it was being used in war—to measure the length of tunnel needed to get inside a besieged palace (evidently no one had yet invented triangulation).

The kite spread first to Indonesia and Polynesia. There is doubt about its route of spread to Europe. It could have come overland through India, Arabia and North Africa, or else been brought direct by sailors from the Far East. The earliest evidence comes from Vienna in 1460 A.D., then from Italy in 1558. But meanwhile a primitive form had been independently evolved in Europe, first by making banners tubular, like windsocks, and later adding a little wing on each side; still, one could hardly call that a kite.

Kite-drawn carriages and boats were tried in the early 19th century, and the latter could even "beat to windward"; but the author does not explain that, in order to do so, the kite must be made to "stand off the wind" by pulling in one side. There are also chapters on meteorological and man-lifting kites, on the development of box-kites into aeroplanes, and we are brought up to date with the gyro-glider. There are many drawings and photographs, and some beautiful colour pictures of decorated Chinese and Japanese kites.

We learn from the paper jacket that the author has written another work, "Your Book of Kites", published by Faber at 12s. 6d., describing how to build and fly many different designs.

A. E. S.

John Joseph Montgomery—Father of Basic Flying, by ARTHUR DUNNING SPEARMAN, S.J. Published by University of Santa Clara, California, 1967. Price not stated.

MONTGOMERY'S status as a gliding pioneer has been the subject of much controversy, mainly about the first of his two widely separated bursts of activity. He built three gliders in the early 1880's, and it is claimed that in the third, in 1883, he glided 600 ft.. There was no contemporary eye-witness account, and the author only quotes Montgomery's own account given to the Aeronautical Society of New York as long afterwards as 1908. In this, Montgomery states that he flew 600 ft. down a slope, and adds: "I was able to direct my course at will," and later, "I found the machine would follow my movements in the seat for self-balancing."

This is the basis of the claim that the event was the world's first controlled aircraft flight. The author nevertheless gives credit to our own Sir George Cayley as the inventor of the first successful man-carrying glider in 1853, but in this the pilot had no control. The controversy has arisen owing to the assertion by some, especially C. H. Gibbs-Smith, that Montgomery's achievements were exaggerated by certain writers with the deliberate intention of invalidating the claims of the Wright brothers. In "A History of Flying" (1953, p. 208) Gibbs-Smith describes Montgomery as "too far away from the main stream of experiment to absorb much from it or contribute anything of importance to it". His comments on the present book will be awaited with interest.

Montgomery's second burst of activity was around 1905, when a tandem monoplane of his was several times taken up to about 4,000 ft. by a hot-air balloon, from which its pilot, Daniel Maloney, released himself and glided down with many manoeuvres followed by a spot-landing; these must have been the first glider aerobatic displays in history. This section of the book especially is very well documented, and in fact the whole book is extremely well produced with a great quantity of illustrations.

Did Montgomery know about soaring, in its present-day sense? His intentions in the earlier experiments were, according to the author, "securing equilibrium when airborne" and "directional control in soaring". But "soaring" in those days was often merely another name for being airborne, and Montgomery's own words, which were more specific, should better have been quoted. They were, according to E. C. Vivian in "A History of Aeronautics" (1921, p. 116): "When I commenced practical demonstration in my work with aeroplanes I had before me three points: first, equilibrium; second, complete control; and third, long continued or soaring flight."

A.E.S.

Soaring Guide, by PETER M. BOWERS. Published by Sports Car Press, New York (419, Park Avenue South), and Ambassador Books, Ltd., Toronto; distributed in U.K. by Graham Scott, 2, The Broadway, Friern Barnet, London, N.11

THIS paperback efficiently covers practically every aspect of soaring in 128 pages, with plenty of illustrations. It has, of course, an American slant, and the final chapter on costs and official regulations is not applicable here. Peter Bowers began gliding in 1950, having already helped to build three gliders at school and college.

A.E.S.

* * *

CORRESPONDENCE

GLIDING CHAMPIONSHIPS AND FARMERS

THE following correspondence between myself and the Group Secretary of the Oxford, Thame & Henley Group Branch of the National Farmers' Union underlines one of the major problems facing our sport. I think everyone will appreciate the friendly tone of Mr. Davis's letters, and I have no doubt that all pilots and ground teams will continue to do everything possible to avoid giving trouble to farmers and landowners.

To the Secretary, B.G.A.

Dear Sir,

At a recent meeting of my Thame Branch, a number of members expressed concern at the large number of gliders which landed on farms in the Thame area during the recent National Gliding Championships.

With one or two exceptions my members reported that the planes themselves did practically no damage and the pilots

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We do **NOT** believe in advertising only the top results achieved in certain competitions, withholding information on bad placings. We feel that you want the full information. There were only a few DIAMANTS available for competitions this year. But here are **ALL** results (up to printing deadline), many flown in rather weak conditions.

Austrian Nationals (2 DIAMANTS entered): 1st and 4th
United States Nationals (1 regular entrant, 1 guest): 4th (3 task wins)
International Alpine, France (1 entrant): 2nd
German Nationals (1 entrant): 11th (best foreigner)
Sebring Regionals, Florida (1 entrant): 1st
Italian Nationals (1 entrant): 9th

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were most courteous. However, in a few cases the gliders landed either in growing cereals or standing hay crops, and there was subsequent damage to these crops brought about by two ways:
a) by sightseers—mainly children—running through the crops and trampling them in order to view the glider and,
b) by the vehicles and trailers collecting the plane.

Although my members are active sportsmen themselves, I have been instructed to ask what action you intend to take to prevent damage of this kind in future.

Yours faithfully,

J. DAVIS, *Group Secretary, N.F.U., Oxford, Thame & Henley Group*

To the Group Secretary, N.F.U.

Dear Mr. Davis,

Your letter of the 11th July has just arrived, and I raised it at the meeting of my Council held last night. We are very disturbed indeed at the complaints you have received from a number of your members.

In the first place, you will wish to know what steps we take in order to avoid such incidents. We make it compulsory that any pilot landing in a field during our Championships should either contact the owner before leaving, or, if this is impossible, record his name and address on the back of their landing certificate. If they fail to do this, they run the risk of being grounded from further flying during the Championships.

This, of course, is to minimise the possibility of any "tip and run" incidents, and I hope, therefore, most of your members who suffered from this actually spoke to the pilots concerned, and those who did not do so, know their names and/or the competition number of their aircraft. If, in fact, there were any "tip and run" incidents, I would most appreciate it if you would let me know the names of the landowners concerned, because I would wish to take appropriate action.

In ordinary circumstances, this procedure has so far shown that it can cover any isolated incidents, but this year, I am afraid, we were undoubtedly defeated by the appalling weather. You, and no doubt your members, will recall that, after it was all over, we were told that last May was the worst for at least 250 years. What happened was that we desperately tried to run our Championships against all the odds, and the result was that very few aircraft managed to get through to their goals, and on nearly every day most of them had to land out. As a result, we are seriously considering whether we shall have to change the time of the year at which we hold championships in future.

We are all only too well aware that our sport will come to a grinding halt if we lose the support of farmers and landowners, and there seems to be some evidence that over the past few years, good spring and summer weather has been moving later on into the calendar.

I would ask you to give your members our most sincere apologies for what happened this year, and furthermore, I would appreciate it if you would ask any individuals who were particularly adversely affected to let me have the name of the pilot, and/or the number of his aircraft, so that I may take the necessary action to make amends. Please do not think I would do this in any punitive sense, but glider pilots are nearly all highly responsible people, and no individual would wish to feel that he had damaged another man's property without being subsequently made aware of it, and given the opportunity of making amends.

Yours sincerely,

PHILIP WILLS,
Chairman, B.G.A.

To the Chairman, B.G.A.

Dear Mr. Wills,

Many thanks for your letter of 13th July. I will make a point of reading this to my next Thame Branch Meeting, which, because of harvest work, will not take place for some weeks.

Your detailed explanation of this year's problem is very much appreciated, and I should like to again emphasise that farmers, generally, are not against sporting activities. As often happens, the interests of the majority can be spoiled by an irresponsible few.

I certainly have no objections to you publishing my letter and I will refer to this in our next monthly journal, asking members who have any particular complaint to let me have details so that they can be passed to you.

It does occur to me that from the

point of view of farmers, May is not the ideal month for your Championships. I suppose October, when most fields are cleared of crops, is not a possible alternative?

Yours sincerely,

J. DAVIS,
Group Secretary, N.F.U.

To the Group Secretary, N.F.U.

Dear Mr. Davis,

Many thanks for your letter of the 17th inst. to hand, and I very much appreciate the whole way in which you and your colleagues have raised this matter with me.

I will proceed accordingly, and only in this letter comment on your suggestion regarding the future timing of Championships.

For meteorological reasons it is unfortunately impossible to carry out high performance flying with a reasonable expectation of suitable weather, between roughly the first week of September and mid-May. We have picked mid-May in the past because we felt that, at that time, most crops would be at a fairly early stage of development, so that any outlandings would be likely to cause the minimum damage. On the other hand, by holding the Championships in, say, June or July, although outlandings might cause more damage, the weather, if better, would result in fewer, or none, such incidents. So it is all very much a matter of guess work. Once we get into August, we get into trouble with density of road traffic, because, of course, it may create trouble if we put a large number of trailers on to the roads in the middle of the main holiday month. But it is possible that mid-August might prove to be the best compromise, indeed the only way to find out really may be to suck it and see. Even then we are likely to be wrong because of the vagaries of our weather.

This year the weather has been so good during July, that the various Regional Championships have been tremendously successful and probably produced very few outlandings indeed. We are currently engaged in looking at all the weather records all over again, considering the farmer and road traffic indications, to see if we can come up with an answer less likely to repeat the disasters of this year.

Yours sincerely,

P. A. WILLS,
Chairman, B.G.A.

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RECALLING A PROPHECY

Dear Sir,

The following is an extract from my article on the Motor Tutor published in *Popular Flying* for December, 1957:—

"To be able to leave the ground at will, without the necessity to find collaborators to winch or aerotow one off the ground. To be able to reach that inviting source of lift, cumulus cloud or air wave, which is, as a rule, tantalisingly out of reach except by a long and expensive aerotow. To be able to return from a cross-country flight without waiting hours for the retrieve by trailer and crew. . . .

"It does not seem unreasonable to draw a parallel with the sport of yachting. Forty years ago auxiliary engines in sailing craft were anathema; but gradually the convenience of motive power for manoeuvring in and out of harbour, for getting back to base from the cruising waters when becalmed at a highly inopportune moment, not to speak of getting the ship out of serious trouble, broke through the prejudice and crust of tradition and persuaded even the purists that there was a place in yachting for the motorised sailing vessel. Just so the convenience, on certain occasions, of having a built-in source of motive power in one's glider must eventually win recognition even from the purist soaring pilots."

London, S.W.9 GODFREY HARWOOD

EDITORIAL NOTE.—In reply to our question whether he soared the Motor Tutor, Mr. Harwood writes:—

"With the engine ticking over at 700 r.p.m. the gliding angle approached that of a Skylark 2, and I often used to thermal-soar at Lasham, and also did a bit of hill-soaring along the South Downs from Harting eastwards. Also on one occasion I explored the sea-breeze front just north of Portsmouth for quite a long way with the engine only ticking over."

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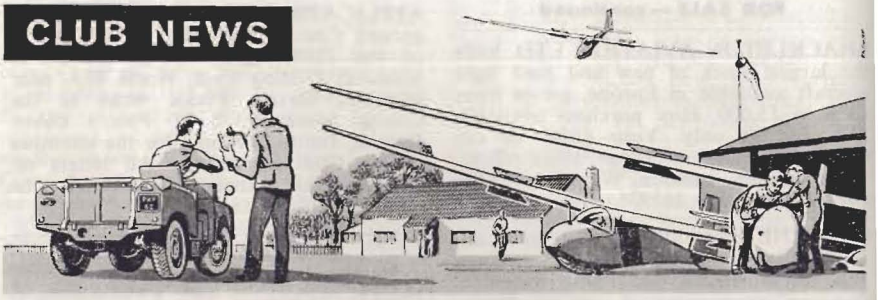
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CLUB NEWS



A NUMBER of Club News contributors are forgetting that they should attach their name and address to all copy they send in. We can only publish your news when this is done. So please remember!

The news this time shows that most clubs have had a good amount of soaring weather, and many cross-country flights have been made.

We welcome to our columns three clubs which have not contributed before, although two of them have been operational for quite some time: The University of East Anglia Gliding Club at Tibenham, The Burton & Derby Gliding Club at Church Broughton and The Solent Gliding Club, Isle of Wight.

News and photographs for the Christmas issue should reach me, typed double spaced on foolscap paper, not later than 11th October, and news for the February-March issue will be needed by 6th December, to be sent to 14 Little Brownings, London, S.E.23.

21*st August*, 1967.

YVONNE BONHAM
Club News Editor

BATH AND WILTS.

BEING a fairly young club, new club records are notched up every season. Most of them would be scorned by well-established clubs. One, however, which we think worth publication puts the club's duration record in Eric Hale's pocket for a thermal flight of 9½ hours in the ex-Peter Scott 419.

We were pleased to welcome members of the Cotswold Club to our site when their own field was not available.

The first week in August saw a new venture in the form of a week's course for the 5th and 6th formers from Bath schools. The experiment turned out to be most successful and was thoroughly enjoyed by the youngsters and club members who came along to help. We hope to do more next year. This could be a source of future membership.

A cup to be known as the "Keevil Ladder Trophy" has been donated by Vince Griffith. It will be awarded to the pilot who tops the club ladder on the 31st December each year.

Our lady members worked very hard to organise and execute a jumble sale



Bath students on their course.
Photo Jeremy Richards.

to add to the site fund. These jumble sales are really something. If you've got the energy we can recommend them. You'll not make a fortune—but you'll enjoy the fight!

I have received a rather unusual request from a young lady member of a French gliding club asking if I could find any pen friends (male or female) for her and her friends who are aged 17-19 years. If any young gliding enthusiast would like to set up correspondence with members of a French club if you write to me (Ken Stephens, 15 Milton Avenue, Bath) I will be pleased to pass on the details.

K. N. S.

BLACKPOOL AND FYLDE

JUNE and July brought consistently good weather, and we found thermals from winch launches on 16 out of 22 flying days.

We were able to take full advantage of Preston Holiday Weeks when we got access to Samlesbury airfield and use of a hangar for a fortnight of club flying. The T-21 made 50 good climbs giving thermal soaring tuition. The pupils thrived on the extra time at the controls and the demonstrations and exercises this made possible. The Grunau and Olympia made 80 soaring flights; on several occasions all three aircraft were at cloud-base simultaneously.

Nine Bronze C legs were flown, five in one day (20th July) which rated a paragraph in the local evening paper, and promotion to the Sports Page!

We saw a tornado funnel near Clitheroe on the 22nd July, but only from a distance. The wind was light and the thermals large but gentle at that time in an overcast day. How often do twisters go unrecorded? And is Lancashire prone to them? It is the second one I have seen.

K. E.

BRISTOL

ABOUT our regionals enough has been said. Our thanks to visitors who helped us hangar-building. Good weather has persistently lured our own members away from this project, which is now falling a bit behind schedule. However half the roof is on, and it has already provided the odd night's lodging for several gliders whose owners prefer improvising sheep-barriers to de-rigging.

During this year's second task-week we were pleased to meet visitors from Camphill and the Worcester Club. Minor pundits were able to test their skill on three of the five days.

An outbreak of cross-country fever has resulted in several completed Silver C's, including yet another attempt to reach the Mynd, which again ended at Shawbury. (Could you possibly paint your site red, Midland Club?)

Jim Stuart-Mentieth flew a 300-km. triangle via Yeovil and Lasham to claim Gold distance with Diamond on a difficult day and without eating any breakfast! It took him over eight hours.

Gold badges go to Mark Westwood and Mike Harper in a neck-and-neck finish. Earlier this year they achieved Gold height in wave, within a few weeks of each other. Mark now leads by one Diamond, as Mike landed just short of his goal.

Another kind of flying is gaining an insidious hold over some of our pilots —namely hot-air ballooning, of *Daily Telegraph* fame. Four of the six proud owners of that red and white monstrosity are Bristol members. We bask in their reflected glory and fame, while secretly wondering how to get them certified.

E. M. S.

BURTON AND DERBY

TWO years ago a few enthusiasts met together to discover the possibilities of forming a club in this area. After many tireless and frustrating attempts to acquire a site, a disused airfield at Church Broughton (six miles from Burton, ten miles from Derby) was acquired. A T-21 was purchased and we were ready to fly.

Chris Duthy James was elected C.F.I., John Whiteley, Chairman and Instructor, Derek Sandford, Secretary and U.T. Instructor, and Pete Ellison, head of the Technical Committee.

Our first launch was made in the last week of October, 1965, using "Pete's Pride", a converted A.E.C. coach, as a winch.

Soon we were pleased to welcome two

syndicates into the club with a Skylark 2 and an Olympia, and during last summer some interesting flights were made by these two aircraft and the club's T-21.

During the club's first year of operation 2,000 launches were made and seven home-spun pilots went solo, an achievement of which we are justly proud and one we hope to surpass this year.

Although we are a new club we are proud of our achievements so far and with the impetus given by the enthusiasm, endeavour and vigour of our members we are certain that our future can only be a successful one.

All gliding enthusiasts are welcome to drop in on us at Church Broughton.

R. T.

CORNISH

MUCH of our jubilation from the success of Noel Ellis in winning the W. D. & H. O. Wills Swallow competition has been suddenly overshadowed by the untimely and sudden death of our Chairman, Lt.-Col. G. E. Tuson, on 15th August.

With the framework of the new hangar already erected and a very successful series of courses almost ended, the club was in good heart and in the mood for some sort of celebration. I am sure that George would wish this mood to endure and progressive effort to continue, but it will not be without a tinge of sadness that he can no longer share it with us all.

G. T. C.

COVENTRY

OUR sacrificial thousands of launches during the year to the gods above must have stood us in good stead, for we had a competition to end all competitions, unbelievably eight contest days out of nine, and even on the odd day out 8-knot thermals for practice in the afternoon!

Everybody, whatever their final position on the rating list, seemed to have had a good time, and we lesser mortals, excluded from the top-secret meetings of the Competition Committee, must take off our hats to a first-class piece of organisation, including, of course, our friends from Leicester who ran the competition with us.

Phil Banks was so meticulous with his line-crossing times—they say he timed to the tenth decimal point of a minute! His reward for this, and all the paperwork he did in the competition, came on Saturday, 5th August, with an excellent Silver distance flight in the club Skylark 3B to Skegness. Peter Partridge flew his Dart 17R to Bristol and back, thus gaining his Gold C distance and a Diamond.

From the exalted heights of the regionals to lesser, but more bread-and-butter matters, our T-21 has disappeared to the Kent Club and the Prefect is savouring the heady wines of the Scottish Highlands, having been replaced by a Swallow.

Course Instructor Chris Falconbridge is processing ab-initios like nobody's business, and all our courses are fully booked to the end of the year.

When one is building up a gliding club from what is a completely new site it can only be most inspiring to see some familiar faces with us again for a second year running on these courses.

Finally, Ray Stevens has been "categorised", and although they do not really know what it means several newer members, knowing Ray, have been heard to say it should have been done a long time ago!

B. F.

CUMBERNAULD

FLYING has continued well this first summer at Cumbernauld with hardly a week-end without some activity in the air. Our first course at this site was held at the beginning of July and from reports everybody thoroughly enjoyed themselves with only one day affected by the weather.

Concentrated flying does pay dividends as Ron Kille, Stuart McKenzie and Neil Meiklejohn will bear out as they have now obtained their B certificates, on the Prefect.

Our Technical Department swung into action very quickly recently when two of the pistons of our winch decided that they were too cramped for space. A replacement engine was fitted in half a day and is going well, despite the fact that a number of winch drivers are being trained!

T. J. G.

DERBY AND LANCASHIRE

CONGRATULATIONS to Mike Barker! Why?—he won us a Swallow!

Mike arrived at Camphill last Sunday with the prize, a beautiful blue and white Swallow. Also congratulations to Noel Ellis, who took the other Swallow back to Perranporth. The Northern Gliding comps. went well, an added bonus was three Gold heights in wave off the west edge on the eighth day. At the end of the Northerns, Tom Smith landed a trailer on his foot, but he is really racing around on those crutches and is managing to stay cheerful.

Our summer courses are running as usual, although on the last one both Capstans and both Swallows (*not* including the Wills Swallow) were damaged. They even managed to clobber the T-31, so perhaps it's a good job the Tutor wasn't rigged as well!

The new Tost winch has arrived and should be working by the time this goes to print.

The recent Bunny party was a success, and a "Flower-Power" party is in the wind as a result of the Wills Swallow win.

R. H.

DEVON AND SOMERSET

YOUR correspondent has been flat on his back for the past five weeks having learned the hard way that trying to soar with brakes unlocked is a mugs game, so that these notes have been culled largely from telephone rather than personal observations.

We suffered a state of mishap about the end of June both to private and club aircraft. Ted Hayter, having reached Ivybridge and landed successfully for his Silver C distance, was aghast when he returned from telephoning to find that a pony had walked up one wing of the Olympia. The Fauvette came to grief on a very slow launch and the Capstan tried conclusions (unsuccessfully) with a heap of concrete. My efforts with the Swallow also left it a bit bedraggled! Notwithstanding all this, the club's activities have not been too curtailed. Their drains for the main building have now been completed and passed inspection and the site for the hangar/workshop bulldozed. The builder's hut is being used as a temporary clubhouse. An introduction to gliding was afforded the "41 Club" of Crewkerne on 12th July and the Bridport Round Table on 18th July.

Eric Shore, our Treasurer, flew to Compton Abbas on 22nd July without a barograph so he did the same flight on the 23rd with one to qualify for a Silver C distance. He also managed to stooge around before landing to accomplish the duration leg. Frank Bell also flew for five hours on 23rd July and to Middle Wallop on 4th August.

The club task week, 29th July to 5th August, produced only two good flying days at the end, but these were well used. Mike Harper having declared Feltwell for Diamond gold had the bad luck to land only two miles short. He did, however, get his Gold distance from this flight.

In all these more advanced awards we mustn't forget the initial certificates which are equally important in a well-balanced club, so that Bill Mills' C certificate is recorded with pleasure.

A. E. R. H.

DONCASTER

IT has been some time since our last report, and undoubtedly the most important event since then has been the acquisition of our own tug. Auster 6 G-ARGI was purchased from Jack Bower and Jack Tarr in February of this year, and ever since we have been urged to take more aerotows. In recent weeks we have entertained aerotow expeditions from Rufforth and Camphill, and we shall be pleased to hear from anyone else who wishes to come over for aerotow training.

Another change in the hangar has resulted from our new policy of using Swallows for the first ten hours solo. The two Tutors are now derigged and ready for sale, and a second Swallow was collected from Kirbymoorside at the end of July.

Our second annual rally, now expanded to two week-ends, was held on 29th-30th July and 5th-6th August, with rather more help from the weather than our first effort last year. Two days out of the four were contest days. At the

end of the first, Bill Bailey, in the Doncaster-based Skylark 3F, was leading, with Dick Feakes in the East Midlands SHK second, these two being the only scorers. These positions remained to the end of the last contest day, when Don Westerside took over the 3F and won a race round a 75-km. triangle from John Prince in the SHK.

R. P. H.

KENT

AT last we have joined the list of wave sites!

The 17th June was the day, when a 30-knot N.E. wind gave us a classic lee wave from our ridge that could be contacted from a winch launch, although it required a nerve-racking downwind dash, through 8 knots sink, after release to get there. Most pilots made contact at about 600 ft. and half a mile south of the ridge, although Glyn Richards (Skylark 4) had a low point of 300 ft.—he subsequently reached 4,700 ft., the highest of the day. Not high by Portmoak standards, but as the North Downs only drop 300 ft. at this point we are not complaining, especially as three Silver C heights were attained.

Since then we've had a further eight Silver legs, which included three Silver C completions.

To cap all this, Ron Cousins got his Gold height during the London regionals with a cu-nim climb to 13,000 ft. and now sits at the top of the club ladder.

The list of A, B, C and Bronze certificates is also increasing from week to week.

On 5th August, Cyril Whitbread (Skylark 4) achieved the longest flight from Challock with a 203 km. to March in Cambridgeshire, after turning Peterborough en route to Great Yarmouth, trying for 300 km. An excellent flight, especially as it was only his second in his syndicate's new "buy" and also the first from Challock to go north, crossing the Thames east of London. The retrieve story hasn't finished yet nine days later, but that's too involved to relate here.

Although we didn't win the Swallow competition, our entrant, Peter Luckett, did very well indeed in coming second and bringing back a new barograph. We are also very pleased that, in the semi-finals at Upavon, we achieved first and second places.



Peter Luckett who won a W.D. & H.O. Wills barograph for his Club.

The club fleet has been increased with the purchase of a third T-21 and Skylark 4. There are now five 4s on site, with two more to come, so it's going to get rather crowded on the ridge with all those 18 metres everywhere!

M. H.

LAKES

IT is with deep regret that we report the fatal accident involving the privately - owned Kranich. Howard Woods, a club instructor of long standing, was piloting the glider, his passenger was Colin Giles. The accident is currently under investigation by the A.I.B.

Summer courses have proved successful with several of the course members returning to fly at the club each weekend.

Cross-country flying from Walney Island remains something of a challenge due to the inevitable sea breeze effects on sunny days. Nevertheless, on a first cross-country attempt Pete Redshaw landed, just short of his Silver distance, at Sedbergh.

Our faithful circuit extender "the Slag Bank" has provided good ridge soaring experience for many of the T-21 and Olympia pilots.

Sid Wearing, one of our instructors,

has now completed his Silver C and is actively working towards his Instructors' Category.

Soaring on our two ridges has been hampered recently by orographic cloud and Haverigg airfield has proved an excellent let-out for those with insufficient height to face the final leg to Walney across the Duddon Estuary.

J. G.

LINCOLNSHIRE

IT is now one year since we moved to our new site at Bardney. Progress during the last 12 months has been very good. The hangar is now complete, the airfield has been cleared of all obstructions and the kitchen in the clubhouse is in use. Thanks to the ladies, members can now have a cooked meal.

The club fleet has been increased with the addition of a T-21 and a Swallow.

On the flying side, July proved to be a very good month, with members gaining four Cs, four Bronze legs, one Silver distance, one height and two five-hour durations.

On the 23rd July, our former Chairman Ted Barker was launched in a Skylark 3F, declaring Merryfield in Somerset as his Diamond goal. After covering 191 miles in seven hours, he landed at Crossways, near Dorchester. Unfortunately the flight did not get Ted his Diamond, but it did complete his Silver C and gained him Gold distance, the first in our club.

Jack Gillanders, a member of the 463 syndicate, completed his Silver C. His height being gained in May, distance in June and 5 hrs. 23 mins. in July.

During July we had two visitors fly in: Bill Bailey, from Doncaster, and Anthony Edwards, flying from Husbands Bosworth.

Congratulations must go to Bob Brown on getting through to the finals of the W. D. & H. O. Wills competition. Bob was placed ninth overall.

B. P.

MIDLAND

THE Instructors' Course, which we ran at the end of May, produced rather mixed blessings. On the one hand the Midland and Coventry Clubs have benefited in that some of their instructors have received further training, but on the other hand the Midland Club has suffered because one of our T-49s was extensively damaged during the course. Attempts temporarily to fill the gap in the fleet with a hired T-21 have not been entirely successful since there have been some week-ends when a hired machine has not been available.

The good wave conditions continue to bless us from time to time but not as frequently as during the winter, nor as often as members would like, although apparently sufficiently often for one to hear remarks such as "I only reached ten and a half". Mike Horan reached 16,000 ft. on 21st June when he was forced to descend because his oxygen had run out. More recently, Peter Marsch gained 17,300 ft. Peter also completed his Gold C with a flight to Leiston.

On a recent cross-country, Dave Carson experienced such massive assistance from the police, fire brigade, etc. as to prove very embarrassing at the time and very expensive in terms of the beer he bought on the day. The story is so good that it seems likely that by now Dave will have recovered some of those beers.

K. R. M.

NORTHUMBRIA

UP to the present time the club has had a record year—more launches than ever, A, B, C and Bronze C's in profusion, Silver C legs by the handful and, at long last, our first lady soloist.

Progress on building the hangar and levelling the field has been held up due to difficulties over the terms of our proposed site lease and meanwhile all that lovely grant money lies waiting to be spent.

The acquisition of a Jaskolka has certainly brought a new purpose in life for our solo pilots. No difficulty has yet been experienced in working from the Tutor and all of the Jaskolka men have now collected their Bronze C's.

The Hedley wave hasn't really been much in evidence and on the best day of all only worked to 7,000 ft. Thermals, on the other hand, have been strong and plentiful even during the two gliding weeks held by the club. It was during the first of these that the Annual T.S. prize was awarded to Jack Little who set

off in wave, in cloud, for Silver distance and landed on course but a couple of miles short. Nothing daunted, he tried again two days later—in thermal this time—and succeeded.

P. W. L.

OUSE

THE Ouse Club now have a well-equipped mobile control "tower"—converted from a double-decker bus.

The forward part of the upper deck has been converted into a control cabin (controlling two double-drum winches), with glass dome giving all-round visibility. Signalling lights on a 24-volt system have been installed; when the operator selects the winch in operation it automatically puts a stop light on the other winch. This obviates risk of confusion and adds to general safety. There is ground station V.H.F. radio for communicating between base and glider and telephone for communicating between control tower and duty pilot. Also an amplifying system linking control operator and retrieve crews. Another feature which adds to safety is an audible signal synchronised with the lighting system. Provision has been made for the installation of met. instruments.

The remainder of the top deck has been partitioned off for use by the C.F.I. and his instructors, for briefing, debriefing and lectures. It is complete with blackboard.

The lower deck has been converted into a modern kitchen, with running water, full catering facilities and tables to seat 14.

Main contributor to the conversion was Brett Atkinson (Leeds)—his joinery work was of the highest standard—a newly-elected committee member and an enthusiastic Swallow pilot. He was assisted by Peter Shepherd, Stan Park (winch and engineering expert) and Barry Crocker.

It is a job of which this go-ahead club is very proud.

A. S.



OXFORD

ARTHUR SPEECHLEY'S keen enthusiasm and effort for everything he does for gliding has never failed to amaze us. We heartily congratulate him on receiving the Torch Trophy Award for services to the sport.

Ray Stafford Allen with "Treble Three" has been with us again primarily to test John Smoker for his aircraft inspectors' ticket which proved successful—well done, Smokey.

After an exhausting week of almost continuous flying at the Bosworth regionals, Smokey, Nick Morland and their Skylark 4 No. 169, fitted with radio for the first time, returned a creditable 8th final place.

The annual flying fortnight over the last week of July and the first in August has come and gone with its usual rapidity and dose of unsoarable days. However, Ray Harvey, in his Olympia No. 170, soared for over five hours to complete his Silver C, as did Graham Smith in the club Skylark 3F and at the same time covering distance to Henlow to allow him to join Smokey's syndicate. Lower down the list the Olympia is again overcrowded after several conversions from the T-21.

Among our recent visitors we were pleased to welcome two from Nympsfield: Liz Saint in a Skylark 2 on a successful Silver distance. Female sailplane pilots arriving at Weston are very few and far between—come again sometime. Giles Bulmer arrived one day with his Skylark 3 intent on stepping from his cockpit into the basket of his hot-air balloon but the rest of his group had let him down with a bump and he was kept waiting!

C. J. T.

PERKINS

FOR the first time our annual training weeks at the end of July were blessed with fine weather, each day being fully operational. "Doug" Phythian gave up his entire holiday to live in the club caravan, the well-known "GREEN BALL HALL", to be available to instruct on each of the two, five-day courses.

To get as many ab-initios to solo, or near solo standard, we restrict these courses to seven pupils. This year, the first group obtained 26 launches each, the second week, however, that number went down to 21 due to ground operational problems.

Unfortunately, the second training week was further marred by the fact that the only basic solo club aircraft was damaged due to a heavy landing.

However, the Gods were with us to a certain extent, especially Thor, thermal activity was at it's most "PUFFIEST" and what must be a club record was achieved. Between Monday morning and the Friday evening on the first week, our T-21 "Daisy May" was airborne for a total of 22 hrs. 48 mins., 224 launches being made from the club site. In fact, soaring conditions were such that a new member (without any previous gliding experience) who obtained 40 mins. duration on his first flight, and similar times on subsequent ones, was under the serious impression that all training flights were of this duration, and that 4,000 ft. was the normal operational training height.

Thermals were still bubbling merrily the middle week-end, when Tony Fidler, forsaking his usual steed, took the Eon Baby up and logged 3 hrs. 31 mins.! As a sort of encore, he took the same aircraft up on Sunday this time obtaining a 3 hrs. 8 mins. duration, qualifying for his Silver C height. Only *once* did this particular aircraft attain a duration in excess of 30 mins. during 1966, this year it's Bronze C duration flights are legion.

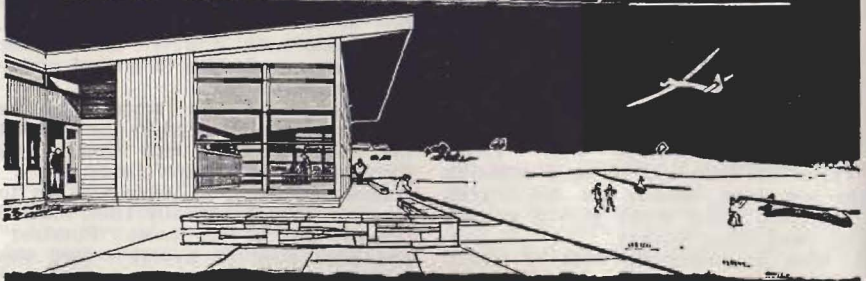
J. V. L.

R.P.E. WESTCOTT

WE are still flying the CISAVIA Kranich II which must be almost the last one operating in this country. Since last October, when the club was first formed, we have made over 1,200 launches, most of which, of course, have been training circuits. The club has made rather better progress since the unexpectedly long C. of A. last March and six entirely club-trained pilots have recently gone solo.

May we take the opportunity to thank the Bocian syndicate at Farnborough who loaned us their trailer to take the Kranich to Lasham and John Pratelli, of

new accommodation, *FAST?*



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PROGRAM-H

CW HPW10a

Oxford, for the aerotow back.

We were very pleased to welcome Ray Stafford Allen who visited us with his Capstan one week-end recently.

B. H. B.

SCOTTISH

SOME recent determined task-setting by Bill Shanks has produced many interesting cross-countries and new Gold C routes have also been tried. One 300-km. triangle involves the high peaks of the Grampians which are unfortunately often hidden in the cloud of our maritime climate—but with a few emergency landing areas mapped out it should be possible. One expedition took the Chairman and ex-Chairman on a 300-km. out-and-return to Turriff. Tom Davidson in his Dart rounded the turning point but landed after about 50 km. of the home journey. Andrew Thorburn, with the 460, was grounded by the sea breezes just short of Aberdeen. Other flights of note were several 100 km. out-and-returns, Silver distances and 100-km. triangles.

Glider syndicate changes are afoot. The Rae-Ross-Reilly Skylark 3 (No. 174) has been sold and goes across two borders, whilst the boys await the arrival of the SHK due in time for our autumn wave season.

A 460 group known as "Friendship Seven" has only one of the original faces left and a sleeker number of five looks like being named "Hoggs United" or the "Fighting Five"!

Yet a third machine is to leave the club ownership for the delicate hands of Norman Clifton, Mabel Ritchie and Peter Slater—the Tutor—good luck to all who sail in them.

All but one of this year's Saturday morning course have gone solo in recent weeks, whilst at the other end of the experience scale a number of new instructors are under training. In the same vein our C.F.I., Ian Dandie, has completed his P.P.L. and A. R. Milnes is under training for his P.P.L. by courtesy of the de Haviland Trophy award. We hope he will return to the fold and complement his other invaluable contributions with aerotowing.

There have been a few sorties to competitions in the south, and although they did not bring back any pots or break records the experience is most useful.

We are now in the throes of getting the hangars floored with concrete.

As the summer wears to a close the "wave safaris" from the south are being booked—and many "weel kent" faces will be back over Bishophill soon.

M. B. R.

SOLENT (I.o.W)

THE greenball has risen again on the Isle of Wight—or at least the lift has begun. The determined efforts of a dedicated few culminated in the inaugural meeting at the end of June of the Solent Gliding Club. Over 60 people heard that Britten Norman Ltd is lending us part of the airfield and a clubroom free of charge and their generosity has made possible the formation of a club without other means of support. With subscriptions coming in we now hope to add a T-21, winching and ground equipment to the second-hand Grunau Baby 3 bought by a syndicate for the use of the club, and we should be flying by September.

Bill Schneider of our Flying Committee has drawn up a programme of Sunday courses which should eliminate, for the beginner, the frustrations of a long drawn-out training, and our particular aim is to encourage family participation, both socially and financially, with remarkably low yearly subscriptions:

Single flying membership ...	£6-6-0
Full family flying membership	£8-8-0
Junior flying membership (16-18 years)	£3-3-0
Associate membership ...	£1-1-0

There is no entry fee. All launches will be 4s. (winch). Further details can be obtained from Ian Creighton (Secretary), 8 Bay View Road, Gurnard, I.o.W.

I. C.

SOUTH WALES

SEVERAL developments have occurred since our last bulletin, including the arrival of a splendid new diesel winch (built by members). The Glamorgan Education Committee's Summer School course, our first venture into running a course "outside" the club, was a tremen-

dous success. All ten members received soaring practice and launches in the T-21.

The Skylark 3F has arrived to replace the Skylark 2 and has already been flown to a motorcycle "drag" meeting near Coventry. The Swallow also flew away to Hirwaun, where it was retrieved underneath the biggest wave cloud we have ever seen—southerly wind.

Our hopes in this direction are directed to a new—as yet secret—wave site in the Welsh mountains. It reminds one of the London Gliding Club sited at the foot of the Mynd and has even stirred interest in the members at Portmoak! More of this later—we hope.

I. S.

STAFFORDSHIRE

WE have introduced a system of "flying permits" which have to be earned by doing a "duty day" at the airfield. It may have been mere coincidence (no pun intended) but shortly after the initiation of this scheme we had over 100 flights in one day.

We have run two courses of one week each for club members. During the first of these the T-21, on a training flight, landed out, the subsequent organising of a retrieve, de-rigging and transport back to Meir disorganised the course. Two Olympia pilots decided to do a cross-country on the same day—we have only one Olympia trailer. The first pilot, Neil Mackay, went to Peterborough, gaining his Silver distance and duration, and the second pilot, Bertie Aranyos, went to Sudbury having collected his Silver C height on his initial climb. Bertie was retrieved first, and arrived back at 9.0 p.m. Bertie's Olympia was removed from the trailer and then the retrieve crew set out on the 100-mile retrieve from Peterborough!

We have had our fair proportion of Bronze C's and Silver C legs, etc., which are abundant this summer.

R. B. L.

UNIV. OF EAST ANGLIA

OUR existence has been silent in literary circles until now, but a progress report is now felt to be due. We exist! The U.E.A. Gliding Club was formed at the end of 1964, as a section within the Norfolk Club, and flies with them at Tibenham.

Because we are not in Norwich for five months of the year, we have some membership problems, but these are being overcome by our present members. Publicity is also proving rewarding.

We have 11 regular members in a University of 1,200, and others are waiting for the new session in October before joining. With an expansion to 1,700, we hope for 20 members by next June. In all our activities we are helped by John Wood, our President, who is a staff member.

Chris Woodman, our sole remaining founder-member, got his Silver distance in June; he flew the Swallow to Bentley near Ipswich. Our best wishes go to him and his wife, Mary, when they go to Canada in September. Chris will be doing research in Chemical Spectroscopy and Canadian Gliding.

Dave Frenkel, who joined the club last October, became our first official statistic when he got his A and B in June; it took three people to get his knees into the Tutor but it was well worth the effort.

Other U.E.A. members have flown from North Weald and Nympsfield in the summer vac., and we hope to visit the latter in December if they can manage it.

Latest news from Norfolk is that the K-13 should arrive in November, and that Derek Staveley and "Doc." Souper have made the Silver distance, both in the syndicate Oly. "Doc." also got her Silver height in the same flight, so this completes her Silver C.

Finally, the secret of how we students can afford to glide—we are partially subsidised by the Students' Union—other University Gliding Clubs take note.

M. J. C.

WORCESTERSHIRE

THE club fleet consists now of a Blanik, Ka-2, T-21, T-31, Swallow and Tutor, the first two being used for aerotow only, both solo and dual. In addition there are three Grunaus and a Skylark either privately or syndicate owned. Aerotows are provided by the Tiger Moth and Auster.

With a membership currently ap-

proaching 200 it was realised that only by full utilisation of our facilities could we be financially secure and therefore it was decided that, as far as possible, we should be open seven days a week with evening flying available whenever there was sufficient demand. As we are running courses both for members and the general public this necessitated the appointment of a resident instructor, a post which Bob Baker accepted handing the mantle of C.F.I. back to his predecessor, Barney Banks.

Land for car parking and a new clubhouse and bunkhouse has been purchased and we hope that this development will improve the social side of club activities, which at present is taking a back seat.

Launch rate and average flight duration has, of course, gone up and Silver legs have been achieved by several members. Mike Burke in particular having had a successful season. Congratulations too to Tim Gore for getting into the finals of the "Win a Swallow" competition, an event which we decided to support with a flying visit to Lasham. The Bonanza got in, navigating by motorway roadsigns, but the Auster, about a quarter of an hour behind, in face of rising ground and lowering cloud, landed in a field near Basingstoke —the crew completing the journey by thumb.

It is hoped that the work done on the runway drainage will enable us to keep going, at least on circuit training, through the winter, although the amount of site work planned for the coming months would fully occupy a labour battalion. Fortunately several of our newer members have proved themselves to be good workers and have augmented the old band of shovel and wheelbarrow pilots.

Undoubtedly our best year but still with plenty of room for improvement both in the air and on the ground.

R. C. S.

YORKSHIRE

SATURDAY, 17th JUNE, proved a good day for cross-countries, especially over the Vale of York. Lewis Ash and Mike Wilson flew au-pair to Camphill in their Skylark 4's in 2¼ hrs. Lewis landed there to a rousing welcome but Mike went on to miss his Gold C distance by 20 miles, landing at Presteigne in Radnorshire. He passed by Meir, the Wrekin and the Mynd en route. "Hu" Hayes flew his Dart 17R 115 miles to Birmingham and several other shorter out-and-returns were flown.

The Slingsby-built Schweizer 2-22 has now been returned after several weeks loan while awaiting the "straightened" T-21. The Schweizer was adjudged to be akin to the Curate's egg, although not as brittle, and we did manage to soar it. Pupils and instructors were quite complimentary, and it was easier to handle than the Eagle.

The Royal Aeronautical Society (Brough branch) sent a party of four young members to Sutton Bank on 26th July, where they wined, dined and flew. The immediate result was one new flying member, and a further visit to be organised in the near future. Courses are well booked and plenty of visiting syndicates have been sampling the soaring.

M. J. C. W.

SERVICE NEWS

AIR TRAINING CORPS

BRITAIN'S 36,000-strong Air Training Corps and R.A.F. element of the schools' Combined Cadet Force are to receive a new glider—the first for 15 years. Of Slingsby T-53 type, it will be used for basic training, supplementing the Sedbergh and Kirby Cadet Mk. 3 (T-31) in current use with the A.T.C. Initial deliveries are expected in the first half of 1968.

A prototype T-53 is being modified by the manufacturer to meet R.A.F. operational requirements for air cadet training, and is scheduled for delivery to the R.A.F. in October, when it will undergo evaluation trials at the R.A.F. Gliding Centres at Spitalgate and Swanton Morley. The trials will take place over a three-month period and the training of a number of cadets to basic solo standard will be a feature of the tests.

Modifications for R.A.F. service include the replacement of the nose-wheel by a skid to reduce the landing run, the

provision of a ground rapid-retrieve facility to improve utilisation on circuit training, the incorporation of a performance-retarding device for basic pilot training and a spring-loaded main wheel (the first A.T.C. glider to feature such a refinement). The T-53 will give the A.T.C. a high-performance soaring capability which will be invaluable in instructor training.

If the trials are successful, the new gliders will be issued to the two gliding centres and to the 27 R.A.F. week-end gliding schools throughout the country, as a wastage replacement for the present gliders on which thousands of cadets have been trained to solo standard during the past 15 years.

R.A.F. News Letter

No. 611 G.S. (Swanton Morley)

FOR giving the school nearly 20 years of loyal service, Ray Fisher has been presented with the A.O.C.'s Certificate of Good Service, and the school's *Newsletter No.* 3 urges him to carry on for another 20 years.

Competition Day, 1967, included competitions for the fastest figure-of-eight won by Flg. Off. M. Silver, and spot-landings, won by Flt. Lieut. R. Page; but actual figures achieved are not given in the *Newsletter*.

Gp. Capt. Douglas Bader, the wartime fighter pilot, qualified for his A & B certificate while visiting the cadets at 611 G.S. recently. He needed only three check flights before going solo.

ALDERSHOT

THINGS have slowed down a bit in the last two months. Bill Barnard and Howard Jarvis have both done their second soaring trips for their Bronze certificate, and Heather Davenport has completed hers.

Congratulations to both her and Paul Gardner on their wedding on 19th August. It nearly had to be postponed, but Paul managed to go solo just two weeks before the deadline.

Unfortunately the club has had to close for five weeks due to the airfield and hangar being required for a service exercise, but the members are taking the opportunity to go to other clubs for wider experience.

J. E. M.

BICESTER

IN common with most clubs we have enjoyed one of the best soaring seasons for some time. Cross-country mileage and hours flown are well ahead of the same period last year and in this respect the two task weeks helped a lot —especially as successful triangles were flown on each day of the second week. Task weeks are to be included as a regular feature in the centre programme and it is hoped to fit in more than two next year.

We are always pleased to see our U.S.A.F. colleagues and deserving a mention for their efforts in the air and on the ground are Walter Mazik and Bernie Geltch; Walter is the third American to qualify as an instructor at the centre.

Two hard luck stories so far this season concerned Paddy Kelly and Paddy Hogg. Both attempted a Gold C out-and-return to Lincoln on the same day, and after overcoming two or three difficult periods fell short by a few miles on the final leg. Congratulations to Charlie Slack on completing his Silver C, a fine effort considering he only started gliding this season.

A. E. B.

FENLAND

THE club has now expanded with the inauguration of a detachment at R.A.F. Wattisham, starting with a T-21 and a winch.

Several good cross-country flights have been made recently, the best being our flying farmer John Whitworth's Gold distance/Diamond goal effort to Merryfield which took him 6 hrs. 13 mins. Also worth mention was a 112-km./9,200-ft. flight by our met. man Jorgy to complete his Silver C.

On the training front one instructor has gained his full cat. and four more assistants are in the making. With the help of a U.S.A. Chipmunk six more members have been checked out on aerotow launch. The club fleet now includes a Skylark 4.

Yet another posting: our secretary, "Mac" McMillan, is on his way and Gordon Hunter has been nominated to succeed him. One of "Mac's" best efforts while in office was to introduce a monthly membership list, giving details of subscription dates, gliding badges, unit, aircraft types qualified, etc. Kept up to date monthly with copies duplicated this is well worth while.

Several successful social evenings have been held in the new clubroom, the best being a barbecue organised by our U.S.A.F. members.

R. G. J.

FOUR COUNTIES

WITH two and a half months to go to the end of our year, we have already exceeded our previous best year's total by about 1,250 launches and 220 hours, and since our last report have achieved seven A and B certificates, seven C's, one complete Bronze and five other Bronze legs, one Silver duration, three Silver heights and four distances, among which Chris Waller's exact 50 km. and Charlie Donaldson's 60 miles to Great Snoring completed their badges. Stephen Hart completed Gold C and Diamond goal with a 7½-hr. dog-leg to Coltishall via Gaydon in the 463, towards the end of which he was able to use a classic textbook sea-breeze front near Swanton Morley. Gold distances have also been attempted by Charlie Donaldson, George Halliday and Al Stevens in the Ka-6 and John Teesdale in the 463.

We were delighted recently to welcome our new President, Air Marshal Sir John Baldwin, on the airfield, accompanied by our Chairman, Group Captain Mallorie, who that afternoon was converted to the Olympia.

S. N. H.

WREKIN

THE club bid farewell to Group Captain D. Durkin, M.A., whose tremendous help during the foundation period can never be forgotten. A warm welcome is extended to Group Captain H. A. J. Mills, O.B.E., who now com-

Gliding

A HANDBOOK ON SOARING FLIGHT

DEREK PIGGOTT

Since its publication in 1958, *Gliding* has been adopted all over the world as the standard reference book on learning to glide. It covers all the important aspects of gliding from the very first flight to advanced cross-country techniques.

Instructional methods have been adapted to meet the requirements of new two-seater training gliders. Many improved types of instruments have been developed and are now in general use. All are explained in this new edition. A special section, which is of particular interest to experienced pilots, has been added giving the results of research into thermal bubbles and their structure. There are several new drawings and interesting photographs of the latest types of gliders. 2nd edn 8 plates, 73 figures 30s

ADAM & CHARLES BLACK

mands Cosford and has become our new Chairman.

Regretfully we also say goodbye to the Treasurer, George Brown, and the Secretary, Harry Oxer, who are both posted elsewhere. Their places will be taken by Clive Broad, Treasurer, and Graham McKenzie, Secretary.

We also welcome Norman Smith from Germany the former C.F.I. of Eagles Club, whose loss is certainly our gain.

Much time has been spent in flying as our statistics show. The Olympia No. 26 of gliding fame has been through a Major which has dealt with the problems of old age and will restore her youth.

We say farewell to John Allerton and Terry Slater, both posted, whose instruction will be missed.

The Wrekin Club News Letter is about to be launched. If anyone in gliding has ideas or examples of club letters which they think might help us please send them to the Secretary, R.A.F. Cosford, Wolverhampton.

G. M. M.

NIMBUS

(Geilenkirchen, Germany)

SINCE our last letter, this year's achievements have continued in the Nimbus tradition and, of course, we are still the foremost Service gliding club in Germany. Our fleet now consists of a T-21, Grunau, Ka-4, Ka-7, two Swallows and a Ka-6.

The week-end of the 5th and 6th of August will be long remembered by at least three people, two Silver distances (Tom Scales and mine) but completely overshadowed by Brian (Danny) Kay's Gold distance and Diamond goal of 308 km. to the Mohne Dam and return. This he completed in 6½ hours, his final glide of 42 km. from 5,500 ft. getting him to circuit height at the airfield. The aircraft was the Ka-6, in which he also completed over 1,000 km. and 50 hours in the last month, most of this in the R.A.F. Germany competitions in which he came 4th. Well done, Danny.

We all wish Al Whiffen well on his departure: as C.F.I. he always had the good of the club first on the list.

M. J. W.

PHOENIX

(Brüggen, Germany)

THE most outstanding item of Phoenix Club news since our last entry in S. & G. must surely be Pete Dawson's 525-km. flight on Monday, 12th June, to St. Remy-des-Monts, a village north of Le Mans. This proves a well-known rule in gliding that the best cross-country days are always on a Monday! We offer Pete our congratulations on achieving his third Diamond.

On 7th May, Don Austin flew to Celle thus gaining his Diamond distance, but Chris Foot, flying a Ka-2 on the same day, unfortunately missed his Diamond distance by 20 km.

Adding Pete and Don's Diamonds to those already obtained at Issoire earlier in the year brings the total number obtained by Phoenix this season to six.

Christine Finlay recently went solo and gained her C on 6th August. Jill Hitch gained her Silver C height, subject to confirmation, on the same day.

We offer our congratulations to John Hughes, now stationed at Wittering, on his marriage in May to Genine (a direct result of the club's expedition to Issoire in February!). Ray Passfield, whom we thank for all his work as Club Treasurer, has been posted to Bassingbourn. Don Stewart, our Chairman of but a few months, has recently been promoted to Wing Commander and will be leaving us shortly for a year's tour in Saigon. We shall be very sorry to see him leave. Don is our second Chairman within six months to be promoted to Wing Commander and then posted.

The club was represented in the R.A.F. Germany comps. by Dennis Bowley flying a Swallow who did well to come fifth.

J. B.

CRUSADERS (Cyprus)

THIS summer we have been exploring a new soaring technique. The aircraft are launched in the morning when the sea breeze front passes over the site and make their way inland to fly in the convective land air. Usually the aircraft leave the inland thermals high enough to glide back to our coastal site.

A curious feature of our local sea breeze front is that it often persists after dusk, giving a line of smooth, wave-like lift. Presumably this is caused by the inertia of the very strong local sea breeze, it can be listed as another cause of the "evening thermal".

During early August Tim Oulds ran a week's camp. During this camp club members secured one A and B, one C, two bronze C legs in a magnificent finale. On the Friday Len Judd got his Silver C height, on Saturday John Scott his five hours and on Sunday Len Barnes did the first Silver C cross-country to be completed in Cyprus, also completing the first Silver C in Cyprus. Altogether a successful week, flying 51 hours with a T-21 and a Swallow.

R. P. S.

OVERSEAS NEWS



We would be pleased to receive news for this section from every country in the world where soaring is done.—A. E. SLATER, *Overseas News Editor.*

AUSTRALIA

LOADS on auto-tow cables during launch have been investigated at the National Gliding School. The wire used was 1,500 feet of 10 gauge spring steel wire weighing about 65 lb., and the tow vehicle a Ford F-100 truck. Gliders tested were ES-52B, ES-52/IV, Ka-7, ES-Ka-6, and ES-59. In general, the 52B and Ka-7 showed the highest loads and ES-59 the lowest. Examples are:—

On the ground run, 52B and Ka-7 both 300-500 lb. On initial climb, 52B 300-1,050, Ka-7 500-850. On full climb, 52B 400-1,000, Ka-7 300-1,100. When near release point, 52B 300-800 lb.

The breaking load for the tow wire was 2,000 lb., but if broken and re-joined with a reef-knot, 1,700 lb. at first but deteriorating with wear to 1,100 lb.

Alan Patching reports that the great variations in the loads were due to differences between individual pilots, and that "It was also found that a very good launch is obtained if the load in the wire is kept constant, after take-off, at 1,000 lb. for two-seaters and 600 lb. for solo machines."

Another investigation was into a suspicion that gliders seem to spin more readily after cable breaks than on other occasions. The truth appears to be that, when a pilot has brought the glider back to normal attitude after a cable break, it is still moving forward at less than stalling speed, so will immediately go into a spin if turned.

Australian Gliding

AUSTRIA

NATIONAL RECORDS.—Ernst Schraffl and Dipl.-Ing. Hans Maders, both of Innsbruck, have set up an Austrian two-seater record for Goal-and-Return with a flight of 365 km. (227 miles) from Innsbruck to Hauserkalbling and back in a Blanik.

Dr. Alf Schubert soared 640 km. (398 miles) on 12th July from Zell am See to Oberalppass and back in a Diamant, setting up an Austrian Goal-and-Return record. Other recent goal-and-returns were by Erick Gehrer, 610 km. from Hohenems to Hauer Kaibling and back,

and Ing. A. Girschick, 596 km. from Mariazell to Patscherkofel and back.

Austroflug

BELGIUM

PRISONER RELEASED.—In a letter published in S. & G. for Aug.-Sept., p. 340 ("Gliding Hazards This Side of the Iron Curtain"), Mr. A. W. Godfrey described how a Belgian pilot who landed in France was imprisoned for the night as a smuggler and his sailplane was confiscated. Mr. Godfrey now writes:—

"In the case I wrote you about an appeal to the higher authorities in Paris at the Customs and Excise office brought out some unsuspected elements of reason and the glider was restituted without cost to the club. If the glider hadn't been released it would have been possible to retaliate by seizing the next French glider that landed in Belgium and arrange an exchange with the Customs at the frontier."

An account of the incident in *La Conquête de l'Air* states that the pilot had taken off for a local flight but found soaring conditions so "merveilleux" that he took the opportunity to try for his Gold C Distance, as he was due to begin military service in a few days; however, he was set free in time to avoid further prosecution as a deserter.

NATIONAL CHAMPIONSHIPS.—A visiting pilot, Hans Nietlispach, of Switzerland, won this contest, while Henri Stouffs led the Belgians. There were six tasks, and the daily winners were, in turn, Stouffs, Defosse, Doutreloux (each in Ka-6E), Pissoort (Ka-6CR), Nietlispach and again Stouffs. Leading final results:—

1. H. Nietlispach	Phoebus	4412
2. H. Stouffs	Ka-6E	4221
3. A. Thirion	Ka-6E	3708
4. J. Pissoort	Ka-6CR	3692
5. B. Segels	Ka-8B	3497
6. P. Bourgard	Ka-6E	3317
7. M. Doutreloux	Ka-6B	3311

Conquête de l'Air

BRAZIL

CARAVELLE'S GLIDING ANGLE.—A Caravelle of the Brazilian Airways Company (VARIG), with fully throttled-down engines, "sailed" 327 kilometres from a height of 12,000 metres.

Aerosport

This makes a gliding angle of 1 in 27½ — pretty good for a non-laminar sailplane in calm air, but the report says nothing about the wind.—ED.

CANADA

JUST as England has its Damphill since the rained-off world contest, so Canada now has its Drownsbury since the all-but-rained-off National contest.

The contest days were from 20th to 30th June, so of course the preceding weekend saw some of the heaviest rains within living memory. Arrivals at Hawkesbury (the legitimate name of the venue) were greeted by local inhabitants squelching about in gumboots, and perhaps even in frogmen's flippers!

Had the weather permitted, the area could provide some of the finest soaring possible, over some of the finest countryside. Only the north is cut off by hills, and even these can provide sources of thermals if one is high enough to run for the flat country when getting low. Apart from that, the country abounds in excellent landing fields in all directions. A few mile-wide rivers do not really present any difficulty to a sailplane three or four thousand feet up, except in the pilot's mind. The only traffic restriction near the site is the rather large area of metropolitan Montreal, which starts some 40 miles to the east and stretches for maybe another twenty. It normally carries considerable heavy power traffic.

Entries were poor, and the sum total of foreign competition was two U.S.

GLIDER FINANCE

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entries, both flying Ka-6's. The organization laid on could have handled three times the nineteen sailplanes actually entered without any difficulty. The Canadian Army supported the contest by providing two towplanes complete with air and ground crews — two Cessna L-19 Bird Dog reconnaissance aircraft, which did a superb job of towing if flown at about 70-75 m.p.h. Several Piper Super Cub towplanes were borrowed from neighbouring clubs, and there was never any hold-up with launching. In fact, it was possible to get the whole field airborne in about twenty minutes if necessary.

It became apparent soon after the official contest started that we were in for a let-down unless the weather broke pretty soon and radically. The first six days produced only two contests. After that there was a slight easing of "water from Heaven" (or might it be from the other place?), and the ten-day period resulted in six contest days. As might be expected, the soaked ground dampened down any strong convection, as well as the pilots' spirits, and the longest flight of the contest was of the order of 200 km. Still, all the mandatory tasks were fitted in and it counted as a legitimate contest, good enough to pick a national champion, a man not unknown in the international field after his ninth place in the last World Contest in a borrowed sailplane—Chas. Yeates, from Beaconsfield, Quebec, and a member of the organising club. A former national champion, David Webb, was placed second, and this earned him a new trophy presented by the Hawkesbury Chamber of Commerce. The team prize was carried off by one of the U.S. entries, McGonigle and Nash. The other U.S. entry, Jack Kane, did not go away empty-handed—he won a prize for taking the most tows during the contest —a case of beer, wrapped in maps and towropes! They do not give up easily, these Americans.

The local farmers had not been able to do much haymaking over the few preceding weeks, and most fields in the area were not only wet and muddy, but also covered with a deep growth of grass—one might be tempted to call it elephant grass. This effectively covered up ground irregularities, and was the principal cause of several minor accidents—fortunately none major. The SHK of Kurt Kovacs and Henri Chabot ran into a concealed ditch the first day, damaging the nose (not the pilot's) and some structure around the wing root. It was withdrawn. Then the Foka flown by David Parsey suffered a similar fate on the last day but one. This one got away with less damage — only some cracks around the fuselage. Last but not least, the Skylark 2 flown by the first girl entrant in Canadian Nationals, Jacqueline Courval, suffered a groundloop and almost completely detached the empennage.

The most exciting flight was no doubt put in by the eventual winner on the free distance day, when he had the audacity to land at a U.S. Strategic Air Command base, and was promptly stood up against a wall and surrounded by automatic weapons for "frisking". As it transpired, the Strategic Air Command simply did not have any rules about overflights and landings by gliders, and this had the effect of throwing everything into confusion. It also allowed our pilot to get away this time. They are sure to establish rules quickly, and the next one who tries will suffer a worse fate.

ONTAERO

CZECHOSLOVAKIA

FEMININE CONTEST.—Twelve women pilots were entered for a competition at Rana. Marie Kyzivatova won with 3263 points, and Kvetoslava Benesova finished second with 2,555. The lowest total score was 337.

Individual tasks and their winners were: 28th June, 112-km. race to Jicin, Ludmilla Orlitova; 29th June, 106-km. Melnik and return, Marie Malkova; 1st July, 102-km. Triangle via Risuty and Zahorany, Marie Kyzivatova; 8th July, 93-km. Ustek and return, Monika Warstatova, a visitor from Dresden, E. Germany.

Letectvi

EAST GERMANY

NATIONAL CHAMPIONSHIPS. — These, the fifth of their kind, held in Neustadt-Gleve during late June and early July, had the worst weather yet, but six tasks were flown by pilots, including five foreign visitors from Hun-

gary, Poland and Czechoslovakia, and they covered in all 21,076 kilometres. Ages ranged from 22 (Kurt Monnich) to 44 (Adolf Daumann). Three women took part for the first time: Imgard Morgner, Monika Warstat and Ursel Heinicke. Two leading East German pilots, Nolte and Blauert, turned up half-way through after flying in the Polish Nationals, so flew *hors concours*. Machines entered were 15 Libelle Laminar, 12 Foka, 2 Favorit and 1 Orlik — 30 altogether.

Tasks: 200-km. triangle (not completed), 100-km. triangle (2 completed); 300-km. out-and-return (no one reached turning-point); 100-km. triangle; 200-km. triangle (no one completed third leg against a 19-knot wind). Then, in the final task, a 147-km. race to Anklam, a woman pilot, Imgard Morgner, won in the National Class with 107.7 km./h., and in the International Class the Hungarian, G. Petroczy, won at 114.2 km./h.

Hans Schmidt, of Neumecklemburg, with 3,471 points in the National Class, was declared National Champion. In the International Class two Germans beat the foreigners, Udo Elke winning with 4,286 points. Kmiotek was third (3,944 pts.) and Petroczy fourth (3,906).

Aerosport.

HOLLAND

NEARLY eight weeks of high-pressure areas gave some excellent conditions with good soaring weather over the whole of the country. As a result, Silver C applications are coming in at record rate.

On 24th July, H. Slierings broke the 2½-month-old out-and-return record of Dick Réparon (305 km.) by flying from "de Voorst" (Zuiderzee polder) to Roermond (Limburg) and back, a distance of 330 km., thus also claiming his Gold C distance and goal.

The glider flight with which our Minister of Culture, Dr. Klompé, opened the art exhibition earlier this year seems to have pleased her very much. On 2nd September she will visit Terlet with all the top people of her Ministry.

Another highlight in the celebrations of the 60th anniversary of the Royal Netherlands Aero Club will have been the visit of Her Majesty the Queen on 9th September, when she attends the Open Day at Terlet. The programme includes balloon ascents, parachute jumping, gliding, model aircraft and demonstrations by KLM, etc.

Gliding in the west of Holland (in the TMA west of Schiphol airport) has been curtailed by the authorities. All gliding above 1,800 ft. is forbidden following a report by a KLM pilot, who was very scared by a glider which passed 500 ft. below him, when he was climbing out from Schiphol.

SUMMER CONTEST.—Owing to the great enthusiasm to repeat last year's experiment, and also the results being used for entry into the Championships, it was more or less obligatory to organise this event again. After the success of this year I believe it will become a tradition to have two contests each year: one for the pundits, and one for the younger pilots so that they can gain entry into the National Championships. Twenty-five pilots took part, mainly on Ka-6's.

The weather during the contest was constantly influenced by high-pressure systems and therefore extremely good. Occasionally it turned out to be better for swimming than soaring! The contest was held at Terlet from 2nd-4th July under the capable hands of Menno Manting and his staff; tasks were set on ten days and points were scored on eight.

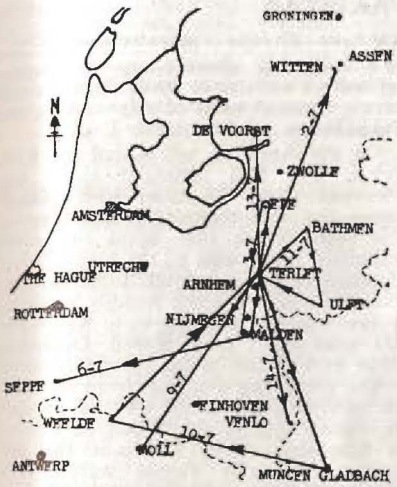
The opening day task was a 108-km. race in blue thermals, moderate winds and some overcast patches of alto-cu. Of the six who completed, D. Sandee (Ka-6) was fastest, 72 km./h.

3rd July: A 96-km. race via a turning point. The fairly strong headwind on the first leg made this a rather difficult task, which was completed by five pilots, again headed by Sandee at 53 km./h.

6th July: Another 125.5-km. race via a turning point. This time 21 pilots finished the course and it was won by van Geldrop at 61 km./h. Sandee came second.

9th July: A straight race of 110 km. Large patches of alto-cu with moderate thermals in between, and an 8-10 westerly wind. The course, which was S.S.W., was completed by nine competitors, and Sandee was the winner again with 46 km./h.

10th July: A gorgeous day with 2/8 cu in the Terlet area and blue thermals up to 3,600 ft. along the rest of the



course. The task was a 305-km. triangle.

Up to this day only three 300-km. triangles had ever been flown in Holland, but at the end of the day another four names could be added to this list. Sandee won with 53 km./h. The others were: van Geldrop, Foelkel and Aart Dekkers, the latter flying *hors concours*.

11th July: 109-km. triangle. This task was completed by 13 pilots in very hot weather, 33° C., with sparse cu and hardly any wind. Nijdam won with 60 km./h. Second, Sandee.

13th July: Back to a straight race again. Blue thermals with 2/8 alto-cu and cirrus made only a smallish task possible—68.5 km. Even so, only one pilot reached the goal, and the maximum points for the day had to be reduced to 709.

14th July: Race to Venlo, 80.5 km. Again large patches of alto-cu were difficult to pass, but one pilot managed to get to Venlo. First, de Boer, 30 km./h., followed by Eykelboom and Ledeboer with the best distance, 72 km.

Leading Final Results:

Sandee	Ka-6	7280
v. Geldrop	Ka-6	5657
Ledeboer	Ka-6	5104
Teuling	Ka-7	5022
Nijdam	Ka-8	4881

J. TH. V. E.

INDIA

IN June at Delhi, Chanan Singh climbed to 25,000 ft. without oxygen (details are not yet available). Again at Delhi Miss Raj Mitroo became the second Indian lady pilot to complete the duration leg of the Silver C.

The Aero Club of India is trying to enter either two or three teams in the 1968 World Gliding Championships, if they are able to obtain foreign exchange clearance from the Government.

DINESH CHANDRA

In reply to an editorial question on research into gliding meteorology in India, Mr. Chandra writes:—

I am not aware of any research being conducted on thermals here at present. Indian thermals—I am speaking purely as a glider pilot—are very tricky. During the pre-monsoon season there are traffic thermals—mostly dry, going up to 14-15,000 ft. However, down-draughts associated with them are also severe; to get −20 ft. is quite common but −30 to −40 ft. per second are also encountered frequently. During the monsoon, gliding is not possible: low nimbo-stratus clouds do not permit even a full winch launch; visibility is also poor.

During the N.E. monsoon good thermals are encountered: in this period thermals resemble more or less the type of thermals encountered by your pilots, i.e., moderate with large areas and associated with −3 to −10 ft./sec. down-draughts. But the winds are easterly to north-easterly, and clubs situated at Poona, Deolali, Trivendrum, etc., are not able to use them due to the Arabian Sea. The ceiling in this period is low: 4,000 to 6,000 ft. only.

ITALY

NATIONAL CHAMPIONSHIPS. — Although a longer meeting was held later, a four-day contest for the Valle del Reno trophy at Bologna during May was entitled "Campionato Nazionale e Partito", the last word meaning a party.

There were two contest days, each of which was won by Walter Vergani in an SHK. The first task was out-and-return Salsmaggiore; only four completed the course, the other three being G. Perotti, L. Brigliadori and Adele Orsi. Maximum score 2,000 pts.

The second task was via Lugo to Ferrara, with the first leg against the wind; only Vergani completed it and scored 1,000 points. Leading final results:—

W. Vergani	SHK	3000
G. Perotti	Ka-6	2621
L. Brigliadori	St. Austria	2572
Adele Orsi	Skylark 4	2478
R. Brigliadori	SF-26/St.	1213

The only other British machine, a Skylark 3, flown by R. Manzoni, finished 20th out of 23 entrants.

Volo a Vela

NEW ZEALAND

THE ANNUAL GENERAL MEETING of the N.Z. Gliding Association was held on 15th July. The President, David Jones (Wellington), said in his report that despite unsettled financial conditions the Association has had a steady growth. However, individual club finances could be a major concern in the next year.

The fact that a full team of four pilots and a manager would represent New Zealand at the next World Championships in Poland is due to the efforts of John Roake (Tauranga) raising the necessary finance.

Mr. Jones congratulated Tony Fowke (Matamata) on becoming this year's National Champion in a decisive manner, thereby winning for his club the Rothmans Championship. We are grateful for continued sponsorship of this contest. Finally, Mr. Jones thanked the Department of Civil Aviation for the co-operation its officers have shown.

Certificates for N.Z. gliding records won since 1950 were awarded for the first time. S. H. (Dick) Georgeson (Christchurch) received no less than 45 certificates.

Records won in the last year were:—

National and Local: S. H. Georgeson, 100-km. Triangle at 48.2 m.p.h.

National: P. K. Heginbotham, 200-km. Triangle at 49.5 m.p.h.; 300-km. Triangle at 41.2 m.p.h.

Local: R. Reid, 200-km. Triangle at 32.9 m.p.h.; T. Fowke, 300-km. Triangle at 31.0 m.p.h.

Certificates during the year included 81 C, 28 Silver C, 3 Gold C, 3 goal Diamonds and 17 height Diamonds.

ROSS MACINTYRE

PAKISTAN

WAVE CLOUD OBSERVATIONS. — The following observations of lenticular wave clouds were made during a trip by car through parts of Afghanistan and Pakistan on 6th-8th April, 1967.

On 6th April we left Kabul for Kandahar. The first lenticular cloud was observed about 20 miles from Kabul, above the next mountain range west of the road. From that point on, every mountain range west of the highway was crowned by a wave cloud. Sometimes the clouds stood above the steadily widening valley, which was taking us to Kandahar, 321 road miles from Kabul. Obviously these were clouds of the secondary wave.

The prevailing wind was from the west, an estimated 15 knots on the ground, increasing with height. When we arrived in Kandahar about 5.30 p.m. the still present lenticular clouds were partly dissolving, apparently under the influence of ever higher-reaching thermals.

On this day, a soaring pilot could have taken off from Kandahar, gained altitude in the first nearby wave, and then made it to Kabul, gliding from wave to wave. With the westerly wind adding to his ground speed, the Diamond C distance to Kabul possibly could have been increased considerably by continuing beyond Kabul towards Peshawar, after crossing the famous Khyber Pass, or towards the 480-miles-away Hindukush, or 600 miles to Gilgit, Pakistan.

On 8th April, Quetta's sky was first a clear blue, but shortly past noon classic wave clouds stood above the barren mountain ranges S.W. of Quetta, and more were scattered in whichever direction the eye was searching for them. Wind velocities were low at the bottom of Quetta's valley, but Quetta's airport met. gave upper winds from 15 knots up to 45 knots with increasing altitude. Our observations were made from the airport of the Quetta Soaring and Flying Club, which is the largest and most active soaring club in Pakistan. The airport runway is at 5,750 ft. a.s.l. (1,753 m.).

Wave clouds are very frequently observed around Quetta, and several times club pilots have entered the wave upcurrents, after the usual winch tow and some thermal soaring. D. P. Middlecoat reached the hitherto highest altitude

of 23,950 ft. (7,300 m.) in an Olympia 2B on 24th April, 1964. On 8th April, 1967, the appearance of the wave clouds gave the impression that altitudes up to 40,000 ft. could be reached on that day.

PETER RIEDEL *in*
Gliding Kiwi (condensed)

POLAND

NEW RECORDS.—On 6th July, 1967, outstanding thermal conditions prevailed over Poland. This mobilised top glider pilots to undertake record-beating attempts.

Adela Dankowska in a Foka 4 completed a 585-km. out-and-return, Pawlowice, Leszno, Powlowice, thus exceeding the current feminine world record held by Anne Burns of Great Britain since 6th January, 1966 (545.6 km. in South Africa).

The current World Champion, Open Class, Jan Wroblewski, flying a Bocian with passenger, completed a 563-km. out-and-return, Bydgoszcz, Radom, Bydgoszcz. This two-seater record is currently held by Franciszek Kepka and passenger who completed a 543.5 km. out-and-return five years ago.

The ladies' distance was also completed by Maksymiljana Paszyc on the same day, but we understand that Adela Dankowska landed first and can therefore claim the record. Both records are subject to homologation.

Translated by J. MIKULSKI *from*
Skrzydlata Polska

SOUTH AFRICA

BRIEGLEB TRANSFORMED. — Jan Swanepoel, chairman of Pretoria Soaring Club, and post-graduate student of Aeronautical Engineering at Pretoria University, has obtained a Briegleb BG-12 in kit form and is incorporating many alterations to improve its performance so as to accustom gliding pupils to the features of modern high-performance machines. A lift-drag ratio of 30 is expected; the geometric twist in the wing will be replaced by aerodynamic washout by mean camber line variation through a related Wortmann aerofoil series; and to help stability, each aileron will progressively attain a 3° negative angle. Camber-changing flaps and a retractable undercarriage will be added.

Wings

SOVIET UNION

GLIDING CONTESTS AT OREL.—The Georgian glider pilot Ushangi Karganashvili, competing in the People's Games at Orel, beat world record-holders Yuri Kuznetsov and Anatoly Zaitsev. Flying twice over the 100-km. triangular circuit in a Blanik, he clocked 2 hrs. 48 mins. 46 secs. to win the gold medal.

The women's event went to Tamara Zagainova, from Orel. Her time (2:55:35) was better than that of the runner-up in the men's event.

Novosti Information Service

SWITZERLAND

NATIONAL CHAMPIONSHIPS. — Held at Grenchen from 9th to 18th June, these were scored on the Wallington system, and six contest days resulted in a win for a German visitor, Rolf Spänig, with 10 pts., while Hans Nietlispach became Swiss Champion with a score of 34. The contest was "the most severe and, above all, the most selective of all the Championships to date". Tasks were:

1. Goal-and-Return Le Pont, 200.4 km. A north wind increased later and helped some pilots to achieve nearly 300 km./h. at times on the return journey. Best times: Wetli (SHK), 2 h. 44 m. 54 s. (72.7 km./h.); Spänig (BS-1) 2:47:58; Nietlispach (Phoebus) 2:49:10.

2. Goal Race via Ecuvillans to La Côte, 128.1 km.; 16 completed it. Winner, again Wetli: time 1:21:22 (94.2 km./h.); Spänig 1:23:39; Lehmann (Elfe) 1:25:10.

3. 212-km. Triangle via Pontarlier and Mandeure; 13 completed it. Winner, Baumgartner at 61.2 km./h.; 2nd Spänig; 3rd Wetli, who still led overall.

4. Goal-and-Return Col de la Faucille, 270 km. Good cloud streets broken by local showers. Spänig rose into overall lead by winning in 3 h. 45 m. 56 s. Ehrat (AN-66) took over half-an-hour longer and Seiler (Super-Elfe) nearly an hour longer.

5. Race via Langenthal to Lausanne,

137.4 km. Most pilots reached Langenthal but then encountered a barrier which only Spänig could penetrate, so he alone reached Lausanne, averaging 64.6 km./h.

6. Goal-and-Return St. Croix, 159 km. Cloud tops to 16,400 ft. with icing. Wetli, alas, had to land at the turning-point and lost his overall lead, which was taken over by Nietlispach. But Ritzi won the race at 70.9 km./h., followed by Spänig and Ehrat, and Nietlispach was 6th.

The table of final results does not include the types flown, though some are mentioned in the daily reports (as above):—

1.	Rolf Spänig (Ger.)	10
2.	Hans Nietlispach	34
3.	Markus Ritzi	39
4.	Urs Bloch	41
5.	Emil Ehrat	42
6.	Bernhard Müller	47
7.=	Kurt Baumgartner	62
7.=	Robert Wetli	62
8.	Rudolf Seiler	65

Aero Revue

RITZI RETIRES. — We regret to learn that Markus Ritzi, Swiss Champion in 1963 and 1964 and runner-up at the 1965 World Championships, is to retire from competition flying. His reasons are mainly to give younger up-and-coming pilots a chance, and to get more time for family life, which his additional activities as an airline and military pilot denied him.

UNITED STATES

NEW CHAMPION.—A. J. Smith won this year's Nationals at Marfa in a Sisu 1A with 7,425 points out of a possible 8,000. (Article in next issue.)

WORLD RECORDS.—Edward C. Minghelli claims a multi-seater goal-and-return record for a 360-mile flight from Cedar City, Utah, to Price, Utah, and back in a Prue 2A, with Robert Semans as passenger, on 26th June. Previous record 337.7 miles in Poland.

This flight also beat the National record of 234.7 miles. Another National two-seater record by Mr. Minghelli, 317 miles distance from Cedar City to El Mirage with Jack Lambie as co-pilot, was flown on the 30th June.



A World record for the 100-km. Triangle, 84.59 m.p.h. (136.18 km./h.) was set up on 30th July by Hannes M. Linke of Los Angeles, a German citizen, flying from El Mirage in a Libelle. Previous record, 79.77 m.p.h. held in U.S.A. On the same day William S. Ivans flew a Sisu 1A round the same course at 83.47 m.p.h. to a new National record.

NEW EDITOR FOR "SOARING".—Bennett Muir Rogers, a free-lance aviation writer who took up solo gliding in 1961, is to edit "Soaring" on the retirement of Richard Miller, the present Editor, starting with the October issue.

WEST GERMANY

CONTEST AT HAHNWEIDE.—This, the most important meeting of the year in W. Germany, is described as an International Competition, though it had the status of a National Championship. One pilot, Emil Bucher, arrived by air after a 400-km. flight under clear sky via Olten in Switzerland. There were two Classes, Open and Standard, and markings were on the Wallington system, though half-points were included in the aggregate scores. The period was 29th April to 7th May, and the site near the Schempp-Hirth factory.

Rudi Lindner (Phoebus) won in the Open Class and E. G. Peter (Ka-6) in the Standard. Six tasks were flown.

1. 300-km. Triangle via Harburg and Lauda. The course was difficult at the end and only Bucher in the Open and three in the Standard Class (which was launched first) nearly completed it.

2. A short out-and-return was set because of a cold front approaching at

25-30 knots, but it arrived after the 10th launch. Only Dr. Gross got round the turning-point, and it was "no contest".

3. A 174-km. Triangle which less than 40% of pilots completed. Rudi Lindner only averaged 50.6 km./h., and in the Standard Class E. G. Peter won at 44.9 km./h.

4. In poor warm-sector weather a 97.2-km. out-and-return was set, but the high cloud cleared off, and most pilots flew the course twice in the hope of improving their times, Lindner won at 84.2 km./h., and Fischer in the Standard Class with 63.8.

5. In good unstable weather preceding a cold front, a 189.6-km. Triangle was set. The front arrived before all the Standard Class were launched, and only Peter (55.7 km./h.) and Schäuble got round. Eight of 22 in the Open Class finished and Hillenbrand (Libelle) won at 65.1 km./h.

6. In fantastically good weather, which Lindner said he had only seen before in Argentina, many pilots thought a 600-km. Triangle possible. But a 153.8-km. Triangle was set. Reinhold Stuhr (BS-1) won the Open Class with 92.6 km./h., and even the 10th best speed was 80.5 km./h., while Peter won in the Standard with 81.4 km./h.

Foreign visitors are not all specified, and included one named Smith, who finished 10th.

Leading final results:—

Open Class		
Lindner	Phoebus	14.5
Hillenbrand	Libelle	16.0
Stuhr	Cirrus	16.0
Standard Class		
Peter	Ka-6	8.0
Schäuble	Ka-6	10.5
Fisher	Ka-6	19.5
Kepka	Foka 4	25.0

YOUTH CAMP.—An Anglo-German gliding and social camp has been arranged at Hirzenhain for the period 6th to 26th October, for 10 British and 10 German young people (male) aged between 18 and 25. Participants should be at the railway station of that place before 2 p.m. on 6th October. The cost is DM.150, payable on the first day. Conditions of entry are similar to those of last year's camp, given in S. & G. for April-May, 1966, on page 127. The Organizer is Heinrich Pempe, and the address: 6341 Hirzenhain/Dillkreis, West Germany. Tel.: 027702/172.

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ZAMBIA

BLANIKS THREE. — The Zambia Government has bought three Blanik sailplanes for training recruits for the Zambia Air Force. They are operated by members of the Copperbelt Gliding Club, one being in use at Kitwe, one at Ndola and one at Lusaka. *Wings*

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