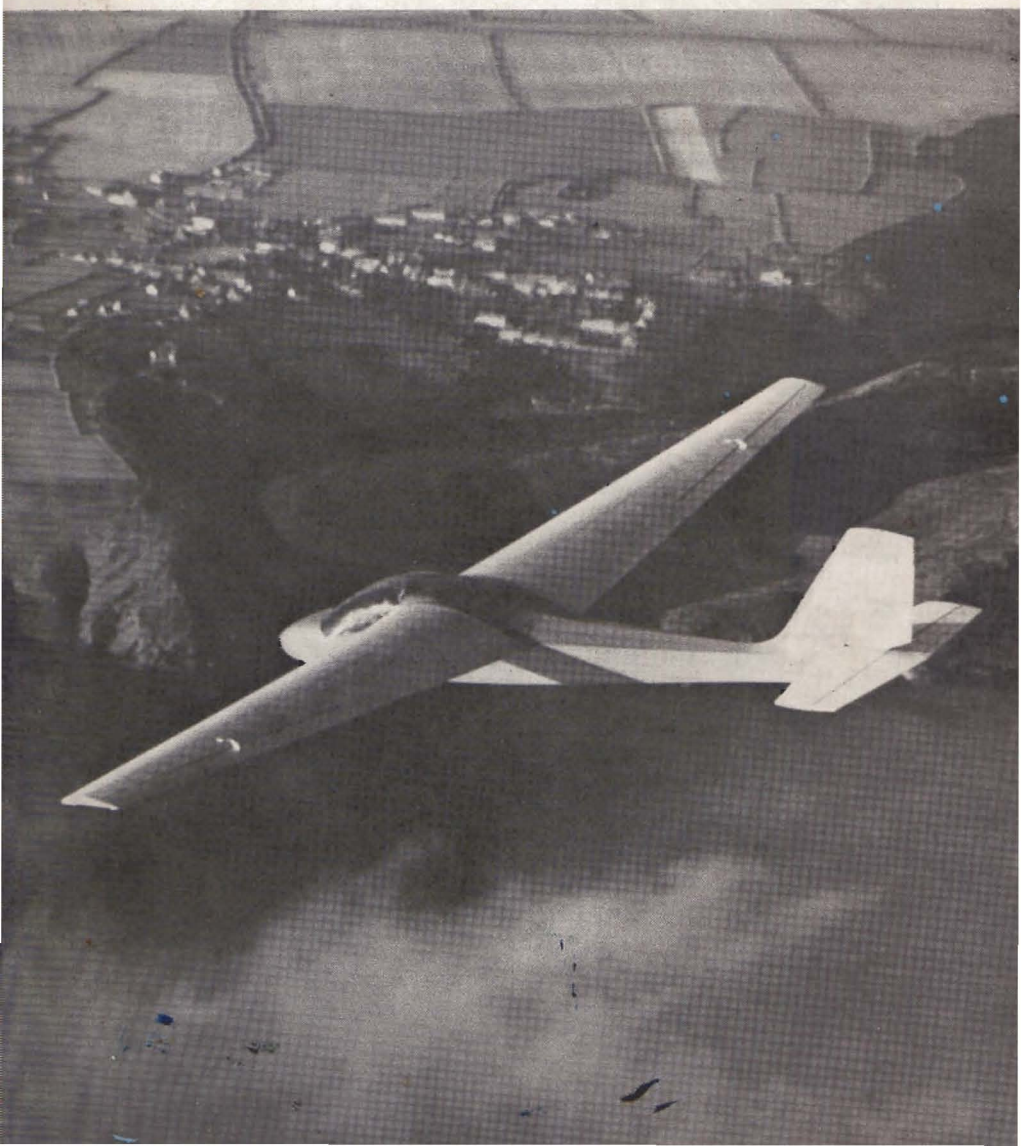
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Cover photograph: A Capstan from the West Wales Club flying above orographic cloud over the coast near Tenby. *Photograph by Graham R. Hughes, Squibbs Studios, Tenby.*

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CALIFORNIAN HOLIDAY

By FRED SLINGSBY

LAST March, Fluff and I thought it was time to go and see our many friends in the U.S.A., particularly Dick and Lucy Lyon, who live in Tarzana, near Hollywood, and who had sent us many pressing invitations.

The Lyons are typical American soaring folk, Dick has two Diamonds in his C badge, and perhaps a third by now—he has been gliding for many years. He also knows every bit of California, certainly all the best soaring sites. As far as Dick is concerned, California is America at its best; I agree with Dick every time on that score, at any rate.

As the spring is the best for a holiday out West, we made a quick decision, and on Friday, April 15th, we left Manchester Airport on a Super VC-10 for New York, en route for Los Angeles.

Apart from a long delay at the first stop at Prestwick, and then another 45 minutes wait on the landing field at New York until a dock was cleared, we had a wonderful trip in the luxurious VC-10 to Kennedy Airport, where we made our first contact with the U.S.A. It was rather bewildering at first. The whole World's population seemed to be scurrying around in great haste in all directions.

With the help of a friendly American (and all are very friendly indeed) we got a "charge call" through to Lucy Lyon to let her know we would be an hour late in Los Angeles. We found our "gate" for a Boeing 707. The clerk who booked us in was very cheerful: "What do you think of it?" he said. "It sure must look a tangle to you folks, but it all works out, you'll find." When we were told we could get aboard, I was very impressed by the well lighted and carpeted corridors, leading straight from the waiting room gate right into the aeroplane. No draughty march across a windy patch to a mobile stairway in wintry conditions. It was indeed a pleasant contrast to what we had been used to.

As soon as we found our seats, we were asked by the stewardess if we wanted anything. With a certain doubtful air, we asked if we could have a cup of tea. It came up with a smile, and very quickly too!

We arrived at Los Angeles at 7.30 p.m. local time, but not so our luggage.

Dick Lyon had a very forceful talk with a nice man in a little office, who put through a call to New York. We then followed Dick to another arrival point, and waited about an hour; and behold our luggage suddenly turned up from another flight. It was getting on for 9 p.m. local time, but my watch showing Manchester time was after 4 o'clock in the morning. Nevertheless, we felt fine and enjoyed our first sight of Los Angeles, its lights stretching to the horizon in all directions, as we joined the broad stream of traffic on the freeway which eventually took us to Tarzana.

Dick and Lucy Lyon live in a charming house, with a "backyard" (garden to us) with about half a dozen orange trees, a few lemon trees, palms, and a lot of spikey looking plants, and lots of lovely coloured flowers. There is a roomy patio for lounging in the sun and having a barbecue. The temperature next day was 98°F. but very dry. I was told that a tree of tangerine oranges had all been



Dick and Lucy Lyon.

reserved for my use—they knew that I adore oranges. Every morning I got at the tangerines and absorbed the "vits". Word soon got around to the soaring people that the Slingsbys were in the district, so Lucy and Dick organised a "get together" at their house. About 46 people turned up, some coming from over 80 miles away and intending to get back that night. The Americans think nothing of such mileage for an evening out.

After a lot of good natured chatter about World Contests at South Cerney last year, I was called upon to answer questions and had about an hour of good natured bantering. "Why had I come to California?" "For a good holiday," I said, and Fluff and I meant to have it, with their blessing.

I was told that there were a number of high-performance ships in the construction stages and I got a pressing invitation to call and see them all during my stay in California. Eventually I did so.

Dick took a week's vacation from his work as research and development engineer at one of the Howard Hughes armament plants, and he planned a 2,000-mile motor trip to take in some of the gliding sites and also a two-day visit to the Yosemite National Park.

On our way up to Yosemite we called to have lunch with Vern Oldershaw and his wife at Bakersfield in the fruit and vegetable district of California. Vern is the President of the Southern California Soaring Society, and a postal official. He was using his spare time designing and building a "two-place ship", which he hopes to complete this year. Vern is an expert craftsman, and has built a few types over the years he has been interested in soaring. He lives in a spacious single-storey house with a luxurious swimming pool and gardens. He actually planned and built the house himself. These Californians are certainly workers.

Travelling northwards we called in at Livermore, Ted Nelson's place, which had a large hangar of unique design from which the "ships" could be taken in or out from both sides without obstructions. When we arrived, Ted had just returned from a cruise around the San Francisco district in a Hummingbird, a motorised two-place sailplane which he developed about 12 years ago with the assistance of Harry Perl.

I had a wonderful opportunity to examine the Hummingbird in great detail. Ted says he can take off fully loaded in a hundred yards, climb to a few thousand feet, retract his engine, and enjoy thermal soaring for a few hours over a wide range. Then, if necessary, he can get out the engine, start it up and motor home in comfort. Ted Nelson designed the 50 h.p. engine, with a very low power/weight ratio; Harry Perl designed the airframe, and the result is the answer to the age-old question: "Why not put a little engine in it?"

The Hummingbird has a very short take-off run, and Ted assures me that its performance as a sailplane is remarkably good. As one would imagine, the initial cost is high. It was quoted in the American magazine *Aviation* in 1954 as 7,000 dollars. I doubt if it would be any less than 12,000 dollars these days.

Ted Nelson has handed over the production and market rights to the Nelson Aircraft Corporation, P.O. Box 551, Irwin, Pennsylvania, U.S.A. He told me that the design development and prototype, including the official charges for Type approval (A.T.C.), cost him a very large figure, in fact in the region of 300,000 dollars. High indeed!

After our visit to see Ted, we put up at a super motel at Freemont where we met Jerry Morris and his wife Joan. Jerry is a Slingsby Sailplanes Agent for California, and lives in San José. Both he and Joan are enthusiastic soaring pilots and operate from Truckee, close to the Nevada border about 30 miles west of Reno.

The following evening Jerry and Joan organised a get-together at our motel and about 35 soaring pilots and their wives turned up for dinner. We talked soaring and sailplanes until a very late hour.

The next day we made a trip to Hayward, not far from Freemont, to see Les Arnold's Soaring School.

Les Arnold is quite a character and well loved by all the S.S.A. He runs a very efficient establishment, and has a fine fleet of sailplanes including a Hummingbird and several aeroplanes. Les has been keen on soaring for many years.



A gaggle, assembly, dope, or production line of famous sailplane designers. Back row (l. to r.): Irv Prue, Ray Parker, Vern Oldershaw. Front row: Howie Burr, Vic Saudek, Fred Slingsby and Jack Laister.

He was a successful chicken-farmer in the early days, then sold out (excepting his hat and overalls, which he wears for flying) to take a chance with a full-time soaring school. I asked him how he was making out. "Fine, fine," he replied—he had Yorkshire grandparents; when he said he was doing "fine", I knew he was really doing well.

That morning Jerry Morris showed us a new Dart which had just arrived from England. It looked magnificent in its bright and shiny paint, and a long way from home.

That afternoon we set off for Truckee, calling at Sacramento, the capital of California—a beautiful city where every sort of plant seemed to be in full bloom at the same time. Here we met John Baird, the Californian member of the S.S.A. Governing Board of Directors. John and his wife joined up for lunch at a very smart restaurant just outside the city.

When we arrived at Truckee, a very small township high up in the hills, accommodation appeared to be scarce, so we pushed on to Reno, Nevada, and found numerous motels to choose from. Incidentally, these motels are a boon to the motoring tourist in America. They are cheap, very comfortable and well appointed. Good-class motels for two people cost about 10 dollars, but one must eat out.

That night we went into town, and soon were involved in the main attractions of Reno, the gambling halls. Here Fluff won a "thousand to one chance" and caused some excitement amongst the less favoured fanatics in her vicinity. She was paid out 50 dollars. Next morning after breakfast at another restaurant, and while waiting for Dick to get the car, Fluff got yet another jackpot, and I was glad when Dick arrived to drag us away. Fluff still has her little packet of folding money she took from Reno!

From Reno we travelled north for a few miles to see the site for the 1966 American Nationals, the Stead Air Force Base. Near by was a dry lake glimmering white in the sun. This is also used as a soaring site, but I imagine it would be very hot indeed in summer time.

That afternoon and evening we went

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to Lake Tahoe, partly in Nevada but with the larger area in California; a wonderful sight from the drive round the rim of the lake to Stateline, with its smart and attractive lure of slot machine halls, which we avoided with grim resolution.

Next day it was evident that the strong sun was just about cooking my face, so it was agreed that I must have a genuine western hat—a ten-gallon type with brim turned up each side (we were in the Pondarosa country, of course). The western stores in Carson City tried hard to fit me up; nothing large enough there. Dick said that Bridgeport, a town in the mountains, would be sure to have big hats as it was real cowboy country. One storekeeper looked at me very hard when I said I doubted if he had my size. "Wanna bet?" he said. "No, just a wide hat my size," I asked. He failed to find one. "There never has been a hat made size 7⅛, and I guess you know it," said he. However he did try. I gave it up and made the best of a jungle hat that I had picked up a few years ago in Cape Town. (My! how we soaring folks travel around.)

From Bridgeport we motored on to Bishop in the High Sierras. It was the opening day of the fishing season and the airstrips of all small towns we passed through were packed with small private aeroplanes.

There was very little soaring activity at Bishop that day. It is a very impressive site with high and massive mountains throwing up powerful rolling clouds.

Next afternoon we rode through the desert to Tehachapé where Fred Harris runs a very lively Holiday Soaring School situated in the hills. Thermals seemed to be boiling up all over the place; they were really vigorous even at ground level, whirling up the sand and desert debris to a good height.

When motoring along the road, Dick suddenly said: "Here's one coming across our path." As it struck us the car shuddered in an alarming way. At the soaring site a large thermal suddenly appeared, collecting anything it could pick up, and made towards a line of parked sailplanes. There was a mad rush to hold the machines down; a canopy cover was caught up in the whirl and went off into the distance in a lively sky dance. What an exciting place for a soaring school!

Fred Harris is a cheerful fellow with years of flying experience. He had a long spell as a "crop duster", until he and his wife Goldie decided to have a more peaceful life for a spell, and so took over the holiday school at Tehachapé—a difficult name for me to get right in conversation. I have adopted the habit of referring to it as Fred Harris's place; it is easier that way.

The mountains around the site go up to nearly 5,000 feet. Two steep valleys converge at Tehachapé, and so the airstreams, roaring down both of them, really get lively when they meet at the site. The Southern Californian Soaring Society members just love this place.

We were now nearing Los Angeles, and after a short stay in the Mojave Desert to take pictures of the flowering cactus and the weird Joshua trees, we passed through Lancaster and Palmdale to the San Fernando Valley and Tarzana; a really wonderful week of travel.

The next week we visited the Marine Park, also Disneyland—both most enjoyable.

On the Sunday morning Dick suggested breakfast out somewhere. Off we went to the Roy Rogers Apple Valley Inn in the high desert, about 60 miles away! "Californians are like that," Dick said, "kinda restless on Sundays!"

However, there was more to it than breakfast at midday in a desert restaurant. We were now quite close to El Mirage—Gus Briegleb's Soaring School, a very popular site indeed, run by a very popular character, and supported by his wife Anne and their two sons.

As we arrived at the school a very impressive-looking sailplane was just taking off, a war-time Pratt-Read side-by-side two-place ship which I should imagine is very spacious and stable in flight. I've always been given to believe that no other country but Britain had a side-by-side sailplane. We live and learn.

Gus showed me his treasured album of the photos he has collected over the years. Recent additions were of an experimental high-speed sailplane without wings! Gus helped the research authorities with the design of this extraordinary aircraft and built the prototype of wood. An Air Force test pilot flew the thing at

El Mirage and landed it safely—it had tail units of sorts. I gathered that the ship was designed for re-entry experiments for astronauts.

Reading through Gus Briegleb's visitors' book, I saw many names of people from England. Talking to one of the Brieglebs' boys, I learnt that Brian Masters, who, up to a few years ago, was a professional instructor at Lasham and then took a similar job at El Mirage, is now General Manager of "Aero Jets", a branch of "Flying Tigers" near Santa Monica, and is doing well.

Our next call was at Pear Blossom to see Irv. Prue and his wife Ruth, who had joined our party a few weeks earlier at Tarzana for our get-together.

Irv. Prue has designed many successful ships. He is now working on an advanced sailplane which I am sure will be way ahead on most now in use. His workmanship is superb. I look forward to having news of the test flights of his latest effort—a beautiful all-metal ship with a high aspect ratio wing and . . . lots of special features which I am not prepared to disclose in this narrative.

I was impressed by the many hours of work these enthusiastic Californians put into their creations. Many have highly placed and responsible jobs in the leading aircraft firms; jobs which must demand maximum concentration of effort for research work. Yet they use their spare hours designing and actually building their own sailplanes.

One afternoon we called to see Stan Hall, another expert designer and certainly in the category outlined above; he is the designer of the successful Cherokee sailplanes, many of which have been built by amateurs. He took a few hours off from his work to show us his latest designs which he was building in his garage at home. When I asked him why he had used a special method of wing-root fairing, he said: "I guess I just like it that way." He was indeed very happy in his work.

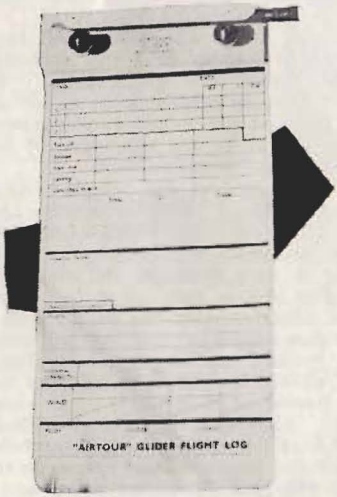
Later in the week, after lunching with Richard Miller (editor of *Soaring*) and George Uveges (who takes most of the photographs for the magazine), we paid

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a most interesting visit to the Soaring Society of America's offices.

Richard then kindly took us to see Jack Laister in his workshops. Jack designed some Army gliders in the last war. He is now busy on a high-performance sailplane and actually building the prototype; helping him with this, in their spare time, were two airline pilots! The machine has a plastic fuselage made in two halves lengthwise and a high aspect ratio wing. Jack Laister knows his stuff, and I await the completion of his "latest" with interest.

One Sunday morning we called to see Ray Parker, who has a workshop in his backyard and, like the other enthusiasts I have mentioned, is never contented unless he is doing something with sailplanes. His latest T-tail ship is a charming sight. Ray has done some wonderful work in sailplane design and construction.

Of course, I have known people in our own country who have built sailplanes from kits of parts and drawings supplied commercially, and they have done some good work too. But I have yet to recall or know of people of the same scale of achievement as those I have mentioned who have designed, and built from scratch, complete sailplanes and obtained aircraft type approval—all in spare time. I wonder why this is so. The Americans have no more spare time than we have in Britain—less, I imagine —so they must work harder and enjoy their hobby work more than we do.

Speaking to a prominent member of the Southern Californian Soaring Society on the organisation of gliding in Britain compared with America, I asked why they did not have clubs like we have in Britain. He said they got on very well as private groups and fraternisation as a Society. Clubs, he said, were always busy making rules and regulations and having meetings, appointing impressively named officials, and creating a sort of political atmosphere. "In America we would rather make sailplanes than lots of club rules," he said. Pondering his reply, I would not entirely agree, but there is quite a lot of sense showing through his remarks.

Nevertheless, it does perhaps explain why the gliding movement in the States is small compared with other countries on a basis of population.



Mrs. Slingsby ("Fluff") and Richard Miller, Editor of "Soaring".

I was invited to attend the April Meeting of the Soaring Society of Southern California (S.S.S.C.) in Hollywood. Moreover, I was asked to get up and talk about sailplanes and their development in Britain over the many years I have been thus engaged. The evolution of the Dart had to be outlined. I explained that all our types had been evolved from the experience we had gained from our earlier efforts, and when one carefully examines our types in detail, this becomes evident. The all-moving tail of the Dart is inherited from the Hjordis of 1934-35. The detachable root-fairing cover from the Gull of 1937 and later types; wing taper ratio from a much earlier type still. The rake of the fin is certainly new, and follows modern trend, as the dress designers say. Anyway, the end product is a good, sound job.

It was a sad morning for us when we left Dick and Lucy Lyon on the Inglewood Airport at Los Angeles. They had made a wonderful holiday for us in a beautiful part of the world, and what is more, with gliding folks, who understand one another—I think so, anyhow.

Where do we want to go next for our sunshine holiday? Need you say it?

A RATING SYSTEM

By THE ARMCHAIR PILOT

ONE way of getting some insight on how to organize a rating system in which points could be scored for all good flights, in or out of competitions, might be to ask a statistician to design an ideal "experiment" for us, and then to see whether it contained any useful suggestions. So let us put a statistician (who has never been in a glider before) and a glider pilot (who has never flown a calculating machine before) together in the two-seater and bunjy them off for a long stretch of hill-soaring.

STAT: Well, now, what it is you want to measure?

GLID: I was hoping you would keep the difficult questions until we were higher.

STAT: But it is rather an obvious first question.

GLID: That doesn't mean we know the answer. Or, rather, we don't know what the answer means: we want to measure pilot skill. The trouble is, you're now going to ask "skill at what?"

STAT: Yes, I am.

GLID: Well, we have come a long way since you could measure skill in simple terms such as duration, or height gained, or distance flown downwind (remember I was telling you about our badge system?). Now the competition tasks tend to be races round set courses, and the skill is in pushing along as fast as possible without chancing a premature landing. You see, one is always balanced on a knife edge; if one hurries, one usually raises the chance of landing — a sort of stochastic cross-country.

STAT: Good heavens! How did you know what "stochastic" means?

GLID: I read my SAILPLANE & GLIDING.

STAT (*aside*): I wish we had descriptions of gliding events in the statistical literature. (*To* GLID) Let's call the time taken, or distance flown, or whatever the criterion is, the "performance" of the pilot in the task in question. Your problem, as I understand it, is to estimate the skill of the pilot from his performances, but this is not straightforward because his performances depend on much more than skill alone. Can you tell me what these other factors are?

GLID: Yes, I made a list before we took off. Just hold this stick a minute whilst I find it. (*Pause*) Here it is! (*Reads list.*)

(1) Weather. In a competition task this is nearly the same for everyone, but not outside competitions.

(2) Glider. Some are better than others, depending not a little on the conditions.

(3) Site. Some sites are easier than others, depending on the task.

(4) Task. Some pilots are better at races, others are better at distance flights.

(5) Luck. Persistent luck, of course, is called skill.

In addition there are other factors, such as glider instrumentation and the driving skill of one's wife, but we can't take everything into account.

STAT: Exactly! We have a term for non-persistent luck and other odds and ends — "error".

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GLID (*sharply*): Are you referring to the driving skill of my wife?

STAT: It's a technical term. So performance depends on six factors: skill, weather, glider, site, task and "error". Or, to put it another way, skill is estimated by some function of the factors performance, weather, glider, site, task and error. So what you must do is to make every pilot fly in every combination of these factors and record his performances. Send these to me and I will estimate his skill.

GLID: Steady on! How many different types of British weather do you think there are? Do you know how far it is from Perranporth to Aberdeen? And where are all the gliders going to come from?

STAT: Sorry, but you did ask me to design the ideal experimental set-up. If only I had all this information I could estimate pilot skill on the assumption that it was a linear function of the factors.

GLID: Oh, you can't assume that! The weather, the glider, and the task all interact in a most complex way to influence the performance. Anyway, how can you possibly have a single factor measuring weather, for example? You statisticians live in dream worlds.

STAT: I see your problem is quite difficult. Perhaps flying is easier. May I try?

GLID: By all means; let me do some talking instead. We must evidently simplify things greatly. Take the weather factor first. We wouldn't want to allow for it completely even if we could, because judging the weather and choosing the right day is part of the pilot's skill. Now that gliding is so competitive we really cannot make allowance for the fact that Joe Bloggs can't take Mondays off (the best weather is always on Mondays). There is, nevertheless, an overall weather factor which varies from site to site; English thermals, to take an example, are generally stronger than Scottish ones. Let's therefore forget about the weather factor except in so far as there are site differences, which may be included in the factor "site".

STAT: Good, that's a simplification worth having.

GLID: Now let's take the factor "glider". Here we are thinking of handicaps, of course. But a one-number handicap, however ingenious its design, is far from ideal, because the true handicap depends on the weather and the task. This, coupled with the fact that competition glider performances are falling into a narrower and narrower band, makes handicapping more trouble than it is worth. On the other hand, it is vital that the slower, lighter gliders should not suffer a hidden handicap through biassed task-setting. But that's our problem, not yours. So no handicaps.

STAT: Splendid. That leaves site and task factors.

GLID: In competitions, tasks are set, not chosen by the pilot, so that provided the setting is unbiassed our only problem is to determine the relative marks that should be awarded for various tasks. Outside competitions the pilot is free to choose his own task, and in this he will be influenced by the marking system. A well-constructed system will be a positive influence for good on flying in this country. One difficulty is that there will be a considerable interaction between sites and tasks; thus a 100 km. triangle from Aberdeen is difficult, but a 300 km. triangle probably impossible (like a goal flight from Lasham to Portmoak), so that the relative merits of completing these tasks are out of all proportion to the relative merits of completing them from Lasham. So we must construct a scoring system which allocates marks for each task at each site. Does this make sense?

STAT: Yes, but you are about to dispense with my services, because unless you do a controlled experiment in which many pilots attempt different tasks at different sites, you are never going to get the relative scores right.

GLID: I see that point, but I am afraid we are never going to be in a position to conduct such an experiment. How would it be if, instead, marks were allotted according to the site record for the task in question, which would score 1,000 marks?

STAT: But surely the standard of pilot skill at — I've forgotten the name of the place now — is very much higher than at Aberdeen, so anyone could pick up marks at Aberdeen.

GLID: Splendid! What a marvellous

influence in the right direction! It would do the peripheral clubs the world of good, and, remember, after a year or two the system would automatically settle down as the site records were pushed up. Initially we would have to designate site records where no realistic ones existed. And small clubs near to each other should count as one for these purposes. You may have talked yourself out of a job, but I can see I shall have to take some dual instruction on a calculator. Just pull that knob — no, the other one — I must go and send a telegram to Artillery Mansions.

SUGGEST NATIONWIDE LADDER STOP ALL FLIGHTS ELIGIBLE STOP 1000 MARKS FOR EQUALLING SITE RECORD IN TASK OTHER PERFORMANCES PRO RATA STOP INITIAL SITE RECORDS STIPULATED BY BGA IF NO REALISTIC ONES EXIST STOP BEST SIX SCORES OF YEAR DETERMINE RATING STOP NO OTHER YEAR COUNTS STOP ANTHONY EDWARDS FIVE CARLTON PLACE ABERDEEN.



A VERY successful party of 40 members and friends went to see the film "The Blue Max" at the Metropole on the 13th September.

The next social event will be the annual Wine and Cheese Party on Wednesday, 5th October, from 7.30 p.m. Tickets will be 7s. 6d. from the bar or at the door, and the social committee promise a good array of wines and cheeses. But come early as supplies began to run a bit short about 9 p.m. last year.

Wednesday, 2nd November, at 8 p.m. will see the opening of the ninth Aviation Art Exhibition and Competition by Graham Hill, the racing motorist, who is himself an aviator and keen on Art. This will be the first exhibition to be organised in the Club by the newly formed Society. I hear that they are going from strength to strength with over 40 artist members already. This year's exhibition should be well worth a visit and it will continue until the end of November; weekday evenings 6 p.m.-10 p.m., Saturdays and Wednesdays 3 p.m.-5 p.m. The next get-together for members of the Society is scheduled for Friday, 7th October, 7.30 p.m. onwards, and a special get-together in the form of a buffet supper will be held on Saturday, 12th November. Enquiries about membership of the Society and the next exhibition should be addressed to Mrs. Yvonne Bonham, Hon. Secretary, 14, Little Brownings, London, S.E.23.

The Club will again be organising a series of instructional lectures on Monday evenings, January to March, 1967, and full details may be had from the Club.

Y. C. B.

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

Sept. 28. Gliding on the Equator, by Mike Garrod.
Oct. 5. *Wine and Cheese Party*, 7s. 6d. at door.
„ 12. Films.
„ 19. Air Law, by Peter Martin.
„ 26. *Annual General Meeting* followed by Motoring Films.
Nov. 2. Official opening of Aviation Art Exhibition, 2nd-26th November.
„ 9. Hovercraft Operations, by R. B. Stratton.
„ 16. Aviation Films.
„ 23. South African Nationals, 1966, by Alfred Warminger.

THE GERMAN NATIONALS

NEARLY a hundred thousand miles — actually 154,000 kilometres — were flown on ten contest days by 15 Open Class and 49 Standard Class pilots during the 13 days of the 1966 German National Championships. Seven of these contests were on consecutive days, and were followed, not surprisingly, by a rest day, while on the two remaining days tasks were set but not flown.

The meeting was held at Roth, near Nuremberg. The Air Force and the Army took a large part in the organisation and provided the tugs. Sailplane types most largely represented were: in the Standard Class, 26 Ka-6 and 6E, 8 Phoebus and 4 SF-27; in the Open Class, 4 SHK, 3 Hütter Libelle, 2 D-36, and all the rest were different. The only foreign participant was Claude Gavillet from France, with an Edelweiss.

SUNDAY, 29TH MAY.—Heavy showers in a very unstable northerly wind from Scandinavia prevented a 153-km. triangle being flown.

MONDAY, 30TH MAY.—First contest day: a 153-km. Triangle via Hesselberg and Rothenburg; this was yesterday's triangle, but as the showers had moved eastwards and been replaced by good cumulus and excellent thermals, pilots were told to fly round it twice, making 306 km., and 58 of the 64 did so. In the Open Class Rolf Spänig in a BS-1 (a Hütter fibreglass type) averaged 80.9 km./h. and W. Schneider 80.8 in a D-36 V2. All exceeded 66 km./h. except one who did 58.7, one who went once round and one who didn't. In the Standard Class Hans-Werner Grosse made 75.7 km./h. in a Ka-6.

TUESDAY, 31ST MAY.—Goal-and-Return Simbach bei Landau, 280 km. in all. Still a northerly airstream but a different air mass bringing much overcast; many got there but no one got all the way back. The outward journey against the wind took a long time, though it was helped by some breaks in the overcast which allowed cumulus to form; but the overcast got worse on the return journey. All but two of the Open Class reached the turning-point and K. Hillebrand covered the longest distance, 245 km., in a Hütter Libelle (H-301). In the Standard Class Glöckl made 241 km. in a Phoebus (all-plastic).

WEDNESDAY, 1ST JUNE.—A north-west wind bringing North Atlantic air via the North Sea brought showers again. The task, a 383-km. Triangle, took the pilots S.W. to Nabern (Teck), then N. to Hettstadt, then back, so they had the day's best thermals for the into-wind leg. But speeds along the course varied greatly: sometimes the going was fine; at other times they had to wait for thermals to boil up under the blue. Only 9 in the Open and 7 in the Standard completed the course; fastest were Spänig (69.5) and Grosse (65.9) respectively.

THURSDAY, 2ND JUNE.—Goal-and-Return Göppingen Army Airfield, 246 km. in all. The N.W. wind was stronger, thermals were torn and there was little cumulus development. Only 5 in the Open Class succeeded, Waibel doing best at 53.2 km./h., and 5 in the

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Programme of production:

Ka-6CR. "Rhönsegler" High performance single-seater

Ka-6E. The Ka-6 with all flying tail for the demanding competition pilot

K-8B. Single-seater for training and performance

AS-K 13. The new two-seater mid-wing for initial training and performance.

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Standard, Lindner making 48 km./h.

FRIDAY, 3RD JUNE.—A 227 km. Triangle, via Giebelstadt and Crailsheim, was flown in a warmer and moister air mass producing excellent soaring weather. Spänig achieved 81.2 km./h. and nearly all the others in the Open Class were in the 60's and 70's. Best in the Standard was Heinz Huth with 73.5 in his Ka-6E. At this half-way stage, overall leaders were: Open, Waibel, followed by Spänig and Kuntz; Standard, Huth, followed by Grosse and Peter.

SATURDAY, 4TH JUNE.—A 234 km. Triangle via Niederstetten and Aalen-Elchingen. With the site in the middle of a High, there were no clouds, and the less experienced found the blue thermals difficult (there is no mention of gaggling in the account). Day's winners: Open, Spänig, 77.4 km./h.; Standard, Lindner (Phoebus), 70.9.

SUNDAY, 5TH JUNE.—A 341 km. Triangle to the S.E. to avoid thunderstorms approaching from France. Cloudlessness around the second turning-point, further into the High, was troublesome and only 8 in each Class got round. Spänig's speed, 70.4 km./h., was at least 10 km. faster than anyone else and he regained the overall lead.

By now the competitors had earned a Rest Day, and this was doubled when next day's task was cancelled due to strong wind, showers, and a 2,300 ft. cloudbase.

WEDNESDAY, 8TH JUNE.—A 166 km. Triangle proved successful in spite of increasing cirro-stratus from thunderstorms to the S.W., as an early start was made to avoid it. A few tried to get round a second time, but the cirrus had grown too thick. Best in Open, Gailing (SHK) with 79.6 km./h.; in Standard, Glöckl (Phoebus), 69.8.

THURSDAY, 9TH JUNE.—Triangle, 243 km. via Burg Feuerstein and Niederstetten, in a similar weather situation with weak winds and excellent thermals. Open Class: fastest, Spänig, 84.5 km./h.; slowest 69.8. Standard, Grosse (Ka-6) made 80.6.

FRIDAY, 10TH JUNE.—Twice round a 184 km. Triangle = 368 km. Cumulus began before 10 a.m., and in good soaring weather the majority accomplished the task, Spänig with 79.5 and Grosse with 71.8 in their respective classes, and both being hard pressed by their nearest rivals. So it ended.

German comment on this meeting was that, for the first time, the Open Class machines performed noticeably better than the Standard, mainly because, with no worse sink, they flew about 20 km./h. faster between thermals.

Leading Final Results

OPEN CLASS

1.	Spänig (BS-1)	... ...	7663.6
2.	Kuntz (SHK)	... ...	7349.1
3.	Waibel (D-36)	... ...	7337.9
4.	Gailing (SHK)	... ...	7176.3
5.	Kremer (AS-12)	... ...	7166.6
6.	Schneider (D-36 V2)	...	7149.8

Followed by Hillebrand (Libelle), Bucher (SHK-1), Jonda (Hidalgo), Böttcher (SHK), Neubert (Libelle), Portmann (Libelle), Friederici (Geier 2B).

STANDARD CLASS

1.	Linder (Phoebus)	... ...	7033.1
2.	Huth (Ka-6E)	... ...	7012.8
3.	Fischer (Ka-6E)	... ...	6881.8
4.	Grosse (Ka-6)	... ...	6861.1
5.	Glöckl (Phoebus)	... ...	6823.3
6.	Schäuble (Ka-6E)	... ...	6696.4

Condensed from "Aerokurier"

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REPAIRS, C of A's & OVERHAULS

B.G.A. NEWS

Association Secretary

FRANCES Leighton (Mrs. Furlong) has retired after her five years stint as Secretary of the Association.

During her time, we have made great strides forward, both in the volume and complexity of the work done, and we must all thank her for the part she has taken in this.

Mrs. Inge Deen has taken over from Frances on the 5th September and I am sure she can rely on everyone's co-operation during the take-over period.

The Chairman.

* * *

South African Nationals

IT is hoped to arrange flying facilities from 26th December, 1966, through to 14th January, 1967. The actual competitions will be from 27th December to 10th January.

Minimum qualifications: Silver C and Gold C distance. All launching will be by aero-tow and pilots should be proficient in this respect.

Only high-performance sailplanes may be entered as there will be no Class this time for sailplanes of limited performance.

As overseas entries may have to be restricted, interested parties are advised to write as early as possible to: The Secretary, The Aero Club of South Africa, P.O. Box 2312, Johannesburg, South Africa.

* * *

Electrical Bonding of Gliders

THE Technical Committee have ruled that *all* applications for renewal of C. of A. of Cloud Flying Gliders received after October 1st, 1966, must include a statement on the INSP/6 to the effect that "Bonding to Drawing No. ..... has been incorporated" if the glider is to retain its Cloud Flying Category.

The C. of A. will then be endorsed at para. 11 "Bonding incorporated by the B.G.A." on renewal.

Drawings for all types are being prepared by Slingsby Sailplanes and Inspectors and Owners may obtain these drawings from the B.G.A.

Parts as detailed on the Drawings will be obtainable from Slingsby Sailplanes Ltd.

This notice does not apply to those foreign gliders which have already incorporated bonding. In these cases the Inspector should note on the INSP/6 "Bonding incorporated on manufacture".

R. C. STAFFORD ALLEN.
B.G.A. Chief Technical Officer.

* * *

1966 Rating Percentages

PERCENTAGES for Competitions held during 1966 which have qualified for Rating purposes are as follows:

50% Midland Easter Rally. Scores published in June-July issue, page 237.

70% Bicester Easter Rally, League 1 only. Scores published in this issue, page 386.

100% National Championships, League 1. Scores published in August-September issue, page 292.

80% National Championships, League 2. Scores published in August-September issue, page 293.

50% Western Regionals. Scores published in August-September issue, page 305. Corrections to these scores published in this issue, page 386.

60% R.A.F. Germany Championships. Scores published in this issue, page 375.

70% Northern Regionals. Scores published in this issue, page 379.

70% London Regionals. Scores published in this issue, page 363.

50% Bicester Junior Championships, League 1. Scores will be published in December 1966-January 1967 issue.

50% Bicester Junior Championships, League 2. Scores will be published in December 1966-January 1967 issue.

* * *

Landing Out

THERE have been two or three instances this year of serious complaints from farmers and landowners regarding pilots who have landed in their field, and left without contacting them. In at least one case the team drove their trailer across a wheatfield.

Clearly the time has come to get this matter buttoned up once and for all, for

a few letters from indignant landowners in the *Farmers' Weekly* or the National Press might easily produce an avalanche which could bury us all.

We discussed this at the July Council Meeting, and made the following decisions and recommendations:

1. Landing Certificates at future competitions will include a space for the name and address of the landowner (or agent) which, in the event of outlanding, must be filled in, or the Certificate will be invalid, and a *nil* score will result.

2. The pilot will be asked to ensure that, if available, the landowner will be contacted before leaving for base.

3. We must recognise that, if we land unasked in somebody's field, the owner is our unwilling host—apart from the fact that we are technically trespassing on his land. When we go and stay with a friend, we afterwards write a "thank you" letter. It is suggested we do the same to the owner of any field we may happen to land in. A gliding postcard might well fill the bill.

4. Any justified complaint from a landowner will, in future, result in the withdrawal of the Competition Licence of the pilot concerned for a period of up to one year.

The Chairman.

O.S.T.I.V. COURSE FOR FORECASTERS

THE progress of soaring flight, particularly in the field of high performance, depends to a considerable degree on good special weather forecasts, which should be worded so that they are easily understood and used by pilots. OSTIV, in close collaboration with individuals, national associations and institutes, therefore has it in view to organize a special course for weather forecasting in the field of soaring. It should take place from 16th April to 7th May, 1967, at Calcinate del Pesce (Varese), Italy.

Applicants should preferably be recruited from people employed in the meteorological services of their respective country, or working in close cooperation with them. They should be chosen with a view to their working later in forecasting for soaring flight, or giving lectures in soaring meteorology to a national association of soaring pilots. They should be able to understand at least one of the following languages: English, French or German.

The fee for the whole course will be $220 for each participant. It will include accommodation and full board, theoretical and practical instruction, and the costs of the organisation, including flights as a passenger in a powered aircraft for soundings, and a two-seater sailplane.

Applications should be sent not later than 1st December, 1966, to: OSTIV Secretariat, NLM Atoomgebouw, Schiphol Airport, Holland.

Course Programme

The first week will include the majority of the theoretical lectures, and in the two following weeks there will be full opportunity for practical participation in meteorological forecasting for soaring flight.

The lectures will be given by well-known specialists in soaring meteorology from different countries and will include the following general items:

Synoptical meteorology, analysis of air masses, climatology, as far as they are useful to soaring forecasting.

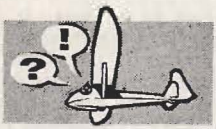
Theories on thermal currents and waves.

Knowledge of the different methods of atmospheric soundings and their evaluation for soaring.

Familiarisation with forecasts and briefings for soaring pilots; choice of a competition according to the meteorological daily situation.

Aerodynamics of sailplane flight; will provide each day an opportunity for evaluation of the general and local meteorological situation and of the soundings; and individual and collective work on forecasting and briefings. Flights made by a team of experienced soaring pilots will also be discussed. Meteorologists who are interested in making observations in flight will have the opportunity for passenger flights in a powered aircraft for soundings and of several two-seater sailplanes.

THE CARE AND FEEDING OF PASSENGERS



By George Locke

Reprinted by courtesy of "London Gliding Club Gazette"

FEEDING them the old guff, that is. Gliding, in the eyes of the public, is something of transcendant beauty. It is the soundless, graceful sensation of being wafted round the sky by gentle winds. Since this is a better image for recruiting purposes than the real one (of steep, sick-making thermalling and savage wind-gradients) we are quite happy to keep it in front of the public.



Thus, care must be taken, when we carry passengers, to make gentle turns and keep our flying so smooth we get laminar flow over the wings of the T-21. The first thing which is explained to a new passenger-carrying pilot is the need to inspire confidence in the passenger. This isn't necessarily achieved by skilful flying, but by skilful talking. Okay, let's see how the passenger can be kept cool, calm and collected, even when the pilot is in a state of fear and trembling.

Assuming he (or she: preferably she) is strapped in, waiting, you saunter airily to the T-21. You admire the beauteous expanse of leg revealed by the curious configuration of the control column and get in with a cheerful smile. Your teeth are bared against a 25-knot south-westerly. Cloudbase is 500 ft. and shows no signs of lifting. Bits of the cloud are very black indeed; it looks suspiciously like a front. "It's a glorious day," you proclaim, even though the birds are walking. You ignore remarks made by other, jealous (because you've snapped up the sexy-looking blonde) club members calculated to increase her faith in you: "I see you've recovered from that crash you had last week." "How's your wooden leg?"

You give her a bit of the old chat, to tell her what's liable to happen to her. Half-way through your carefully prepared spiel, the cable-man sticks the rings into the Ottfur mechanism and the batman starts wagging his bat. Before you have time to explain that the winch launch might look a bit steep but is really quite normal, "all out" is given. The winch—as though it heard you—has an epileptic fit, and you're yanked into the air. You climb, standing on your tail.

The passenger gives a squeak. You can't make any comforting remarks at this stage because the noise of the wind is too great. Just as well, really, as you think you inadvertently let a few four-letter words drop during the early part of the blast-off. (You must *never* swear,



as this implies that things have gone wrong, even if they *have* gone wrong.) By the time you've sorted matters out and are in a normal climbing attitude, you find that cloudbase is somewhat adjacent. More than somewhat.

"Where's the ground gone?" she asks.

You don't say "That's what I'd like to know"; you say "Oh, it's quite all right. We've gone into cloud. That's where a glider feels most at home. Did you know that gliders can go into clouds but that birds can't? That's because a glider has a special instrument fitted called a Turn and Slip indicator which

helps us to steer it in the right direction." At which point there is a jerk and a moment of weightlessness. Damn it. Back-released. You'd forgotten you were still on the cable. Chatting is distracting.

"Ohhh," says the passenger. The timbers creak as you are hit by a gust. It sounds like the crack of doom.

"Are we breaking up?"



"No, no. It's just the mainspar flexing under the load. Quite normal." How long overdue for a C. of A. is it?

There is a silence for a moment. Then she says, "Show me which one the Turn and Slip indicator is, please".

You admire her. Such calm! Then you admire yourself. Boy, you've done a really magnificent job of confidence-building! Then you realise that you haven't got a Turn and Slip. Nor a Horizon. T-21's don't bother with refinements, even though this particular machine *has* got an accelerometer (mainly because the B.G.A. says that all gliders which aerobat must have one and you never know—with pupils aboard anything might happen). You'd had time on the ground to show her the A.S.I. (reading 25 knots; pole forward vigorously), the variometer (green ball stuck, as usual, at the top), and the altimeter (900 ft. and still going up, oddly). You therefore have only the accelerometer left unidentified. You can't say that there isn't a Turn and Slip, and so you point vaguely at it. She's not to know.

"It doesn't seem to be doing anything," she observes.

You're not surprised; it hasn't worked since the last C. of A. Now, you haven't the faintest idea at this stage of what is going on. You're still in cloud (nasty, damp, cloying stuff; first time you've been in it with an open cockpit). You seem to be going up (the altimeter reads 1,100 ft. now) and your A.S.I., surprisingly enough, has settled into a reasonably steady 40 knots. You're not sure whether you're in a turn or not. You feel as though you're going straight, which means that whatever you're *really* doing, at least you're not slipping or skidding. You decide to let the aircraft do the flying. How long this pleasant state of affairs will last, however, you don't know.

You say, "So long as the needle stays where it is, we're flying straight and level".

She nods. "We're still going up, I see, 1,500 ft."

Very observant. Good club material, here. Then there is a violent lurch. The



green ball makes like a rocket. "We've just arrived at some strong lift," you say. Without thinking, you whack the stick over and pile on some rudder. The altimeter winds up past the 2,000 ft. mark. You shouldn't have done that. Gentle turns, remember. And certainly not in cloud. The A.S.I. starts fluctuating between 25 and 45 knots, with the associated effects on the human body becoming quite pronounced. "You usually get a little turbulence in strong upcurrents," you chunter, confidently. She's hanging onto the gaps in the instrument panel like grim death. She looks at you. You hope she doesn't notice your pallor. "Why are we still going up?" she shouts above the howl of the wind.

Future national champion, here.

"We're in a strong thermal," you croak.

"But I read somewhere that you only go up in a thermal if you fly in circles. The Turn and Slip indicator says we're still flying straight."

"Ah, but lift in clouds is much bigger and you don't have to bother to circle." You're certainly rising to the occasion with the explanations.

"You mean we'll go up and up and up?"

"No. Not at all. Lift rarely goes above six or seven thousand feet in this country." Except in storms—and cold fronts. the forecast *had* said something about one crossing the country. 4,800 ft. "Look, we're nearly 5,000 ft. From this height we can glide a distance of 12 to 15 miles before hitting the deck—er—landing."

"Why do you make the glider go sort of up and down like a roller-coaster?" is her next question, undoubtedly referring to the fugoids of ever increasing amplitude.

"Because—because the lift is stronger in some places than others. Like waves on the sea." You can't say "The glider's doing it, not me", implying lack of control.

"Oh. Whoops! What was that?"



"That" was the bottom falling out of everything. The green ball dropped so fast it didn't stop at the bottom of the tube. The altimeter started to unwind. "We've gone into an area of—er—descending air. We'll descend with it for a little while, then come out of the side of the cloud into open air."

"That will be nice. I'm cold."

It will be nice—if it happens. More likely, you'll come out of the bottom. Cloudbase 10 ft. off the ground at that point. Over Dunstable traffic-lights, showing green, but not on your vario. Still, you'll certainly be in an unusual attitude, so it'll *look* to her as if you *did* come out of the side.

At 3,000 ft. something happens which, by all the laws of chance, shouldn't. You emerge from the side of the cloud. Not only that, your wings are more or less level with the horizon. Instead of going round in a circle when you whacked the stick over, you must have straightened out from the turn you'd already been in, unknown to yourself. You must have flown through to the back of the front and entered the dramatic clearance the met. boys are always babbling about, but which never happens in practice.

The passenger is delighted, full of "Oooh's" and "Aaah's", and "Isn't it lovely". You smile. "This is one of the most rewarding experiences in gliding" (and some!) and silently wish she'd shut up while you try and find out where the bloody hell the wind has taken you. 25 knots on the ground. 35 or more at this height (2,800 ft. and a steady three feet per second down). Lot of houses underneath. Is that a big main road there? The M1? Looks rather like it. That lot of houses must be Dunstable, and that would be the hill over there. A long way off.

"Where's my boyfriend?" she asks.



She'd spent the last minute or so looking down intently, obviously without success. (To be told, at such a moment, she has a boyfriend, doesn't help you take philosophically that fact that you're well out of range of the club.)

"I don't know. Watching for your return to his arms, I expect."

"I can't see the club. Is it very difficult, identifying things from the air?"

"Very easy, once you're used to it."

"Show me the club, please."

How the hell do you show her the club when you're so far behind the hill the hangar's disappeared! You ponder. You mustn't destroy her faith either in you or the machine, which is, after all, one of the modern wonders of the world.

"Are you any good at finding things from the air?" she asks, disconcertingly.

You grin. At least, you hope it's a grin. "Actually, we can't see the club itself from here. You see the top of that ridge, straight ahead of us? That's the

top of the hill we use to soar on when the wind's right."

"Isn't it a long way off?"

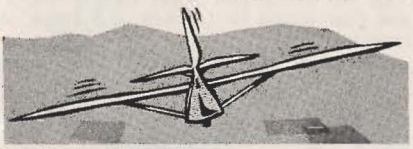
"It isn't really. The glider is designed to cover great distances with the loss of very little height."

"As great as this?"

"Uh-huh. Actually, you're a very lucky girl. Very few passengers get the chance to experience one of the most rewarding aspects of gliding—the . . ."

You stop. Don't call it that. "Final Glide" sounds too much as though it is just that—final.

". . . the Straight Glide. It is the most refined part of gliding, used by the top pilots in competitions." You explain it all to her, while you watch the top of the hill getting higher and higher on the



horizon. 2,000 ft. You're not winning. Not by a long shot. You'll be lucky if you get past the A5. And you haven't run into any lift yet. Not that that would help you much. You've never had much success going upwind in the Skylark 5, so what you'd do in a T-21 you shudder to think.

"What happens," she says, "if you run into a lot of air which is going down during the Straight Glide?" You'd only mentioned the possibility of meeting air which was going *up*, of course. This is it! The crunch! The ultimate in awkward questions.

"You do not achieve your objective," making it sound as nice as possible.

"You mean you crash. Are we going to crash?"

"Oh, no. If we failed to achieve our Straight Glide, we'd land in a suitable field. They're very easy, field landings, and gliders are designed to land in small spaces."

"Suppose there isn't a field?"

"Ah, but there is; I know this area very well. And almost any field I picked would be bigger than the one we're used to flying from at Dunstable."

"And flatter?"

She'd noticed the undulating nature of Dunstable. She has a think while you search round for a suitable field. Most of them have corn in, but there is one possibility. Her face lights up. "I'd *love* to do a field landing. Can we do one? Or do they want you to land on the flying field?"

This is splendid! You're not sure whether it was due to your chat or not, but she's accepted the idea of an out landing. "Well—they'll have to retrieve



Fuller

us by Land-Rover, and it'll cost a pound or so, but—well—let's do it, shall we?"

"Oh goody, goody."

And you start a circuit. She's chattering happily about everything now, and is obviously enjoying every minute of it. You have succeeded in inspiring confidence—and some! Presently, as you're about 600 ft. above your field, she says, "Which field are we going to land in?"

"That one there. The green one, with the cows in the far corner."

She grabs the side of the cockpit and screams her head off. A hundred decibels at least. A bit later, she runs out of wind.

"What's the matter?" you ask, worried as hell.

"P-please can we f-find another f-field," she blubbers.

"Why?" There aren't any other fields available. Not now.

"I don't—don't like cows."

Oh Lord. You'd thought you made the perfect job of cementing relations between the passenger and the unnatural element into which she had been thrown. But you hadn't. You'd failed miserably—and the chances are she'll never go up in a glider again. At least, not until agricultural economy has made the change-over to polythene cattle.

V-TAILS

By JOHN GIBSON

The author is an aircraft design engineer working on aerodynamics with responsibilities for design of flying control systems. He has been gliding since 1954.

THE recent inconclusive correspondence in SAILPLANE & GLIDING about V-tails, and Slingsby's Newsletter blaming Dick Johnson's Austria accident on its V-tail, have goaded me into an attempt to extract some facts about this configuration. There are V-tailed gliders with perfectly normal spin-recovery, while fatal spins from an ample height for recovery are not unknown with ordinary-tailed gliders. Any glider will spin if its c. of g. is too far aft. One cannot possibly prove that, because a glider with a V-tail could not be got out of a spin on one occasion, V-tails are "dangerous" or tend to result in poor spin-recovery. Since one V-tail is almost exactly like another, it is hard to visualise a reason for unsatisfactory characteristics which do not apply to all V-tailed gliders.

Critics should read NACA Report 823, which studied the V-tail very thoroughly. In particular, they would note that the V-tail has a much higher stalling angle of attack or sideslip than an ordinary tail, and that a fighter (King Cobra, I think) had a slightly improved spin-recovery when fitted with a V-tail of the same volume coefficients as the original ordinary tail. No evidence or hypothesis was found to suggest that a V-tail could in any way degrade normal flying qualities. Beneficial effects on control forces and a 15 per cent reduction of tail drag due to reduced interference are among incidental features discussed.

Fin volume coefficients for the Olympia 2, Dart, 463, Foka, Phoebus, Edelweiss and Fauvette, for example, are all about 0.026, and for the Blanik and Skylark 4, about 0.031. None of these has a bad spinning reputation that I know of. British sailplanes speak for themselves, and I am assured by M. Witt, Breguet's chief test pilot, that the Fauvette has perfectly normal spin-recovery. The Fauvette's designer went on to design the Choucas and Edelweiss with V-tails, so he at least has faith in them!

On the other hand, the Austria's fin volume coefficient is only about 0.018, as is the SHK's, with a correspondingly small tail volume coefficient of about 0.33 (all the others range from about 0.45 to 0.72). One might suspect from this that the Austria would have less margin against spinning troubles than other gliders, but this has nothing to do with the tail configuration.

The classical causes of failure to have satisfactory spin-recovery are one or more of:

(1) large distribution of mass along the Y-axis (the wing);

(2) inefficient body section producing low body damping;

(3) deficiency in side area producing low body damping;

(4) shielding of the rudder by the tailplane.

The Dart and Skylark, for example, have efficient body sections (elliptical) and plenty of side area, but blot their copybooks a little by blanketing at least 50 per cent of their fin and rudder area in spins with the tailplane wake. The Austria has an inefficient body section (circular) and not much side area, but does not blanket its fin. One could surmise that a Slingsby tail would worsen the Austria's spin and a V-tail improve the Dart's.

Calculation of the non-dimensional anti-spin body damping shows the Austria to possess about two-thirds of the Dart 15 value and about the same as the Dart 17. The Austria has about four times the unshielded rudder anti-spin volume of the Dart, giving a total predicted anti-spin moment greater than either Dart version. Complete prediction requires inertia data I do not have, but a high ratio of pitching to rolling inertia is favourable. The Dart appears better than the Austria in this respect.

Such considerations tend to suggest reasons why the Austria might have poorer spin recovery than many other gliders (if it really does), but the V-tail is not one of them. Will anyone, therefore, who can produce a rational case against the V-tail please oblige us with the data to prove it?

REBUTTAL TO GLIDER HANDICAPPING

By R. E. SCHREDER

A DISCUSSION of glider handicapping such as Tony Deane-Drummond's in the August-September issue of SAILPLANE & GLIDING always opens an old wound of mine.

The last power 'plane race which I participated in was decided by a special handicap dreamed up by the organisers. Each contestant's average airspeed was divided by his horsepower. This annual race was never run again.

In the United States we have two sports which employ handicapping: golf and bowling. Handicaps are not based on the clubs or balls used by the players; they are determined by the player's average game score. Even so, these handicaps are only used in the local meets. In National and International Championships, every man is on his own and the actual scores are used.

I dare say that neither the British nor United States National Golf Championships would survive a year after the country's worst duffer won over Arnold Palmer by virtue of a 40-stroke handicap.

Whether we all like it or not, National and World Competitions are developers of good machines as well as good men (and women). Instead of handicapping superior equipment, many sports reward the best machines by giving them the choice starting positions determined by pre-race qualifying runs. This is particularly common in auto racing.

If the Soaring Society of America would have been using Tony Deane-Drummond's handicapping system in the United States Nationals at Elmira in 1959, when Dick Johnson won the competition with an old Weihe, no official would have had the nerve to multiply his score by 1.14 when it was apparent to all that he had outguessed everyone by bringing a ship that fitted the conditions best.

To be completely fair about the whole thing, it will be necessary for the organisers to test-fly each and every machine to properly evaluate the variations in quality of finish, types of fairing, actual weight, extent of taping, fit of control surfaces, extent of plywood warping, antenna variations, amount of tread on fixed-wheel tyres, length of yaw string, number of bugs on the leading edges, etc., etc. Are you still with me? Where have the organisers gone? Oh, well, let's switch to bowling—it is easier to figure our proper handicap there.

MAJ.-GEN. DEANE-DRUMMOND comments on the above article:

The comparison of bowls and gliding is interesting. Another comparison could be made with horse racing. Let the best horse win and to hell with handicapping! Unfortunately Darwin comes in here and it may be another 10,000 years before we can halve the time round a race track.

Before submitting the article, I showed it to about 25 top competition pilots and incorporated their suggestions where possible. There was certainly no fundamental disagreement with the principle and considerable encouragement for the whole idea. One of these pilots was Dick Johnson.

I certainly cannot agree that it is not possible to get two points on a performance curve for any particular type of glider. This should be reasonably simple. Pilots will naturally try and extract the maximum performance out of their own aircraft by removing bugs from leading edges, taping gaps and even slimming (*pace* Wally Kahn!).

I remain unrepentant and believe that something like my scheme should be introduced in 1967 — naturally after checking by a Committee set up for the purpose. The people I hope my scheme will help most will be the top pilots themselves. It should *make* them fly much better.

Correction to "Glider Handicapping" article by TONY DEANE-DRUMMOND in August-September issue, p. 262 (table of suggested handicaps):

Olympia 465 (series 1) has *not* got an "A" polar. Also the words in the line above, "Tested points at Cranfield", refers to this glider, not the new Dart 15.

LONDON REGIONALS

30th July — 7th August

THESE Regionals were easily the largest run this year, with forty-three entrants, a number of whom wanted to improve their rating or get into a second competition so as to qualify to enter next year's Nationals. This was borne out when the chairman of the Flying Committee asked at one briefing how many pilots would *not* be interested in flying in Nationals. Only one pilot confessed that he was really flying for fun and would never enter for a National event.

Over 60 entries had in fact been received, but owing to site difficulties a number had to be turned down. So far as launching was concerned, however, there seemed to be no great difficulty, as usually the gliders were launched in just over an hour. One more tug would have brought this to under one hour.

SATURDAY, 30TH JULY.—At the 12 o'clock opening John Furlong, president of the club, welcomed everybody. During the task briefing—a race to Swanton Morley—someone interrupted to say that a large storm was imminent and gliders would need attention at once. Half an hour later the task was cancelled.

SUNDAY, 31ST JULY.—Task: Free Distance beyond Husbands Bosworth, 71.8 km., X=15 km. Designated start.

According to Peter Wickham, pilots needed to be lucky as around the storms the air would be dead. During the afternoon the storms would be less severe or widespread than over the past two days. However, X being what it was, this could easily be a contest, and so at 11.20 launching started with everybody hoping that they were going to be the lucky ones.

The first five were soon back for relights, while the next lot went straight from launch height to try and reach a sunny patch near Leighton Buzzard. In many cases it was a "one-only-thermal-and-down" affair, but those who were still airborne outside the airway and not hampered by showers made some good climbs and flew on. George Locke, who had never flown more than 100 km., found it most satisfying to find that he had won the day with a flight of 78 km. Peter Nielson was a close second with 77.4 km. and Les Frank third with 73 km.

John Brenner, despite an early start, found the task easy and even discarded 2-knot thermals. However, he had to detour Northampton because of a storm and landed at Cottingham, so far north-east of Husbands Bosworth that he lost out on points.

An interesting flight was made by Chris Wills who was launched at 4.16 p.m. just in front of a heavy shower. He released in strong lift and had to fly at 120 m.p.h. in order to stay out of cloud —the ground completely obliterated by rain. He flew along the edge of this cloud until clear of the airway above, and then climbed to 11,000 ft., from which height he covered exactly 60 km. to finish fifth.

Seventy-two contest launches were carried out, but only five pilots passed 60 km. (Comment by Peter Wickham: Some large cumulus storms developed in the afternoon, which made the going difficult. Then upper cloud spread quickly in from the west which made the going impossible.)

MONDAY, 1ST AUGUST.—The task was cancelled at delayed briefing at 13.00 hours.



The Stephenson family: Beryl on left, Geoffrey on right, Carr Withall in cockpit of Skylark No. 8.

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TUESDAY, 2ND AUGUST.—Streaky cirrus was noticeable at 9 a.m. and most of the gliders were rigged before briefing at 9.30 in case of an early start.

"Cynical sort of weather, this" began Mike Fairman. Task: Race to Swanton Morley, 140.5 km., X=30 km. Designated start. On the grid by 10.30 a.m. You may overfly the goal, maximum height 1,000 meters. With some warnings about the intensive activity at Swanton Morley, etc., Mike handed over to Peter Wickham, who started with an apology "for this mess" (pointing to the weather map); "it's the weather situation. The edge of the cirrus has just passed us but it will thicken up gradually here, and from 1 to 2 o'clock it will become dull and gloomy here . . ."

Those to be launched first seemed very happy as small cu. had appeared by the time briefing had finished. Pat Holmes was first off at 10.41 and soon they were winding up and away, not bothering about start lines.

In fact only half the number of pilots crossed the line as they did not wish to come back and perhaps be caught out.

Although not easy at first, the weather was improving and only a few re-lights were needed. This improvement was just as well for some; Peter Scott had landed back with variometer trouble, and hurried off again after a quick sort-out with willing helpers. He had, however, set off in a temporarily inactive patch, and landed just outside Dunstable 20 minutes later. Launched again at 14.20, he could hear the radios bleating "Final glide, final glide", so off he went to have a fairly easy ride in good conditions. In fact some of the best times were made by the late starters.

Humphry Dimock, who had also landed back at base, went carefully and did not come back for a start line crossing. Arriving at Swanton Morley with 900 ft. in hand he decided to fly back. He landed at Cambridge.

Ian Paul also flew back and landed with Humphry, while Anthony Edwards got back as far as Ely.

Pat Holmes (who had probably flown ahead of the good weather too quickly) got unstuck near Ely, and on landing damaged the tail of the Skylark badly enough to take her out of the contest.

Bernard Fitchett won the day with a handsome margin and reported 6-8 knot thermals to which Chris Wills referred as "Polish weather".

All but four pilots completed this task with speeds varying between 66,9 and 28,6 km/h.

One local paper phoned re a landing nearby—did the wind drop? they wanted to know. After explaining that it wasn't the wind that kept gliders up but convection currents, the paper printed a report that the pilot was brought down by convection currents.

WEDNESDAY, 3RD AUGUST.—Wet. No task after delayed briefing.

THURSDAY, 4TH AUGUST.—Pilots half expected to be set a task to the west. However, a 200 km. triangle, Leicester East, Edgehill, Dunstable, was announced. X=30 km. Designated start.

Peter's forecast was a north-westerly airstream, wind strength 15-18 knots, and a convective day. Cumulus to start around 11 a.m. with base 3,000 ft. a.s.l. rising to 4-5,000 ft. during the afternoon. Showers along the route might not be too bad, though storms and spread-outs

would also be possible.

Pilots were on the grid by 11 a.m. but as the sky was rather dead, launching was delayed to 11.20 for first take-off. There was, however, only time to launch 12 competitors before we were enveloped in a heavy shower. Launching resumed at 12.16 and from then until last take-off at 17.56 towing never seemed to stop, the pilots landing out within a 10-mile radius, most of them from straight glides. A weak form of wave was contacted by some pilots in the late afternoon but this did not extend far enough to be of any help.

David Ince from his second launch covered one of the best distances against quite a strong headwind. Ian Paul damaged the tail of his Skylark 4 and had to retire.

Ninety-two contest launches were carried out, but only one pilot passed 2 X so a No Contest resulted.

FRIDAY, 5TH AUGUST.—The forecast on the whole was very similar to yesterday, with only one extra disadvantage to cope with—a Purple Airway.

Peter Wickham was not having an easy task with this very unpredictable weather, as timing it was almost impossible. "Those who flew yesterday," he said, "will know what the weather is likely to be today." Blustery. Cloudbase about 2,000 ft. a.g.l. rising to 3,000 by noon and 4-5,000 ft. later in the day, except near showers. Thermals fairly widespread but cu-nims. less severe except in East Anglia where conditions will be more like yesterday.

Task: Race to Seething. 151.5 km. X=30 km.

Launching commenced at 10.58 but soon most of the first starters were reduced to ridge soaring, with the odd exception like Chris Wills who crossed the line at 11.11 and Bernard Fitchett 30 seconds before him.

Obviously a lot depended on finding lift immediately after release; the hill worked quite well, however; now and again a bundle of gliders would dislodge from the traffic jam and cross the start line.

At around noon aero-tows seemed to connect again more easily, so several pilots, including Jane Warter, John Brenner, Gordon Camp and Peter Scott, decided to land for re-lights. No sooner had they landed than the hill decided to throw off a good thermal which gave Peter Nielson, David Ince and Rika Harwood the chance they had been waiting for.

In the meantime Chris Wills reported conditions good although cu-nims. and showers were about. He climbed to 10,000 ft., which was too high, and then like others found it difficult to find Seething. Many pilots also made climbs to between 8-10,000 ft., but they might have done better had they broken off at freezing level at 6,000 ft. as icing was severe, and heights were lost accordingly.



L. to r.: Anne Ince, Fluff and Fred Slingsby, Connie Hervey, David Ince and crew member, Cedric Vernon.



A high polish on Colin's Ka-6.

Colin Pennycuick, who won the day, avoided cu-nims, as he found streets in the form of large clouds with little ones ahead. He found the masses of aerodromes a navigational nuisance. Peter Scott, who left Dunstable around 2 o'clock, seemed to be catching up quickly, and in fact he found a street all the way from base to Royston.

John Brenner decided to delay his second launch and then to make a really fast time. This did not work as planned and he had to be retrieved before he could start again at 17.17—by which time the wind had increased a lot and he landed well east of track near Colchester. Jane Warter also hurried back for a late last launch and did well to cover 97.5 km. before having to land at 7 p.m. Eric Cunningham, who landed at Lowestoft, had been out to sea for 3 or 4 miles and regained the coast again at 1,500 ft.

At Seething Alf Warminger (who had come over to see what was going on) made himself very popular by driving pilots to and from the clubhouse where "tea on the house" was kindly offered by the Waveny Flying Group and greatly appreciated.

Twenty pilots completed the task with speeds between 93.2 and 57.6 km/h. Sixty-one contest launches were carried out.

SATURDAY, 6TH AUGUST.—Briefing at 9.30 a.m. was short. Weather forbidding. No task, but launches available.

Anthony Edwards was launched soon after 10 a.m. and found weak usable lift. He announced over the radio that he was trying to go to Cambridge. After initial scrapes conditions improved considerably and soon more pilots cottoned on to the idea of some pleasant flying. Peter Nielson, who had followed shortly afterwards, was invited to come down from 3,000 ft. at Cambridge to join Anthony Edwards for lunch, and this he did.

Bernard Fitchett, however, thought of greater things and declared Newcastle for Gold C distance. He took off at 12.22 and by 1 o'clock was on his way with 3,000 ft. in hand, though after that he had to scrape to Podington, when he made a good climb to 8,000 ft. with no icing. Near Scunthorpe he was saved by a 6-knot thermal off the steelworks, but after that conditions changed rapidly and the scrape was on again. He finally glided to Sutton Bank from about 15 miles out and landed at 18.20 p.m., 20 km. short of his goal. A fine effort!

(Comment by Peter Wickham: A warm front moved in from the S.W. and the day was scrubbed at an early hour. However, ahead of the main rainbelt there developed a gap in the upper cloud in which thermal conditions brewed up dramatically for an hour or so during mid-morning. Despite some good individual flights in this clear patch, the decision not to attempt a contest task was probably justifiable—but only just.)

SUNDAY, 7TH AUGUST.—Briefing would be delayed as late as 2 p.m. if necessary, and Prizegiving would be postponed! However, to cut a long story short, the task was cancelled and Prizegiving took place at 2.30 p.m.

A frustrating week, but how we enjoyed it all the same. This small but well organised band of officials did really try to do all they could, and I feel sure that everyone who took part will be back next year. On behalf of all the pilots, Thank You, London Gliding Club, for having us and for your chairman's promise of more "thermaliferous" weather next time.

RIKA HARWOOD

Final Place	Pilot(s)	H/cap	31.7 1	2.8 2	5.8 3	Total Points	Sailplane
1.	P. Nielson		988	770	880	2638	Skylark 3B
2.	G. Locke, A. Letts		1000	778	745	2523	Ka-6CR
3.	P. Scott		621	823	932	2376	Olympia 419x
4.	B. Fitchett		459	1000	891	2350	Ka-6CR
5.	T. A. McMullin		621	746	907	2274	Skylark 3
6.	C. Wills		625	844	800	2269	Ka-6
7.	C. Withall		402	882	903	2187	Skylark 4
8.	D. A. Smith		615	763	687	2065	Skylark 3B
9.	R. A. Foot		329	763	745	1837	Skylark 3F
10.	R. S. Waller, C. Pennycuick		0	830	1000	1830	Ka-6CR
11.	R. Jones		558	775	471	1804	Olympia 403
12.	D. H. G. Ince		31	844	891	1766	Dart 17
13.	A. W. F. Edwards		392	554	810	1756	Olympia 463
14.	H. R. Dimock		31	699	989	1719	Dart 17R
15.	L. Frank, P. Partridge		896	532	276	1704	Skylark 3B
16.	J. Brenner		765	751	175	1691	Olympia 463
17.	G. Camp		152	708	800	1660	Olympia 465
18.	V. Tull		90	611	924	1625	Skylark 3x
19.	C. W. Bentson		27	830	758	1615	Skylark 4
20.	G. Cornell		0	746	837	1583	Dart 17R
21.	R. Ismail, A. Burton		0	680	873	1553	Skylark 4
22.	A. Tarnow		406	477	385	1268	Skylark 3F
23.	J. Griffiths, M. Wilson		0	584	675	1259	Skylark 4
24.	Rika Harwood, J. E. G. Harwood		0	492	753	1245	Skylark 3B
25.	M. Randle, K. Mansell		146	0	924	1060	Dart 15
26.	C. L. Ryan, K. Barton		152	428	414	994	Olympia 463
27.	B. Keogh		90	526	333	949	Skylark 4
28.	R. Allton		38	595	258	891	Skylark 4
29.	P. Pozerskis		135	635	91	861	Skylark 4
30.	A. Wilson, S. Tomlin		142	604	91	837	Dart 17R
31.	I. Paul		0	830	—	830	Skylark 4
32.	A. MacDonald	(10%)	0	490	323	813	M-100S
33.	R. H. Smith, L. Woods		152	478	143	773	Ka-6CR
34.	J. Argent		27	440	297	764	Skylark 4
35.	J. B. Ramsden		0	575	184	759	Skylark 3F
36.	J. Stewart-Menteth, Jane Warter		0	475	264	739	Olympia 463
37.	J. Bellew, J. R. Jeffries	(10%)	0	638	45	683	Ka-7
38.	L. Booth, D. Dawson		298	0	359	657	Olympia 460
39.	J. V. Inglesby		—	534	—	534	Olympia 465
40.	F. W. Fay		0	526	0	526	Dart 15
41.	T. Sheppard		0	—	428	428	Dart 17R
42.	E. Cunningham		0	0	392	392	Skylark 4
43.	Patricia Holmes		152	163	—	315	Skylark 3B

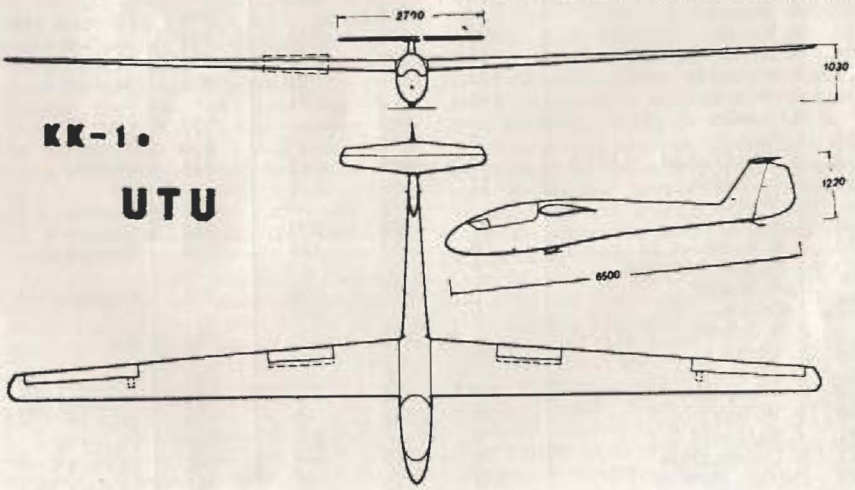
NEW FINNISH UTU

WORK on the Utu was begun in 1961. After several tests on structural applications of FRP Shells stiffened with different foam plastics, a prototype was flown for the the first time in August, 1964. Since then, five other prototypes have been built with various techniques and structures at the factories of Oy FIBERA Ab, Helsinki. The oldest ones, with one or two flight seasons behind them, have been used during 1966 for continued structural tests. As a result the superiority of plastic materials, especially as compared with wood, has become evident, both in use and in production technique.

During evaluation work the aerodynamic concepts and outlook of the Utu have remained the same, except for some minor modifications based on test flight results and the opinions of test pilots. Structure, however, is another story, as production techniques for metal and wood aircraft structures are neither as a whole nor in part directly applicable to plastic.

The wing structure is an FRP sandwich shell with a foam plastic core, single "I" spar and no ribs. The fuselage consists of a load-carrying outer skin, the rear part of which is also a sandwich, and separately produced and bonded fittings for controls and seat, and a detachable instrument panel. Because of the big local loads from landing wheel and wing-fuselage fittings, there still remains a rib behind the pilot's seat. The structure as a whole is thus open and easy to inspect. The attachment of wings is done with two conical bolts. Some traditional metal parts in control mechanisms have been replaced with injection-moulded nylon parts.

Several specimens of all main parts have been used in proof loadings. Several wings with the same amount of fibre in spars but spread in different widths and ways on the wing shell were proof-loaded to clear up the question of buckling strengths. The results varied from load factors of +5.7 to +14. The lowest values were obtained with wings in which a substantial part of the fibre pattern was spread over a rather broad surface. This produces a thick and hence dimensionally stable and accurate wing contour. However, the construction of the wing main fittings needs the fibre pattern to be concentrated in the middle at the wing root. This again produces instability on the wing shell. Even very small buckling which may come up in normal use, either in the leading or trailing edges, showed a tendency to widen into the middle of the wing with the addition of loading. The result was



buckling of the whole wing upper surface. None of the calculation methods used turned out to be reliable. With the "I" spar the full compressive properties of the laminate are attained, and the structure, with skin stabilisation accounted for, gives the best strength-to-weight ratio. The proof load factor of +8 allows a maximum of 210 km/h. (130 m.p.h.) in gusty conditions according to the OSTIV requirements. Greater speeds are very unpleasant in really gusty conditions, and therefore questionable in practice.

In flutter studies a complete flutter of wings and rear fuselage was—by misadventure—obtained in one of the test 'planes without mass balancing, beginning at an E.A.S. of 250 km/h. The only damage realised afterwards was a small crack in the rear fuselage shell. To prevent this, 100% mass balancing of ailerons and rudder has been added. The test, however, showed that the widely integrated structure of the FRP is very resistant to flutter. The complete disintegration of a wooden 'plane in that situation would have been a matter of seconds.

As to materials, glass fibre-polyester laminates have been used throughout the structure of the Utu. They cannot be regarded as new, since they have been in use for a quarter of a century, even in industry, and test results already published are very comprehensive. Due to their very high ultimate load factors (and hence low medium stresses) and the small number of flight hours yearly, sailplanes differ from other aircraft. For instance, they do not have the same fatigue problems as commercial 'planes. The sailplane very seldom wears out in use; rather it is destroyed by technical alterations and weather. FRP laminates are already used successfully for purposes far more demanding than the sailplane, for instance roof panelling. Compared with wood and plywood, the FRP laminates have a strength-to-weight ratio better by more than twice. The compressive properties of most woods are strongly affected by moisture and the swelling breaks the glued joints.

The difficulties and unknown factors in plastic sailplane manufacture lie in its lack of tradition, which means that there are few ready solutions to structural details, and few qualified workers (especially designers), existing factories, production methods, etc. Building a sailplane of plastics today includes almost too many new processes, from mould structures and mould-making to the selection of the right degree of structural integration and selection of materials, the number of which is already almost too big, etc. As to inherent properties, the plastic sailplane (some prototypes excluded) has better overall strength with the same structural weight, longer life, and lower costs per unit due to radically lower working hours. But because of the growing design, experimental and set-up costs this does not lower the price. In any case it can be said that plastics for the first time are offering a real chance to make sailplanes in series.

The foregoing description of the latest version of the Utu, called the KK-1E, has been sent by the firm producing it: Oy FIBERA Ab, of Fredrikinkatu 36B, Helsinki 10.

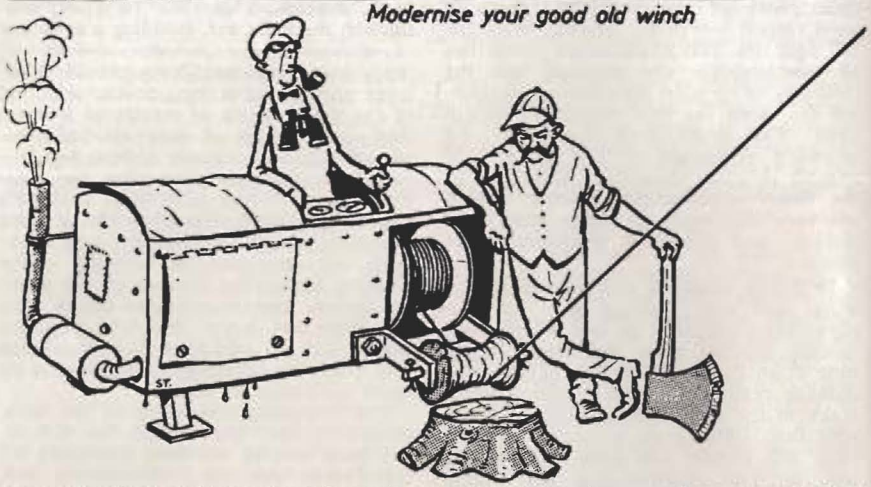
The designer is AHTO ANTTILA.

Principal Data of KK-1e Utu

Span 15 m. (49.2 ft.).
Aspect ratio 20.
Wing section, root NACA 63(3)618, tip NACA 63(1)612.
Dihedral 2°.
Aerodynamic twist 2°.
Fuselage max. width 0.6 m. (23.6 in.).
Fixed wheel with brake.
Trailing-edge drag flap, span 1.20 m. (3.94 ft.) each side.
Weight empty 187 kg. (412 lb.).
Max. permitted flying weight 310 kg. (684 lb.).
Wing loading, max., 27.6 kg/sq. m. (5.65 lb/sq. ft.).
Placard speeds, km/h.: smooth, 250; gusty, 210; aero-tow, 200; winch launch, 150. Cloud flying and usual aerobatics permitted.
Min. sink 0.6 m/sec. at 74 km/h. (2 ft/sec. at 46 m.p.h.).
Sink at max. L/D, 0.64 m/sec. at 81 km/h. (2.1 ft/sec. at 50 m.p.h.).
Sink at 111 km./h., 1.11 m./sec.; at 130 km./h., 1.65 m./sec.; at 148 km./h., 2.33 m./sec.
Stalling speed 63 km/h. (39 m.p.h.).
Max. L/D, 35.

For photo see page 416.

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FLYING IN THE U.S. NATIONALS

By R. E. SCHREDER

TO do well in a National Contest a pilot must have:

1. Cross-country and competition experience.
2. A good crew.
3. A good ship.
4. The will to work and fly to win.
5. Good luck.

This year I had all five.

At the conclusion of the 1965 U.S. Nationals, I drew up a design for a competition sailplane which would perform equally well in weak and strong conditions. I used to believe that the high wing-loading of 7 to 7½ lb. was the answer, but bitter experience taught me that going down just once during a contest on that weak day or weak period wiped out all the advantages of the lead sled.

The HP-14 evolved as a 55-foot span, 5 lb. per square foot, 20 to 1 aspect-ratio compromise. I worked constantly on this ship with only Saturday and Sunday evenings off until the very day we left for Reno. This takes a very patient and dedicated wife. In spite of this tremendous effort, the first flight was not made until the day we left for Reno. During the practice flights before the contest, the superior performance of the HP-14 became apparent. In spite of its light wing-loading it could stay with the Sisus, Libelles and Austrias at high speed. On the low-speed end it could slow down like a 1-26 but with the lowest sink of anything I have ever flown.

The area weather in Reno this year was fabulous. We flew nine days under near perfect conditions. Never in any U.S. Contest have we had the variety of lift found here. There were plain thermals, shadow thermals, evening valley thermals, slope thermals, primary, secondary, tertiary, etc. waves, dust devils, ridge lift, convergent lift and shear-line lift.

Our only rest day was forced by a 443-mile flight. One pilot complained that he had made Gold C Distance and only placed 30th for the day.

Landing in rough country surrounding Reno took a heavy toll of good sailplanes. Daily reports of damage helped to keep me cautious.

After the first three days it became apparent that the weather was reliable enough to allow the crew and car to remain at Stead Air Force Base on all race days. This saved a lot of wear and tear and cash and kept the crew in better shape for flight preparation and distance flight chasing. My crew drove 440 miles on a speed task before we adopted this tactic.

My general strategy for the entire contest was to:

1. Stay up at all costs.
2. Centre as perfectly as possibly in all thermals.
3. Pass up all thermals of less than 500 ft. per minute unless low.
4. Leave all thermals when their strength dropped below 500 ft. per minute.
5. Run at 80 miles per hour or better between thermals unless low.

I had three frustrating experiences which could have drastically altered my



The winning HP-14.

contest standings. They were:

1. On the second task I nearly went down about 25 miles out and spent an uncomfortable 45 minutes on a 200-foot rock pile at the southern tip of Pyramid Lake;

2. On the fifth task I was leading the pack and made a 40-mile glide across Snake River Valley, Idaho, to the foothills of the Pioneer Mountains (where strong conditions existed). Here I was trapped on a 400-foot knoll from 5 to 7 p.m. When I finally succeeded in getting off it was too late to get more than 15 additional miles.

3. On the final day while passing over the starting line, a violent negative gust threw my emergency kit out of the baggage compartment through the rear canopy. I tried to complete the speed task but after 30 miles turned back and landed at Stead for repairs, as the constant roar of the wind was shattering my ears and nerves. My crew was ready with cardboard and tape and, assisted by E. J. Reeves, Marshall Claybourn, Herman Stiglmeier and others, fashioned an airworthy rear canopy while I made a much-needed rest stop.

The final day delay proved to be a blessing in disguise, as thermals were at a maximum all the way around and gave me the only day of the contest that I did not think that I could have done better.

Although many pilots utilized the frequent waves of the Reno area and got as high as 30,000 feet, I flew in waves only twice and left at 16,000 feet both times because the lift became too low.

The Reno Nationals were very well organized and smoothly run. All tasks were well chosen. Site facilities were excellent. For those who had time and money, the casinos proved to be very fascinating. Contest-soaring conditions were excellent and the best in which I have ever flown. I did miss the complete lack of evening social affairs, but so much late flying and retrieving probably influenced the organizers in omitting this detail.

The HP-14 and I flew 64.3 hours for 2,511 contest miles in nine days. It was necessary to average more than 900 points per task to stay ahead of George Moffat, who flew superbly every day. Flying with this greatest assembly of top competition pilots in the 33rd U.S. Nationals has given me my greatest thrill since taking up the sport of soaring in 1956.

DAILY SUMMARY

Condensed from daily News Sheets and "Soaring"

AFTER a practice week, ending with a practice task of 120 miles out-and-return on the 27th, the Championships opened with 65 pilots and 15 tugs at Stead Air Force Base, 8 miles north of Reno, Nevada. Edward Makula came from Poland to compete.

TUESDAY, 28TH JUNE.—Out-and-Return Hawthorne, Nevada, 202 miles in all. Forecast: thermals to 16,500 ft. in the afternoon and a shear line north of Walker Lake (Hawthorne is at its southern end); strong west wind. The



Dick Schreder, the new Champion.

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course ran S.E. diagonally across two mountain ranges, one rising to 12,000 ft. west of the turning-point. One question was whether to deviate to the shear line to help the return journey; George Moffatt did not, and won at 71.1 m.p.h.; A. J. Smith, in his faster Sisu, did, and came second at 68.3 m.p.h. Dick Schreder was fifth at 62.7 m.p.h. 40 pilots completed the course.

WEDNESDAY, 29TH JUNE.—Distance along a fixed course to Winnemucca (137 miles to N.E.) and back, then along a line through Alturas, Calif. Graham Thomson (Libelle) won with 443 miles; on the second leg against the wind, he was saved by a dust devil which took him up into wave lift! He landed at 9.15 p.m. Moffat was second with 439 miles. Both had, at 8 p.m., climbed to 11,000 ft. in "about a square mile of lift at 300 ft./min."

THURSDAY, 30TH JUNE.—Out-and-Return Alturas, 258 miles in all. After the launch the 60 or so gliders looked very pretty bunched together in two thermals. Dick Schreder won the race at 54.7 m.p.h. in spite of variometer trouble which left him with one instrument capable of showing only 5 up or 5 down. Moffat and Thomson tied for second place with 51.0 m.p.h., and 28 completed the course.

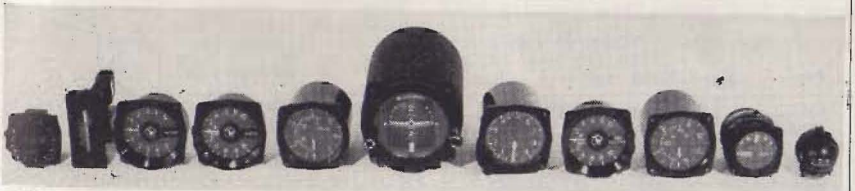
FRIDAY, 1ST JULY.—Out-and-Return Smith Valley (to the S.E.), 133 miles in all. Waves and lenticulars at 18,000 ft. were forecast, contactable at 9,000 ft., which lifted some pilots to 24,000 ft. and prevailed over the entire course. Makula flew cross-country in wave lift for the first time in 20 years' contest soaring (he said of the whole contest: "I have never experienced such fantastic soaring conditions"). John Ryan (Sisu) won at 57.8 m.p.h., having flown back from the turning-point in 42 minutes without circling. Schreder was second at 55.7 m.p.h.

SATURDAY, 2ND JULY.—Free Distance with cu-nims forecast across Northern Nevada and a shear line through Minden into Idaho. It was won by Ed McClanahan (Libelle) with 456.5 miles; his wife reached him at 4.30 a.m. Brittingham (Dart) made 437, Smith (Sisu) 436, Makula (Foka 4) 431.5, Bikle



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(SHK-1) 402, and Fisher (Vasama) 400. Throughout the day everyone was "gradually overtaking the trailing edge of a cold front". Hans Linke lost points by staying with a pilot who was very low over rough ground, in case he should get into trouble.

MONDAY, 4TH JULY.—Distance along a course through Lee Vinning (125 miles S.) and back through Alturas. Dean Svec (Sisu) won it with 435.5 miles and Schreder was second with 429.5; he was also second overall, only 27 points behind Moffat.

TUESDAY, 5TH JULY.—A 135-mile Triangle via Yerington and Minden. Thomson won it at 54.9 m.p.h., but although Schreder was only 7th with 48.6 m.p.h., Moffat finished 10th, 36 points behind him. So Schreder reached top place overall, where he stayed to the end.

WEDNESDAY, 6TH JULY.—Distance along a fixed course, first round a 370-mile triangle and then Free Distance beyond Stead. Schreder won with 440.5 miles, and the only others to complete the triangle were Thomson, 413.5 miles, and Moffat, 372.

THURSDAY, 7TH JULY.—Last task was a 175-mile Triangle: the rules say that there should be only four speed tasks but that the Contest Director can change the rules "in exceptional circumstances". So he did. Dick Schreder again won, at 54.0 m.p.h., and the only other pilot to exceed 50 was A. J. Smith (Sisu), who used nothing but wave lift after his first thermal and met several others at 24,000 ft. in various states of icing.



Caroline McQuade, former P.R.O. for the Nationals and Internationals in England, took over the same job in America. With her are Helen and Graham Thomson.

Pilot	28th 1	29th 2	30th 3	1st 4	2nd 5	4th 6	5th 7	6th 8	7th 9	*Total Points*	*Sailplane*
1. Schreder	894	810	1000	968	816	986	897	1000	1000	8385	HP-14
2. Moffat	1000	991	941	812	816	955	861	844	857	8080	SH-1
3. Thomson	874	1000	941	716	689	986	1000	939	768	7794	Libelle
4. Ryan	941	616	903	1000	769	961	793	630	895	7508	Sisu
5. Makula (Pol.)	851	905	833	638	945	867	917	652	858	7466	Foka
6. Klein	858	950	889	870	805	799	834	465	874	7353	Libelle
7. Klemmedson	877	799	721	729	816	949	929	757	750	7327	SH-1
8. Svec	786	742	762	649	781	1000	773	839	805	7137	Sisu
9. Brittingham	822	799	715	638	957	571	834	839	832	7007	Dart 17R
10. Starr	867	905	845	888	674	932	344	652	817	6930	1-23 (Mod.)
11. Greene	895	577	919	83	769	961	921	877	893	6895	SHK
12. Ivans	827	914	306	879	682	867	864	652	831	6823	Sisu
13. Bikle	881	616	831	700	881	867	753	486	783	6798	SHK
14. Smith, A. J.	968	905	406	408	955	955	944	234	956	6731	Sisu
15. Beebe	789	902	886	270	790	941	812	353	749	6493	Foka
16. Scott	854	538	834	681	769	863	715	338	805	6397	Ka-6E
17. Linke	778	616	796	866	689	876	760	222	726	6329	Libelle
18. Briegleb, R.	374	736	698	757	769	715	724	757	779	6309	BG-12
19. McClanahan	872	609	—	270	1000	853	914	788	836	6148	Libelle
20. McNay	753	533	800	644	866	726	447	549	768	6099	Prue Super Std.

"TURN LEFT AT READING"

Some Thoughts on a First Cross-Country

By RICHARD WADE

THERE'S a twist somewhere in your guts as you drive into the field, because this is probably going to be the day. The sky is clear blue, and on the horizon, just forming, a tiny patch of white. Wind northerly and Lasham all of fifty-two kilometres away. By lunchtime, the ones who got there first and rightly grabbed the aircraft are down. And there it is, the unsuspecting Ka-6. Barograph in, cushion — those Germans must have backsides like steel. Map, phone money, pencil. God bless Nanny, straps, instruments, trim. What was the other I had to say? Canopy, brakes and God bless me — all out! Bumpy — good thing — oops! Very bumpy. Five hundred feet — round we go. Well upwind and I can't keep down with the tug and look at that vario! Pull off and circle and whoops and up we go. Calm down — you are only local-flying. If it all looks right and you feel like going, well and good. If not, just settle down and enjoy yourself. Back to 40 knots. Good Lord, 2,000 ft. already and five up and the audio is playing "the bells of St. Mary's".

Now then, when we get to 3,500 we'll think about it. Oh, it is 3,500. Well, what the hell, I'll go and thermal downwind over there. I can still get back — who am I kidding? Lovely-looking cloud over Henley — here goes. And the audio stops. Speed up — four down and speed up again. I'll make that cloud but is there lift under it? There must be — please let there be just a little. Here it comes, plenty of down and now the bumps and wallop! Ha ha. Well, I am going to need all this lot to get back to Booker. Face it mate, you aren't going back to Booker. Hope this *is* Henley. Don't be an idiot, of course it's Henley, and here you are at 4,000 ft. — Reading next stop. Don't push your luck, follow the river. Sing a little song to keep your spirit up, tum de tum de tum. That's the town sticking out of the murk down there, and a cloud over the top very high up with V.M.C. and God's in His heaven and so am I and what the blazes is up with this cloud? Oh, charming, one of my all down and no up specials. Keep on the windward side and it's five down. Get in the middle and it's two down. There's another one coming from upwind so get out of the sink and wait about and think . . . What's best? Press upwind for that cloud or . . . down to 2,000? Fields? Yes, lovely fields. I'll move gently towards the cloud. That's my field, long and green and a footpath in it — no telegraph poles. Even money, there's a wild bull lurking in the corner. Come on cloud and there's that lovely audio noise and round and straighten and in again and who cares about bulls? Five up all the way and who wants to go to Reading?

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Now, map — railways out of the town. Branch left for Basingstoke. mustn't get too near cloud. Basingstoke here we come. They said I'd enjoy it. They were right again. What wouldn't I give for a cigarette. Have to wait till I land. You know, there is just a chance that I might get there after all. What a marvellous feeling — Booker a million miles away, and wildest Hampshire down below, or is it Berkshire? Not going down to find out.

Concentrate. Hope it is the right railway. 190°, about right. What the hell, Basingstoke must be down there somewhere. Barograph! I never switched it on! Listen, slow down, get a bit of hush. Tick, tick, tick. If I didn't, somebody else did. Hallo, more lift, and it's a good one. You'd have to be flying a brick outhouse to come down today. There is an airfield — Odiham. Where it should be on the left and Basingstoke! Good Lord, I'm nearly there, and enough height and am I going to look an idiot when I don't find Lasham? It's big enough. It must be in that fug down there somewhere. A glider! Now he must be from Lasham. Skylark 2. Local soaring? I can always follow him and nobody will know. There it is — oh ye of little faith and look at the height! 5,000 and a bit, so here we come, and watch me make a classic stinker out of the landing — and where? That's the towcar line and there are the tugs and wherever I go it will be wrong anyway, so why hang about? Nobody else landing. Brakes out, 4,000, 3,000, 2,000. Remember it's 150 ft. higher here. Over the Comet, 850 and turn left and left again — speed up. Too late to change your mind now — brakes and don't groundloop it, not here, not now. Nice and straight and stop.

This is almost the best cigarette of my life, and here comes somebody and how can I wipe that silly grin off my face?

"Good afternoon — no, not far, only from Booker."

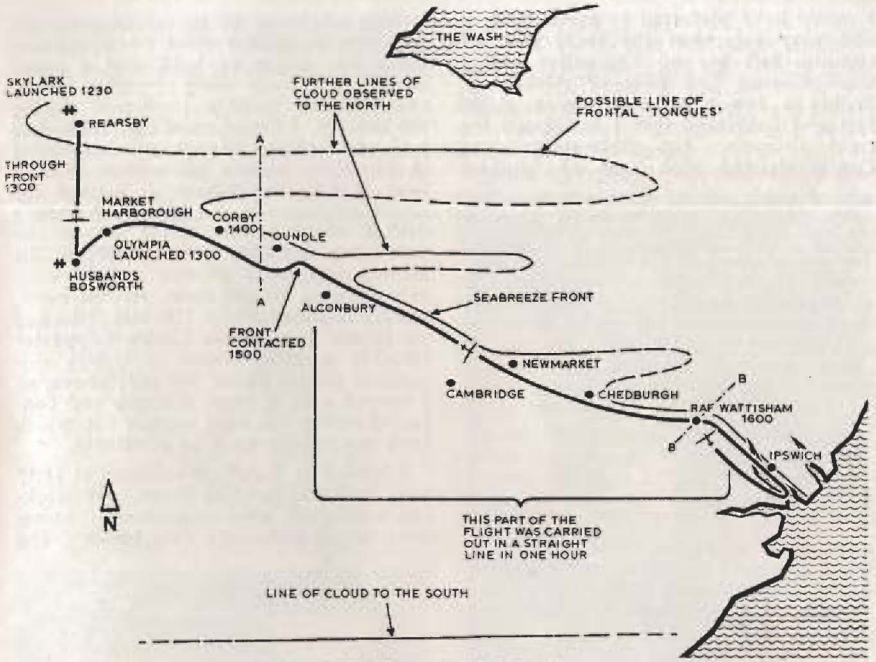
A FRONT TO REMEMBER

By KEITH NURCOMBE

YOU might think that we at Husbands Bosworth, almost in the heart of England, would not be terribly concerned with sea-breeze fronts except at the end of a downwind dash to the coast. However, some of the local pundits have been insisting that they do penetrate as far as our site from the north-east, and pilots at nearby Rearsby (a bit nearer the Wash) claim to have seen the occasional S.B.F. in the late evening after a good light-westerly soaring day. On Easter Sunday (10th April) rather exceptional conditions occurred when a cold front was reinforced by sea breeze and gave me a flight to remember for a long time, while a number of short out-and-return tasks were foiled by the almost incredible conditions.

The day started with low stratus and poor visibility, and it took considerable optimism to plan cross-countries, although the morning forecast told of a weak cold front clearing rapidly from the south by mid-morning. Late arrivals from the Stratford region confirmed that a large area of blue, with good Cu popping already, was moving rapidly northwards, and so flight preparations changed into top gear. The Oly trailer had been totally destroyed in the previous week-end's gales, and so 09.30 hrs. saw a band of eager workers busily modifying an ex-syndicate trailer. Since they appeared to have everything under control (and I was getting in the way), I moved off and tried drawing lines on my map and attending to the sundry details that one remembers at the last minute.

By 10.00 hrs. the clearance had arrived, and by 12.00 hrs. cloudbase was up to 3,200 feet a.s.l. with tops at 7-8,000 feet. By 13.00 hrs. streets were forming, and since reports of strong lift were coming in, an immediate launch in the Club Oly 2 was thought prudent to enable an attempt on five-hours as well.



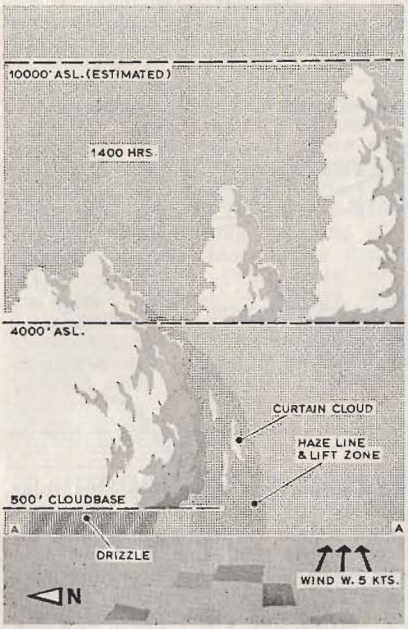
The Tiger waved me off at 2,500 feet a.s.l. (airfield 500 feet a.s.l.) with Downham Market declared for Silver distance, down a light (estimated 5 kts.) west wind. The flight progressed normally, albeit rather slowly, and I concentrated on staying high. Going too fast had been my downfall on two previous attempts and I was in no hurry this time. Some thermals near Market Harborough were worked in company with a 463 and, later, a Ka-6, doing the Bicester-Spitalgate O. & R. task. Conditions by this time were superb with smooth 4 and 6 kt. thermals and about 4/8 Cu based at 3,600 feet a.s.l. rising rapidly.

At 14.30 hrs. I crossed Corby, heading for Peterborough, but alas, directly on track about five miles east of Corby there was what appeared to be an enormous decaying Cu-nim with cloudbase virtually on the ground, tops at about 7,000 feet, and rags of fracto-cumulus along its edges. The street that I was using disappeared into this ragged grey mass, and it was felt wise to divert south where good Cu were still working. This Cu-nim was an evil-looking thing, squatting on the ground like some science fiction monster, and it was disconcerting to find that I was continually being caught up by the cloud mass whenever I stopped to make a climb.

It was at this point, desperately trying to claw my way out of this mess, that I lost myself. Descending rapidly under a small local area of overdevelopment, I was down to 1,200 feet a.s.l. (about 1,000 feet above ground) when I was saved by a tiny thermal just as I was giving up hope. During the slow climb I located myself over the A5 just south of Oundle, which gave me a great fillip, since previous cross-countries have found me lost almost the moment I crossed the airfield boundary, and staying lost thereafter.

On reaching cloudbase, I was in a position to see that the Cu-nim formed some sort of front stretching to the eastern horizon. It was about this time that the possibility of a sea-breeze front occurred to me, since it seemed to fit in with the book descriptions. At the time

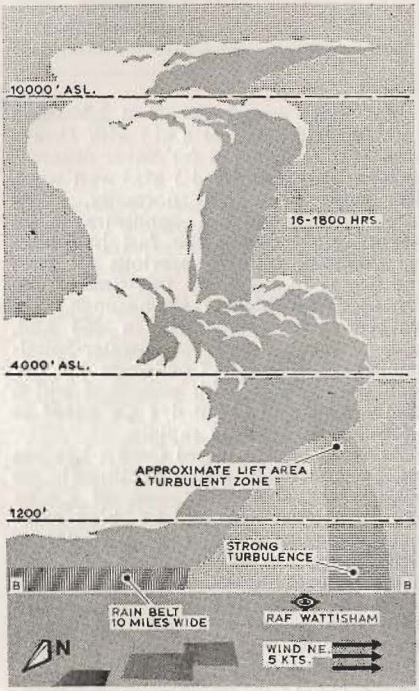
I would have preferred to avoid using it and play safe, but the local lack of cumulus left me no alternative and I made contact just west of Alconbury. Within a few minutes I was at 4,000 feet and convinced that I had made the right decision. The haze-wedge was clearly defined with rags of "curtain



cloud" forming in it, and I set off along the line of the front at 55 kts., all thoughts of Downham Market now gone. Without turning I was able to maintain between 2,500 feet and 5,400 feet, but occasionally the "monotony" was broken by diverting south to interesting-looking Cu, rejoining the front after making a "normal" climb. Sometimes the lift was up against the sheer wall of cloud, sometimes up to a mile away, but there was no difficulty staying in it. The flight took me over Huntingdon, Cambridge, Newmarket, Chedburgh, Wattisham and Ipswich in little over an hour. With five hours now a distinct possibility, I was reluctant to go too near the coast, and so I went back inland a bit to R.A.F. Wattisham, where I soared locally for two hours.

With one hour to go to complete my duration, a sudden bout of airsickness made me decide to land, and a rapid descent was made using airbrakes. However, having quickly recovered during the descent, I found myself at 1,200 feet a.s.l., cursing my ill-luck and scratching in turbulent broken lift almost directly over R.A.F. Wattisham. I battled for about ten minutes, during which time I drifted about a mile to the east in the prevailing westerly, while below me the airfield windsocks showed a light easterly blowing off the coast. At this point, having regained about 100 feet, I looked up to see the Suffolk Club's two-seater (Ka-7?) whirling round in tightly disciplined circles about 500 feet above, so I moved over a short distance and contacted strong but very narrow lift, which took me rapidly back to cloudbase.

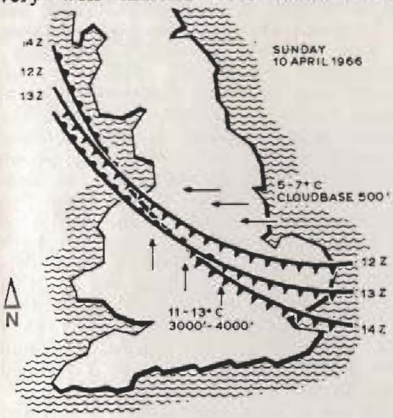
I landed at R.A.F. Wattisham at 18.15 hrs., and watched the front, still working, until dusk. Two magnificent Cu-nims were sitting stationary over Ipswich, and



others could be seen along the front to the west, their anvils silhouetted by the setting sun, making a suitable ending to a glorious day.

Meteorological Notes

I WENT to the London Weather Centre and had a look at the charts for Sunday, 10th April. They show a very well marked cold front in the position reported by the pilot. It had travelled northwards over Southern England the previous night as a warm front (and was still tending to do so in the west at 13.00 G.M.T. on 10th). I sketched the positions at 12, 13 and 14 h. G.M.T., shown in the diagram.



There was a complete overcast of low stratus to the north of the front in the morning, so that there was little solar heating near the Norfolk coast. However, later in the day the stratus burned off and gave a little heating there. Showers and thunderstorms developed in the warm air to the south of the front and locally also along it during the afternoon and evening. The front eventually moved south into the Channel during the night.

It therefore seems that the front described by the pilot was a large-scale feature, although it may have been enhanced in the east by sea breeze effect from the Norfolk coast.

Since the front seems to have been pivoting about the Rearsby area at 14.00 G.M.T., the frontal characteristics would have changed to the west of Rearsby.

KEN BIGNELL

R.A.F. GERMANY CHAMPIONSHIPS

Butzweilerhof, 26th June to 10th July

Final Place	*Pilot(s)*	*H/cap*	*Day* 1	2	3	*Total Points*	*Sailplane*
1.	N. Smith		872	959	911	2742	Ka-6CR
2.	P. Dawson		632	1000	1000	2632	Ka-6CR
3.	A. Whiffen		800	934	617	2351	Olympia 463
4.	B. Kay	(20%)	431	577	694	1702	Olympia 2B
5.	D. Austin	(20%)	352	439	800	1591	Swallow
6.	R. Passfield,		1000		287		
	C. Foot	(20%)		187		1474	Ka-2
7.	R. Paker	(20%)	300	285	694	1279	Ka-2
8.	J. Collins		58	545	572	1175	Ka-6CR
9.	I. Smith	(10%)	356	285	—	641	Skylark 2
10.	P. Hanson	(20%)	0	292	113	405	Swallow
11.	T. Slack	(20%)	44	276	0	320	Swallow
12.	A. Price,		0		0		
	D. Kitchener	(20%)		211		211	B-Spatz

Tasks: Day 1, 109 km. Triangle; Day 2, Goal and Return 158 km.; Day 3, Goal Race 164 km.

ON FLYING THE NORTHERNS

2nd-10th July

By STEPHEN WILLS

WHEN in March our syndicate decided to buy a Dart 17R in place of our faithful Skylark 4, I might have had second thoughts had I known that the new ship would be delivered the day before the Northern Championships started.

Arriving at Camphill on Friday afternoon we rigged rapidly; as I climbed aboard, I little thought that all the height I should get was ten feet before the winch cut. Luckily I was too frozen with fear to develop any stick twitch or rudder flap until after touchdown. And then it dawned: perhaps despite all the dire warnings of its "slipperiness", this aircraft (a) flew and would behave itself despite the pilot, and (b) could withstand heavy landings over the formidable wall roots at Camphill.

However, it was with considerable foreboding that I took the air on the first competition day to fly Distance along a Line through Husbands Bosworth via Kirton Lindsay. Things were not improved by having a syndicate member as crew patting the Dart fondly just in case . . . !

I found out quite swiftly that a Dart could scratch with the best of them. Had it not been a competition, the day was a day on which sensible pilots might well have stayed around the site; but in the circumstances obviously the best plan was to drift away from the site in whatever lift could be found. It was very shortly afterwards that I found myself in rather better weather, over Chesterfield, in company with several others.

One or two reasonable thermals and Kirton Lindsay hove in view, with a lovely cloud just before it sucking like mad. O horror of horrors — to throw it away just to have a look at the marker, to find on my return that the cloud had collapsed!

I then proved that this was no day for getting away from a low altitude. However, I was happily rescued by a Ka-6, and was later embarrassed by leaving the kindly presented thermal for another stronger one, thereby beating the Ka-6 into a cloud which bore me to 7,500 ft.! On emerging, I glided down to find that the conditions had sadly deteriorated on course, and a rather measly line of cloud departed at right angles towards the east. "Go with the weather" and "Glide it out" battled furiously. "Weather" won, and soon The Wash hove in view. Tea at Boston? . . . No — little clouds formed a sort of sea-breeze effect and I floated on a south-westerly course quietly back inland. My anxious crew now underneath, and on the lookout for at least 3,000 yards of runway, decided that Wittering was for me, especially as I had run out of lift and the fields around were filled with corn, and so I radioed them to ask for landing permission.

To cut a long story short, I left the cell block two hours later, having exercised two fire engines and three police cars, and provided suitable details to keep ten R.A.F. bloodhounds busy for some time checking whether or not my intentions were honourable.

And so the Competitions continued with a race to Dunstable, where once again a splendid cloud to 8,500 ft. made a glide out to Ampthill an easy task. Had I fully appreciated the qualities of my Dart, an arrival at Dunstable with two feet to spare might well have been on.

With two wins and 400 points in hand, I began to think that Lady Luck was with me; but nevertheless it was equally obvious that one bad day could quickly erase my lead.

After a couple of Camphill specialities, the weather only clearing after No Contest had been announced, the next task, a race Camphill, Kettering, Swanton Morley, was clearly a No Contest day but for the fact that the organisers refused to recognise it as this, and so off we all went. Soon 24 aircraft were happily soaring a low wave which showed how wrong we could be. This



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was undoubtedly the only way to leave Camphill. A second wave over Matlock clinched it for me. Once again the Camphill weather deserted us over to the west, and conditions were such that Kettering was quite easily accomplished. So good did it appear that I indulged in a bitterly regretted loop over the turning-point just to make sure they saw me. Although still in company with several others at 2,000 ft. there appeared suddenly nothing to go for. I watched race-minded friends drive off into the distance getting lower and lower. I decided that this was not for me, and so I waited for conditions to improve. Eventually, by going for patches of sunlight, I managed to work my way forward against an increasing headwind. This was probably caused by a developing thunder cloud over Peterborough, 10 miles to my north. I could hear Bernard Fitchett in his Ka-6 at the top preparing for his final victorious '.glide out". Finally a patch of sunlight over Chatteris failed me and I was forced to land.

However, as no one reached Swanton Morley, I still held a lead of about 300 points over Chris Riddell, who had been dogging my footsteps in his 17R right from the first day. What turned out to be the final day came on Saturday, after two more No Contests. Visibility around Camphill on a race via Long Eaton to Doncaster was once again rather poor and thermal conditions weak until Matlock was reached.

Very broken and twisted thermals took me over the next ten miles to Ripley and finally to Long Eaton with a bad, nearly disastrous dalliance just west of Derby. After rounding the turning-point, conditions were good to Mansfield, but all the time cloud was thinning out until only wisps of cloud announced where lift had been ten minutes previously. Thermals were few and far between after Mansfield, and unexpectedly strong Downs without the corresponding Ups caught me unawares. Worksop slid underneath at 2,000 ft.

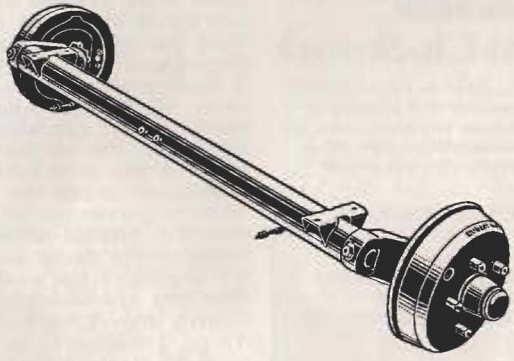
With only 1,200 feet with five miles to go, I watched a 463 with 1,500 feet start his finals. Knowing a little of the southern approach to Doncaster, I regretfully started to search. Down to 700 feet, five minutes later all seemed





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lost. An urgent plea over the radio from Mary-Pen my wife "not to give up" turned despair into determination. Turning my back on the only landable field in view, I selected a housing estate as a possible thermal source with its chimney, slag heap and all. Slight flickers of green and red were small encouragement, but the unenviable thought of dropping in for tea in the parlour spurred me on. Never have I worked so hard. The flicker of green like will-o'-the-wisp led me all round the houses, until finally after what seemed like an age, probably only 30 minutes, I made a complete circle in half a foot per second. Ten minutes later at 1,500 feet it was in the bag.

I was one hour behind Chris Riddell, but nevertheless safely home despite being drenched with perspiration. We then watched the later arrivals, Mike Armstrong's being the most spectacular I ever wish to see, as he cleared a housing estate, mine workings, a railway line and finally the boundary with inches to spare, nearly carrying a tractor driver over the line with him. To think I'd chickened out at 1,200 feet over Tick Hill!

Being only 137 points in the lead, the final day dawned with nerves at a stretch. A task was set, but after fruitless searching by everyone it started to rain and No Contest was declared.

And so the competition ended. All praise be to the task-setters, Brian Jefferson, Mick Kaye and Bernard Thomas, for some magnificent tasks under difficult conditions, which in normal circumstances would never have been flown.

Final Place	*Pilot(s)*	*H/cap*	*Contest Day and Date* 1 *2nd*	2 *4th*	3 *5th*	4 *9th*	*Total Points*	*Sailplane*
1.	S. Wills		967	496	746	807	3016	Dart 17R
2.	J. C. Riddell		893	171	817	1000	2881	Dart 17R
3.	B. Fitchett		537	332	1000	927	2796	Ka-6CR
4.	V. Tull		537	0	924	822	2283	Skylark 3F
5.	M. Seth-Smith		799	120	461	757	2137	Olympia 463
6.	B. Jackson		537	168	690	725	2120	Olympia 463
7.	R. A. E. Dunn		574	0	617	886	2077	Olympia 463
8.	J. Przewlocki		832	0	744	388	1964	Dart 17R
9.	L. Bellamy		779	0	532	572	1883	Skylark 4
10.	J. Reilly		697	0	539	444	1680	Skylark 3B
11.	K. W. Blake		0	177	617	768	1562	Skylark 3B
12.	L. Crabb,		488	0	—	752		
	B. Crabb		—	—	0	—	1240	Dart 15
13.	M. S. Armstrong		0	177	310	738	1225	Skylark 4
14.	R. Cousins		0	0	661	363	1024	Dart 17R
15.	J. Tweedy	(10%)	108	0	678	178	964	Sky
16.	D. S. Cooper,		0	0	661	—		
	J. Brooks		—	0	—	137	798	Olympia 463
17.	F. Knipe,		779	—	15	0		
	J. Reussner		—	0	—	0	794	Skylark 4
18.	T. Smith		0	12	593	25	630	Skylark 4
19.	L. Haynes,		0	—	398	—		
	D. Hatch		—	136	—	0	534	Dart 15
20.	A. Beckett		422	0	0	0	422	Dart 15
21.	K. Brown,		243	—	0	129		
	R. Perrott	(10%)	—	0	—	—	372	Skylark 2c
22.	D. Dawson,		—	—	0	—		
	B. Davies		70	—	—	204	274	Olympia 463
23.	J. Tarr,		70	—	63	—		
	J. Bower		—	0	—	39	172	Ka-6
24.	J. Everitt	(20%)	—	—	7	0	7	Capstan
25.	C. Christianson	(30%)	0	0	0	0	0	Harbinger

READY- STEADY- GO

Well, nearly !

By Wally Kahn

ONCE upon a time, when Pundits flew Olympias and Wally Wallington was just a met. man and not a god, Lorne Welch hatched a Golden Plot. It was simple really: Wally or Jock Findlater would telephone us and pass the magic words "The Golden Goose will lay a Golden Egg" and we knew that the weather was cooking up for a Gold downwind dash. Somehow, the goose never did lay.

Cooking Olympias moved on and so did the Met. office. Our Olly turned Eagle, then Skylark and now Dart. In our halcyon Skylark days the cry was, "Dogleg, Lasham-Long Mynd-Yarmouth for Diamonds". Although the Met. office moved nearer to mine, that goose never laid either.

With our new Dart came the latest form of masochism called Diamond Tri-



angles. Religious incantations sounded like "eighthoursatfortymilesanhour". Downwind dashes were out, taboo, old hat and rather square.

Wednesday, 29th June, our goose turned ever so slightly Diamondish. Friday or Saturday we eat egg, my clairvoyant Met. man said. Thursday, the goose was distinctly broody, so we moved the isobars out just a little. Dinner that night with cricketing friends was hell until I heard that they had an important match that week-end and I offered there and then to ring the Met. Office. Oh could you, Oh would you? Would I! Saturday, my sweet Met. man said. No sleep, tried counting thermals jumping over gliders at forty miles divided by eight hours? Friday, another call before work, goose still straining. Work all day, impossible odds — I bought three lots of forty miles an hour from two Dutch factories and resold them to the Customs and Excise and three customers — I wonder what they did with them?

Pressure awful now: home — camera, wife, Polo mints, radio, dog, sunglasses into car. Don't think about 500 km.; concentrate on driving. Yes Ma'am! Make small talk with dog, damn — not dog, with wife. Damn — forty miles per hour speed limit sign — back to forty miles for eight hours, then motorway — fifty speed limit — thinks: fifty only six hours and a bit. Then seventy limit — seventy between thermals, not enough. No police cars — eighty. Ah,



eighty between thermals, be back for tea, cakes, polish finger nails: "You see, chaps, what I did next was . . ." Suddenly, big weightlessness trick — camera, wife, dog *et al* floating — that damn hump bridge at Odiham at eighty between thinks!

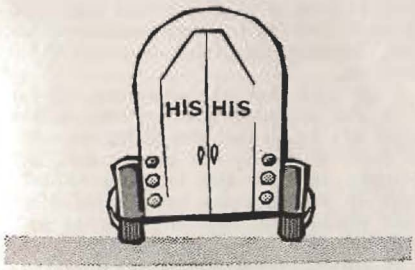
Lasham — batteries — alarm clock — sleep. Sleep? Not a hope, count gliders jumping over thermals . . .

Saturday, broody goose, isobars formed solid floor, fly local, bloody goose, bloody Met. men, bloody gliding. Saturday night all smiles again; some idiot has seen TV weather forecast. Take

silver collection from Burton, Burgess, Carrow and others for sub to ring sweet kind clever Met. man. Bloody Met. man: "Sorry old chap, tomorrow will be quite useless for gliding." Get drunk — well just a leetle. Sleep. Thank goodness for drink, makes you get up real early. Dog and me into garden, spend pennies. Watch dog playing with Diamond Eggs. Diamond Eggs! Lawn covered in lovely, round, oval, glorious DIAMOND EGGS! Dirty great Eggs!

Clubhouse, flap, barograph, rig, ring lovely Met man — depression, remember it's partner's turn to fly and new trailer hitch is still in the back of the car. Feel like placing those eggs ever so indiscreetly . . .

Nine-thirty, clouds, glorious clouds, little white clouds. Fingernails don't taste bad. "Do you take this man to be your lawful wedded partner?" Private ownership IS worse than marriage! Law-



ful-law — possession is nine points . . . Friend, please, please one trailer hitch — Oh thank you. Instructions to U.C.C. (Utterly Committed Crew) to break eggs on partner's head on arrival. Look at map, agree with Burton, Burgess, Carrow and half the club on Lasham — the Wrekin (British Alp near Wellington)-Wittering-Lasham. Map, damn Philip Wills and his sticky route tape. On at last, dear clever Philip. Declaration, camera, official observer. OFFICIAL OBSERVER. Ah Rika. Dear Rika. Thank you Rika. Rika saying, "You must do it, don't chicken out." Tug, airborne, wheel, blast, blast, blast, I have forgotten to . . . since the dog found those eggs this early morning!

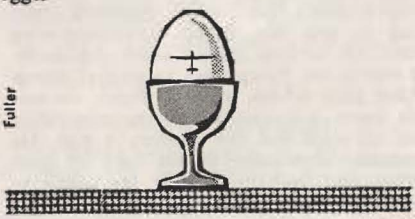
Off tow in the wrong place. Carrow crowing about a Barn Door passing him in a thermal (his code for real thermals Texan style). All I find are the bottom half of stable doors — open at that. To hell with start lines and all that jazz: Off. Basingstoke — oh no, that . . . Carrow sitting on barn door ahead at Newbury. Newbury now, Door Carrowbarn at Wantage. Too much, only one cure. Switch off radio. Peace, lovely



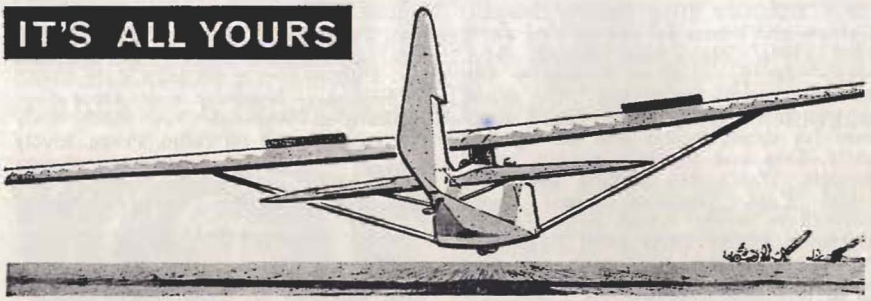
gliding, glorious silence. Ten minutes later — one ulcer to other: "I wonder where Carrow and the others are?" Switch on radio. Broadway tower, hear Burton, Burgess turn back. No Carrow, barns or doors. Is he ahead out of range?

Near Wrekin now. A front lies across the Wrekin and is doing over Camphill (Damphill) what I want to do oh so badly. Four miles from Wrekin, no good, bloody cloud solid mass. Radio speaks, Carrow landing Halfpenny Green airfield (damn silly name, hate everything now). Carrow landing, landing, landing. Temptation — land with him. Remorse! Poor Partner at Lasham ". . . for better or worse . . ." Turn round, jolly fly home. Look at gliding site near Evesham, very tempting. Hear Goodhart and Burton on radio breaking 100 km. triangle records. Home, home. Land. 240 miles in six-and-a-quarter hours. No partners there, no eggs either. Climb out, please Madam — look the other way. Glorious. Feel much better. Tea, cakes, Burton polishing fingernails: "You see chaps, what I did next . . ."

Oh what a bloody frustrating sport. Why, why, why? Trouble is — I love eggs.



IT'S ALL YOURS



SOME instructors let their pupils do everything themselves at the earliest possible moment, on the grounds that the beginner only learns when he is using the controls himself. Other instructors can hardly bear to part with the stick and, particularly when soaring offers, use the lift regardless, on the excuse that the pupil will benefit from the longer flight.

Both instructors may have the right on their side when dealing with some pupils, but will be wildly wrong when dealing with others. But, however different pupils are, there is one thing they all need, and very often do not get, and that is really thorough basic training. Far too often the pupil is given, or allowed to have, so many different things to do in his early flights that he never learns any of them properly. If he continues through his training in this way he partially overcomes his lack of understanding by contriving a series of aids which seem to give him the result he wants (e.g., turning over a particular tree, using the brakes for landing instead of the stick). After a while he can superficially handle the aircraft reasonably.

But big problems arise when he gets even more to do while he is flying—responsibility for circuit planning, circling to use lift, flying on strong-wind days, or landing across wind. Suddenly, it seems, his flying goes to pieces. Something goes wrong on each flight; on one his turns are awful, on the next they are all right but the landing is bad. He becomes depressed at his lack of progress, and feels that he is not going to ever get solo. This feeling of failure contributes to continued poor flying.

Of course, nothing has gone wrong with the pupil or his ability. All that has happened is that his lack of understanding of basic flying techniques shows as soon as he has the extra responsibilities to cope with. It prevents him from concentrating on the next immediate action, because his flying is not yet instinctive.

I am sure that we have gone too far with the laudable idea of letting the pupil try to do all the flying as soon as possible. He is not getting solo any quicker; in fact, the launches to solo have in recent years been rising more than would seem necessary to cope with present needs.

A further disadvantage of a sketchy basis to flying is that the early lessons do not get "fixed" in the pupil's mind. On post-solo checks his turns soon become sloppy, he forgets to keep a good look-out, he doesn't remember spin recovery drill, he is hesitant following an unexpected cable break.

If one happens on a bad case of "foundationless" flying, the kindest thing is to take a deep breath and work steadily through every stage of basic training with the pupil, ensuring that he really understands each step, and is confident of his ability to carry it out. It may be frustrating for the pilot to feel that he has gone back to school, but as soon as the improvement in his flying begins to show, he will think you less horrible.

The proper answer, of course, is good basic training *at the beginning*:

1. The instructor should decide exactly what he is trying to teach on any partic-

ular lesson, and above all what he is not teaching and is therefore taking complete responsibility for.

2. He should concentrate on ensuring that his pupil is quite clear about what he is trying to do, demonstrate the exercise correctly and fully, and then ensure that the pupil has sufficient time to learn it properly.

3. The next stage is to teach the pupil to link definite exercises — not vague half-done manoeuvres — and to ensure that his concentration is not broken by extraneous activities and confusions.

In this way the pupil will achieve a well-learnt basis on which to build his subsequent flying, and he will become a better pilot quicker.

INSTRUCTORS' WEEK AT LASHAM

There will be a B.G.A. National Instructors' Week from Saturday, 19th November, to Sunday, 27th November inclusive. This is being arranged as a sequel to the successful C.F.I.'s Conference held last year, although this time the programme will be more extensive.

The first week-end will consist of an Instructors' Panel Conference, and Meeting of Instructors' Panel executives and examiners.

MONDAY, 21ST NOV. to THURSDAY, 24TH NOV.—These days will be available to Instructors from all over the country to fly different two-seaters with senior instructors; exercises will include general aero-towing—low and twin and short-rope tows, stalling and spinning, field landings, and category tests, and it is hoped flying on various light aeroplanes.

FRIDAY, 25TH NOV. to SUNDAY, 27TH NOV. will be the C.F.I.'s Conference (for C.F.I.s and one other instructor from each club). Conference members will have priority flying on the Friday, and in the early morning of Saturday and Sunday, weather permitting. There will be lectures and discussions during the week-end days on elementary training, the use of powered trainers, early cross-country flying, etc.

Full information will go out by B.G.A. circular later, but any Instructors who would like to bring a two-seater, or who would like any special subject discussed, should contact the Instructors' Panel, c/o B.G.A.

ANN WELCH

A SOBERING THOUGHT

Report on the accident to Slingsby Tutor on 16th April, 1965. C.A.P. 263. Her Majesty's Stationery Office, 1s. 6d.

This short and sad report should be compulsory reading for all glider pilots. For those who cannot get a copy quickly, the following extract is reproduced.

"The evidence indicates that the pilot was not manoeuvring the glider in a manner likely to cause structural failure and although there appears to have been a high degree of turbulence at the time it is not considered to have been sufficient to overstress a sound wing structure. According to the Meteorological Office there was a probability of gusts up to a maximum of 800 feet per minute, i.e. approximately 13 feet per second. Even at the maximum permissible speed for this type of glider, the normal acceleration increment produced by such a gust is less than $1\frac{1}{2}$ g.

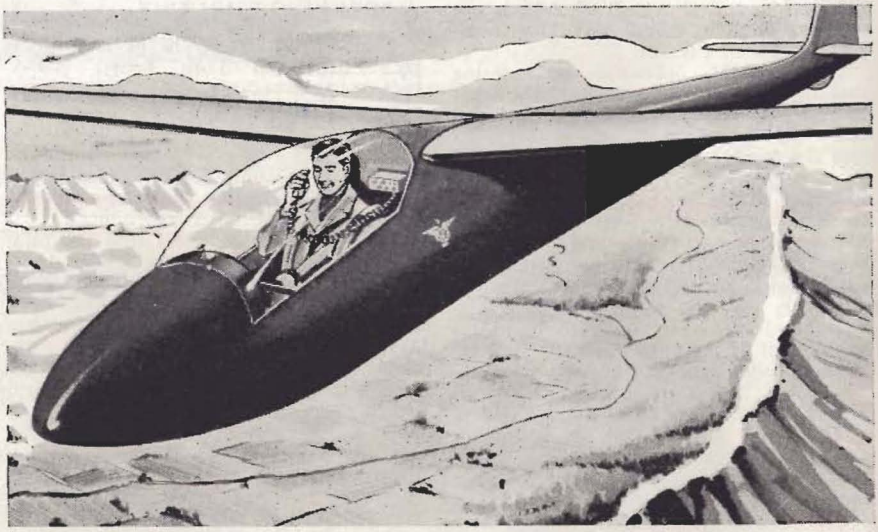
"The report of the Forest Products Research Laboratories showed the presence of slip planes and compression creases in the port wing; they were also found to a limited degree in the starboard wing. Since the port wing failed in tension, it is considered that the most likely explanation is that the wing had received compression damage, such as from a heavy landing, at some time prior to the accident, and that the turbulence encountered during the flight was sufficiently severe to break the weakened wing. Damage of this nature would not be detectable during normal aircraft maintenance."

The moral is obvious. If at any time a glider could have been overstressed, either in the air, on landing or take-off, or during ground handling, the event must be reported to a competent person. Pocketing one's pride could save some other pilot's life.

PAUL MINTON, *Safety Panel.*

"TO FLAP OR NOT TO FLAP"

This article, published in the last issue on page 297, was written by Roger Neaves, not Mr. Ward, and first appeared in BGA Instructor No. 4.



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RIETI 1966

By PHILIP WILLS

WHEN the Aero Club d'Italia invited me to fly in their 1966 Gliding Nationals at Rieti, 2nd-12th August, I accepted with alacrity, but little did I realise in what a treat I had been permitted to take part.

I had flown in (and won) the 1961 Italian Nationals at Perugia, and it had been a wonderful experience; but Rieti, about 60 miles away in the next valley to the south, gives gliding conditions which I have little hesitation in saying equal in strength of lift those met in Texas or South Africa (though over a smaller area), and which for variety of flying and beauty and interest of the country flown over exceed both by a very wide margin.

And where Rieti, in August, beats every other site I know of is in that month it has nearly 100% meteorological reliability. We could have flown every one of the 12 days, and the same was true in 1965. On rest days there are dozens of wonderful things to do, from bathing in one of the many lakes to expeditions to buildings and works of unrivalled beauty and history.

To beat our National (and even World) records, over triangles of up to 300 kms., one need go no further than Rieti, and until you have learnt about mountain flying you are not a fully-developed glider pilot.

Although a lot nearer than Texas or Kimberley, Rieti is still a long way — three days, including the Channel crossing, the Mont Blanc tunnel, and a thousand miles motoring with the trailer, gets you there fairly comfortably. And the other thing to say is that, although not nearly as tricky as mountain flying in the Aosta valley (with 10,000 to 14,000 ft. peaks all round), flying over the Apennines is still a man's game: not nearly as dangerous as it looks (which is just as well), but still requiring skill, discipline and caution.

The risk is minimised by not flying except in conditions which, by our standards, are absolutely roaring, and on no day did one launch into less than 3-knot thermals, which worked up to double that figure, and even then conditions were said to be subnormal.

From the ground the country looks unlandable: small fields and power-wires in the valleys, and steep mountains, but from the air there are only a few, and known, valleys in which for a few miles there is no landing-place to be found.

The lessons to be learnt from mountain flying form a chapter in the behaviour of the air which to most British pilots is virtually unknown.

Envisage the valley containing Perugia, Assisi, Foligno and Spoleto, perhaps 20 miles wide, and 30 miles long from north to south, surrounded by steep mountains running up to 5,000 ft. To the south, over the mountains, a deep valley running east and west contains Terni (a steel town), then another range, south of which is the bowl containing Rieti, about 10 miles across in each direction, surrounded by more mountains running up to 7,000 ft.

Now the surface wind can effectually blow only up and down the valleys, but the upper wind is almost invariably across them. One day, flying over the west-facing mountain south-east of Perugia, I saw factory-chimney smoke at Perugia blowing to the south, smoke from Spoleto, 20 miles south, blowing to the north. Cloud shadows, showing the upper winds, were coming from due west. My mountains had spurs facing N.W. and S.W. To which place should one go for lift? Without a relief map, it is difficult to answer this and the other hundred similar problems which present themselves, but I got very much better at forecasting the right answers before the meeting was over. The time of day, and hence the direction of the sun, of course came into the calculations, as did your own altitude when the problem presented itself.

In one day's task I used thermal lift, mountain-slope lift to 10,000 ft., wave lift and the roughest rotor I have ever met — I thought for a few minutes it might use *me*, but the Dart overcame it.

We flew seven tasks — all were enchanting, two were memorable, and one was amongst the half dozen most interesting and exciting flights I have ever made. I will try and write these up for the next issue of S. & G.

BICESTER EASTER RALLY

THE following scores are published as they have been accepted for rating purposes. The task, an Out-and-Return to Spitalgate (72 miles), was flown on the 10th April, 1966, and was the only contest day which resulted from this Rally.

Name	*Points*	*Name*	*Points*
A. J. Deane-Drummond ...	1000	D. F. Holding	717
J. Delafield	987	J. H. Stanley	706
G. MacA. Bacon	980	D. J. Marpole	702
J. S. Williamson	970	J. G. Croshaw	695
E. J. Meddings	970	P. D. Lane	695
N. W. Kearon	970	D. S. Innes	695
H. C. N. Goodhart	845	P. W. Williams	694
A. W. Gough	834	J. A. Evans	690
G. R. Barrell	834	C. J. Gildea	671
K. C. Morgan	833	M. R. Medland	661
R. A. E. Dunn	825	C. P. O. Alty	655
E. Stark	765	E. G. Shephard	634
N. A. Wilkinson	749	P. Hanneman	634
A. Somerville	734		

CORRECTION: Western Regionals

Table of final results, August-September issue, page 305:

17. J. V. Inglesby scored 205 points on day 4, making total points 824.
18. W. Mason and M. J. Smith. Smith scored 24 points on day 5, making total points 754.
20. W. Fay scored 24 points on day 5, making total points 472.

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FIRST GOLD FOR WALES

By IAN SHATTOCK

THE Midland G.C. Easter Rally provided the first opportunity to get a Gold C height, but it was not to be. A climb from minus four hundred feet (above Mynd) to ten-five seemed to be good enough, but I didn't count on the ink freezing, the clock stopping and lack of base line preventing my Gold.

It was, therefore, with an anxious eye on the shortening summer that on 17th July I rang the Met. at Rhoose to find out what was in store. The very prevelant northerly airflow was again forecast with diminishing strength throughout the day, with a possibility of sea breeze "stopping" the flow near our position eight miles north of the sea. The term the met. used was a likelihood of a "heat sink" forming over the vale of Glamorgan with cu. to 8,000 ft. and occasional ones to 14,000 ft., cloudbase around 4,000.

At the site everyone seemed preoccupied with the routine of getting flying started, amid cries for tow-rope, lifting, petrol and the numerous chores, including the repair to the 21 where a sheep had contemptuously kicked a hole. As soon as I had assured the rest of the Skylark syndicate that they weren't at all keen to fly—we hate flying in very low wind conditions on our site—I set about rigging, barograph smoking, map-folding and other "pundit type" tasks.

Amid jeers from all but the most optimistic, I donned warm clothing, gloves, and fitted a cellular plastic seat cushion for insulation. A small cushion between the 'chute and me, and I was ready. The launch was a magnificent 700 ft. but out over the valley at 500 ft. I hit a two-knot thermal which took me to 3,000 ft. The plan was to fly north to clear our airways and then west along Green One South Edge. This would place me in a clear airspace with the north wind driving me away from airways—over the Bristol Channel. Thermals were fair with occasional 4 kts. to cloudbase, while the wind at 4,000 ft. a.s.l. was about 15 kts., which made it hard going to keep high and northerly.

At Hirwaun Edge, 800 ft. sheer facing north, there were big cu. forming, and it was just west of these that I first entered cloud. The first climb was very good with up to six knots at times. I used the idea of centring on maximum noise and it seemed to work, but at 7,000 ft. I was only getting 2-4 knots. Eventually, with a few rather high-speed turns, I lost the lift and flew on compass to N.W. Again I entered cloud and again I reached 7,000 ft. At this point I had the impression that the altimeter had stopped. On reflection, however, I was used to seeing it go up in large jerks, but as I was getting lift of only 2-4 knots, one hardly expects large movements. I had been in the air about three hours and I was yet to top 8,000 ft. Still, I had all day—or did I? The sky seemed generally filling up with cloud and didn't seem to be Gold C height type at all. Just as well to edge towards the site area—no point in a long retrieve.

With the site in view about 8 miles to

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the east, I came across a very dark, evil-looking cloud with a sort of octopus look about its underside. Before I reached the tendrils of cloud hanging below, I was in six knots and wasted no time in getting into a turn. The lift before entering cloud was six to eight knots and was the strongest I had so far encountered outside of cloud. Sure enough, once inside, it built up to eight or more. This was the one, I thought; seven thousand feet to go inside. First there was wet air with moisture all over the canopy, then this stopped and after a short while a hissing noise arose above the normal slipstream. The canopy let in fine bits of white occasionally, and if the window or vent was opened the whole cockpit became filled with them. I couldn't help thinking of those little glass snowstorm novelties which one can buy.

Occasional peeps at the wing revealed a glassy, knobbly coating on the leading edge which was rapidly taking on a frosty look. Amid the gloom it seemed more comfortable inside and I was glad to concentrate on the T. & S. and A.S.I.

The vario seemed to take care of itself. Occasionally I would open out the turns to the smallest of deflections on the T. & S. needle and tighten up when the noise and/or lift increased. It was no surprise to me to have to centre on the lift, but I was surprised to be able to keep it up on instruments.

My recollections of height and the symptoms of outside weather conditions at various levels are very vague. I was concentrating so much on staying in the lift. Eventually 11,000 ft. came, still in 10 knots to off-the-clock, and it was here that I relaxed and took stock. Could I go higher? I was still in cloud in lift, so with a check on the brakes and a guesstimate of position, I was about to concentrate on climbing again. The brakes, however, were solid and I could only operate the lock. Reluctantly, but with a glad heart anyway, I set course to N.E. and waited. At about 9,500 ft. I broke cloud and saw just how much ice, snow and hail I had really collected—I photographed it several times in colour —and kept N.E. until I could see "the wood from the trees'. I had cloud almost

all around with large flat areas of it stretched around me. Still the brakes were frozen, although never once did I feel the cold.

At about 8,000 ft. I saw a dark blur in the otherwise grey sea of cloud and decided it might be a hole. Turning steeply now, for I had the clouds for horizon, I tried to get down into it. It seemed to be the time for a spin. I don't "love" spins, but this was the ideal time to use it. I entered the spin by the slow turn-bootfull-of-rudder method and was pleasantly surprised to see the horizon sliding around at a good rate with the nose only just below it. Funny, I thought, I should have the dark patch just below me spinning around my canopy. I took corrective action, taking plenty of time, and I was turning properly once more. I repeated the manoeuvre and checked the instruments. I was certainly spinning, over 10 kts. down, 40 kts. A.S.I. and T. & S. needles crossed. I continued to go down, and once through the hole found myself well to the S.E. of the site about 10 miles away. The spin, I feel, must have been a very flat one due to excessive ice in the tail surfaces, and I give full marks to the Skylark 2 and her makers for handling characteristics with c. of g. well aft.

A most exhilarating glide at 100 kts. back to the site, with the ice breaking off in large lumps, terminated my third flight for Gold — three tries for a Welshman.

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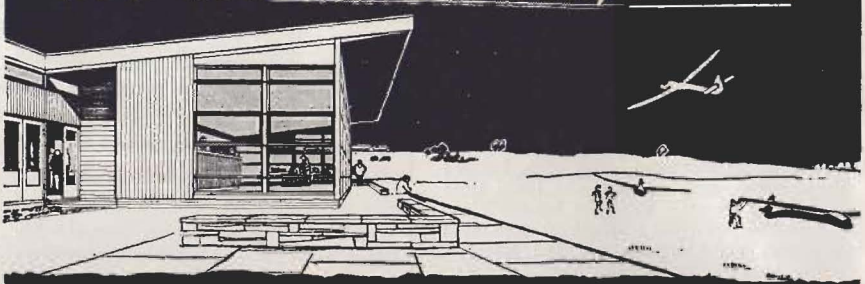
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3/47	R. A. Neaves	Airways	12.3
3/48	B. Fitchett	Leicester	30.3
3/49	A. Doughty	London	12.3

DIAMOND FOR GOAL

No.	Name	Club	1966
2/211	C. O. Hancox	Fenland	28.5
2/212	C. R. Simpson	Leicester	15.5
2/213	A. MacDonald	London	15.5
2/214	A Doughty	London	30.8.59

GOLD C COMPLETE

No.	Name	Club	1966
158	A. Doughty	London	13.3
159	A. MacDonald	London	15.5
160	K. A. Harrison	Bicester	19.6
161	I. H. Shattock	S. Wales	17.7
162	D. J. Marpole	Fulmar	17.7

GOLD C DISTANCE LEGS

Name	Club	1966
A. MacDonald	London	15.5
D. J. Marpole	Fulmar	17.7

GOLD C HEIGHT LEGS

Name	Club	1966
A. Doughty	London	12.3
K. A. Harrison	Bicester	19.6
I. H. Shattock	S. Wales	17.7
R. McLuckie	Moonrakers	11.6

SILVER C CERTIFICATES

No.	Name	Club	1966
1796	N. W. Fox	Cambridge	29.5
1797	R. F. Bradshaw	Perkins	15.5
1798	J. B. Stewart	Surrey	7.5
1799	D. A. Donnelly	Cranwell	15.5
1800	A. R. Walker	London	28.5
1801	W. L. Edwards	West Wales	15.5
1802	A. T. Farmer	Four Counties	1.5
1803	L. J. Monk	Clevelands	15.5
1804	C. Falkingbridge	Perkins	30.5
1805	T. Moss	Oxford	15.5
1806	J. W. Jenkins	West Wales	15.5
1807	F. Thompson	Doncaster	2.6
1808	R. A. Hare	Derby & Lancs.	15.5
1809	D. C. Brown	Kent	8.6
1810	F. S. Webb	Coventry	8.6
1811	K. N. Stephens	Bath	11.6
1812	R. J. Buckels	Phoenix	29.5
1813	B. Holmes	Derby & Lancs.	15.5
1814	B. King	Aldershot	11.6
1815	M. P. Stavenau	Four Counties	5.6
1816	R. J. Smith	London	26.5
1817	T. W. Slater	Chilterns	19.6
1818	H. G. Westlake	614G.S.	18.6
1819	C. F. Whitbread	Kent	4.6
1820	A. D. Palmer	Dorset	18.6
1821	J. Greig	Southern Command	4.6
1822	P. D. Simmons	Bristol	7.5
1823	G. W. Halls	Phoenix	19.6
1838	K. M. Phipps	Dorset	3.7
1839	P. A. Bartle	Essex	3.7
1840	P. Hutchings	Bannerdown	18.6
1824	A. R. Dick	Scottish	26.6
1825	S. B. Marshall	Scottish	18.6
1826	H. Blake	Fulmar	5.6
1827	F. A. McKenna	Fenland	8.6
1828	B. Connolly	Four Counties	26.6
1829	J. C. Taylor	Derby & Lancs.	15.5
1830	M. Pocock	Bath	18.6
1831	E. Cosser	Imperial Coll.	11.6
1832	J. M. Worswick	Derby & Lancs.	15.5
1833	G. G. Hayman	Cornish	30.6
1834	J. M. Gill	Airways	30.6
1835	K. Challenor	Surrey	30.6
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OBITUARY

L. C. OTTLEY

LEONARD was a fine example of a "backroom boy". He ran a garage and repair workshop in a yard behind some shops near Alexandra Palace. He had been a fitter and probably a rigger, too, in the first War, of which he seldom spoke. He was a shy, retiring man who found difficulty in mixing with his fellows and, as is often the case in these circumstances, he assumed a somewhat aggressive front. He first became known to me in 1940 when the R.A.F. decided to introduce gliding into the A.T.C., under pressure from Air Commodore Chamier.

For economy reasons it was decided to set the Cadets to build Cadet gliders from kits of parts supplied by Slingsby. This proved to be an almost impossible job, due largely to lack of know-how and time. Ottley appeared on the scene and I was the contact man — I soon found L.C. hated officialdom and was suspicious of anybody in uniform. Fortunately I also was a garage man, but even so it took a long time to break down the barriers and get behind his façade.

He turned out to be a really first-rate engineer, with all the enthusiasm and know-how we could possibly want. As long as we could keep the high-ups, as he called them, at a respectable distance, he could and did work miracles.

In the early days of A.T.C. gliding, with very few instructors and poor equipment, we broke the gliders, and Ottley received them on Monday mornings to get them ready again for the next weekend. He, with a few reliables and a number of women and girls, got down to the job in earnest—patching and repairing and building gliders.

The Ottfur hook came to perfection in his capable hands, and in fact he handmade many dozens in the first year. The basic idea was explained and a cardboard model produced, and when he realised the vital need for such a hook he worked on it almost day and night until it gained official A.R.B. approval.

The now almost universal landing wheel was popularised by Ottley being willing to experiment with position and size, often at short notice, working weekends and long into the night. Fortunately there was little knowledgeable official inspection, so experiment was fairly easy, and we who had to fly the machines had complete faith in L.C.'s skill and ability.

To spend an hour or two with Leonard in his private workshop was a revealing experience for any engineer: his array of tools, the condition of them, the loving care bestowed on them and his amazing ability to use them, made the best of us feel like apprentices.

Work was his hobby, as seen in his many models, particularly a wonderful railway engine complete and to scale in every detail, made by his own hand—every nut and bolt. Also he made a superb grandfather clock, which he claimed (and I believe him) did, among the more usual clock indications, something which appears every 6,000 years. He liked to expound on this and his audience never really knew if it was a leg-pull or not.

He could make anything and would in fact have a go, especially if one quietly suggested that it was even too difficult for him. He kept monkeys, which he seemed to understand and like better than men. We who were privileged to know L.C. recognised our good fortune to have met a genius. He was a great character. I wish there were more like him.

J. F.

R. PHILIP COOPER

PHIL Cooper died on August 2nd, after an operation, at the age of 64. He had been living on only about half a lung for some years, and only his courage and tenacity can have kept him going for so long.

Phil was one of the kindest and most generous of men. I have been plodding through my old SAILPLANES but haven't found when he first came into gliding. He gained his C on the 29th July, 1934. In 1935 he joined with Jack Dewsbery and Kit Nicholson in one of the first syndicates, buying the Rhönbussard which Joan Meakin (now Joan Price) had aero-towed over from Germany the year before, and they came and com-

peted at the B.G.A. competitions at Sutton Bank. On the first day, I noted Phil had two flights each lasting one minute, and I thought this must show he was still in an early stage of proficiency, until I noticed that my own flight that day lasted the same time—we were indulging in a spot-landing competition from a winch-launch.

In 1936 the Bussard was changed for a Rhönsperber—of which the rather sad remains are still in the hangar at Dunstable. For during the war, the 'Sperber got left out in its trailer in the rain, and never recovered. Phil was the "baby" in the 'Sperber Syndicate, and his good nature was so overwhelming that it was difficult not to take advantage of it. In the September 1937 issue of SAILPLANE there is rather a sad little picture of him beside the glider, muffled up to the nines, swigging a mug of cocoa. The caption reads: "R. P. Cooper, who was launched at 7.24, 6.40, and 6.55 on three consecutive mornings, is here seen taking nourishment before one of these early flights." The wind would then drop. Phil would descend, thermals would start, and his partners shared the subsequent flying. Anyway, on one of these early starts Phil got in his Silver C duration.

It took him until August 7th, 1939, to get his Distance, with a 65-mile flight from Huish to Dunstable, and I don't think he ever got his height. As Silver C's were in those days issued by ISTUS, a German body, I doubt if they would have got round to it if he had, as other things intervened.

During the war Phil ended up in the Glider Pilots' Regiment, a pretty extraordinary feat since he was far from fit, which prevented him getting beyond the early stages. But he remained a fanatical devotee for the rest of his life, and was the Secretary of its post-war Association for many years.

His record as a pilot in sporting gliding does not read very impressively, but I remember him, as will all old-timers, because he was enthusiastic and kind and generous and compietely unselfish. We shall always need people like Phil, and they will always be remembered with affection.

P. A. W.

CORRESPONDENCE

A NEW LOOK AT THE CHAMPIONSHIP SYSTEM

Dear Sir,

May I be allowed to express opinions on several rather tenuously related subjects in the compass of one letter? First of all, has not the time now come for an entirely new look at our competition system? We are bogged down with a rating scheme which, except for a few "has-beens" like me, makes few glider pilots happy, with the prospect of a handicapping scheme which appears unlikely to be universally acceptable, with a scoring system which keeps long-suffering mathematicians up all night, and with an unnecessarily limited second-hand market for our gliders. Surely fundamental changes are called for. I suggest that the B.G.A. should now promote Class Competitions in Darts, Olympia 465's, Skylark 3's (and 4's?), Ka-6's, and perhaps others. Each of these would produce an annual Champion of the Class, and the plan might lead to international class championships. Not only would this improve the second-hand value of such gliders, but might encourage new construction in a popular class thereby reducing the original price. Clubs without aero-tow facilities would become the strongholds of the lighter, most easily winch-launchable classes. Class qualifying competitions would probably in due course become necessary on a regional basis. The system is borrowed from yachting, and has been used very successfully in gliding in the U.S.A.

There would, of course, continue to be an Open Class so as to stimulate new design. "Open Champion" might still be the most sought-after title. For this competition there would be only one League (because *most* of the reasons for establishing League 2 no longer now apply). In both Open and Class Championships (which

should be held at varying times of year so as not to exclude pilots with fixed calendars such as those of schools and universities), there would be a small number of Authorised Qualifying Contests from which the top *x* pilots would be eligible to fly in the Championship so as to make, together with the top 20 from the previous year's championship, a total of not more than 50 aircraft in each championship—whether Class or Open. In addition, for every 10 in a Class Championship one pilot would be admitted to the Open Championship. It might be desirable to hold an Open Championship for gliders with less than 15 m. span, though the somewhat farcical name of "Standard Class" should be dropped as being totally misleading.

All competitions would be Wally-marked, self-supporting from entrance fees, and as greatly automated as possible. With this system, interchange between qualifying and championship competitions would be more rapid in both directions (not before time) and no eligibility would depend on more ancient flying form than that of the previous summer. When the new system has been perfected, it should be recommended to the C.V.S.M. for promotion on an international scale.

Designated Starts, Dropping Zones and Task Flexibility

In a very large competition, Designated Starts may ease some organisation difficulties, though they greatly add to the responsibility of the Contest Director. As has frequently been pointed out, they remove one significant refinement in competition flying—the look of the sky and its effect on each pilot. We are told with a cry of triumph that boardmanship is eliminated, but surely individual assessment of the up-wind sky *should* be a part of the contest, however good the day—and anyway playing with the discs on the hooks is all good clean fun, especially when the day is deteriorating as you watch it. There may be some conditions in which a Designated Start has more advantages than disadvantages, though even this seems doubtful.

The recent Regional Competition at Dunstable demonstrated the potential unfairness of the Designated Start. With a good forecast there was earlier and greater over-development than was expected, with the result that, because of rain, launching had to be suspended when less than half the field was in the air. Thereafter large dead areas surrounded the Dropping Zone intermittently for the rest of the day. Had the Dropping Zone been considerably larger and the tug pilots been instructed to drop gliders in any available lift in a three-mile square upwind of the starting line, a much fairer contest would have resulted. It may be claimed by the advocates of the Designated Start that "Pilot Selected Time" would have been more appropriate on that day—but the margin between good convection and over-convection is a narrow one for even the most skilful Met. men to differentiate. I suggest that tugs doing their best to drop gliders in lift, within a comparatively large specified area, is basically fairer than dropping them over a fixed point.

In view of Met. forecast difficulties, I suggest that as a matter of standard practice alternative tasks should be set. If pilots were told that until the time of first take-off there would be A, B and C tasks—say a triangle, a downwind race and free distance—the final decision could be made three hours or more after briefing, the letter could be displayed at the launch point and the Marshal made responsible for ensuring that each pilot had taken note of it; alternatively or additionally the letter could be displayed on the ground. Photographic turning-point evidence will make such last-moment changes practicable, and I believe many "no-contest" days will thus be avoided.

Slimbridge, Glos. PETER SCOTT

NATIONAL CHAMPIONSHIPS

Dear Sir,

Surely the time has come when we ought to have a long, hard look at competitive flying in this country. It seems obvious that glider pilots like flying in competition with one another and that all of them cannot hope to fly in the National Championships.

I suggest, therefore, that we develop Class Championships and recognise the

winners of each Class as National Class Champions. We could start with four basic classes, namely Olympia 463 and series, Skylarks 3 and 4, Darts 15 and 17, and Ka-6 and series.

The entry to the National Championships should then be restricted to one League of not more than 60 gliders. There would be no case for handicapping for what would be an entirely "Open Contest".

If we are to win the World Championships, we must breed more pilots determined to win rather than the large number of pilots who enter the National Championships because they are fun. Fun no longer seems to play a part in International sport, and the sooner we realise this in our own sport, the better.

Let us take the heat off the Nationals by creating Class Championships which, if properly organised, would surely attract most pilots. This will have two great advantages, the first being that pilots will be able to measure their own skill against other pilots in the fairest possible way and, second, it will permit a smaller, tougher National Open Championship to be organised which should breed better top class Competition pilots. What hope has a top pilot in Nationals now when gaggling and radio pair flying has made a nonsense of individual effort?

London, W.2. WALTER KAHN

TASK-SETTING AND PAIR-FLYING

Dear Sir,

Whilst I have much sympathy with Rocky Stone's remarks in his letter in the August issue, I must say that, with what little task-setting experience I have had, I have always noticed how easy it is to set 100% successful tasks retrospectively. When I am a mere pilot, I often indulge in this exercise myself.

But he mentions, as a side issue, a point which I think is becoming really vitally important. "The object is to fly a sailplane round a given course as fast as possible, not to carry out a pin-point navigational exercise at each turning-point."

I am absolutely certain that a first-class pilot *must* be able to fly to a pin-point. And increasingly this is being lost sight of. Enough time has now passed for me to dare to say something I haven't liked to say before: at least half the pilots in recent World Championships have been quite unable to navigate themselves; this job has been taken over by ground-crew and sophisticated radio aids, where they have been available. We have only got to devise a few more similar aids in other fields to be able to do away with the pilots altogether: then we will pin the medals onto the consoles of the computers in the cockpit.

Ally this to another appalling development in Contest flying, and I can see myself in a few years time recommending that we don't bother to send a team to future World Championships.

This development is pair- or team-flying. This practice is the most serious threat to our Sport because (a) it is only possible for State-backed professionals, involving more time, practice and money than can be found by individuals, and (b) once again it reduces the initiative of the single pilot, the credit for each day's results really being diffused over up to three pilots and three ground crews and three or more ground-based radio installations.

I can see no better answer to this one except to limit each National entry to one glider in each class: but this is now possible since so many Nations now take part in World Championships that the total entry would still tot up to a sufficiently large number to make a first-class event.

Henley-on-Thames, Oxon. PHILIP WILLS

LESSONS FROM CANADA

Dear Sir,

Some comments on problems in U.K. gliding (to which I have every intention of eventually returning) may be of help, in the light of experience in Canada and the U.S.A.

Ann Welch raises the universal problem of helpers for contests, and suggests

two ways of reducing the requirements. In the face of considerable opposition, timing in the 1966 Canadian Contest was from release over a specified point (this was partly dictated by operation from Regina airport, a large, if little used, civic airport). The objectors, myself among them, agreed afterwards that this had not been a significant handicap. This does imply, however, that a designated start should not be used, as the pilot's choice of take-off time then becomes of considerable importance.

As in previous years, turning point confirmation was photographic; I used 8-10 shot lengths (35 mm.) from a 50 ft. roll, prepared beforehand in used casettes. With efficient processing facilities, this is quite satisfactory, and the cost is negligible. Clear and unambiguous descriptions of the turning-points are essential, and photographs or diagrams as well, desirable.

Tony Deane-Drummond's suggestions for universal handicapping seem very sound, though the extra complications may not be welcomed by the scorers. Having flown a Skylark 3F against a 419, and an Austria SH against Skylark 4's and numerous other well and less well known machines, I doubt if the 419 merits 92% and feel sure the SH should be below 90%.

Finally, a comment on the current controversy of "to help or not to help". Most pilots here have more leisure money than in England, yet the clubs nearly all operate with very little professional help, other than for major maintenance and repair work. Few hangar doors are other than man-powered, and then only as a bonus from well-to-do aeroplane owners. A list naming the duty instructor, tow pilot and field manager, for several months ahead, is circulated to those concerned. This ensures a basic organisation for flying. Surely everyone can spare one day every six weeks or so, to assist with these vital tasks? However, there is a growing tendency here, where the demands on the training aircraft are fairly light, for new members to arrive around midday, fly, and disappear, leaving the donkey work to the faithful few. What is the answer?

National Research Council, Ottawa. JOHN FIRTH

A "LADDER" FOR RATING

Dear Sir,

Now that the problem of the Rating List is again in everyone's mind, may I ask you to reprint some sentences from a letter of mine which you published nearly five years ago?

"The present scheme of selection by scoring for a 'ladder' in Regional Competitions, though much better than a ballot, seems designed to preserve the National Championships for rich private owners with long holidays. I foresee a merry band of individuals touring the country amassing points which allow them to enter Nationals and amass more points . . . Furthermore, in a year or two the rush to get marks at Regionals will be so great that we will have to restrict entry to them as well!

"I suggest for consideration an alternative 'ladder' for which marks may be obtained from any good flight, in or out of a competition. At the Cambridge University Gliding Club, John Pringle's 'President's Ladder' has been operating successfully in this way for some time, and its rules would be a good basis for a B.G.A. Ladder. Further refinements could be introduced in the form of better aircraft handicaps, and perhaps even handicaps for sites.

"This scheme . . . has the further merit of encouraging good flights outside competitions."

Though I would now be more circumspect in my reference to private owners, and though I no longer believe in aircraft handicaps, the rest seems still to be moderate sense.

5 *Carlton Place, Aberdeen.* ANTHONY EDWARDS

WHAT TO DO WHEN LOST

Dear Sir,

As a private owner using radio over Southern England today (16th August), I had the horrifying experience of listening to another member of our fraternity admitting to all and sundry on 130.4 that he was lost, and in fact had not the slightest

idea of his position. This person was lost for at least two hours (as he continuously informed his ground station) before landing in some presumably unidentified field.

Most of us get lost occasionally, but I consider that in these days of controlled airspace it is little short of criminal to remain airborne whilst lost for this length of time.

I am very tempted to mention the call-sign of this (to me unknown) person, but I feel that perhaps in his case this was an isolated incident and it would be unfair to single him out.

However, now that many people are advancing so rapidly, there must be quite a few cross-country pilots with very little idea of how to get from A to B, let alone how to get back to A. What is much more important to the gliding movement is that these same people may not have the knowledge to avoid controlled airspace, any infringements of which can only lead us into the Ministry's clutches.

There is no new answer to this problem of course, instruction and supervision being all, but at least let us all act like responsible people and land within a reasonable time if we get lost, so that there is no possibility of flying into the wrong area.

Airways Gliding Club. JOHN ELLIS

NICHOLAS GOODHART, Chairman of the B.G.A. Airspace Committee, comments: Being lost and not knowing where one is are two different things. If truly lost, one does not even know where one isn't! This is the state of affairs that should not be allowed to continue, whereas one can continue without a pinpoint for quite a while.

It should also be borne in mind that provided one maintains VMC there are very few pieces of controlled airspace to be avoided.

With these reservations I fully support Mr. Ellis's remarks.

TO HELP OR NOT TO HELP?

Dear Sir,

Surely Mr. Redman, in his letter to you appearing in the current issue of the SAILPLANE, overlooks the fact that gliding is a sport, and as a sport everyone partaking should be willing to pull their weight, and not fall into the modern trend of expecting everything to be laid on regardless.

What is wrong with winching? Nothing. In the A.T.C., where I was the C.F.I. at Sealand, we carried out all *ab initio* training with winches and time lost was zero; it was merely a case of organisation. As for hangarage, I think I am right in saying that reasonable hangarage is available at a large number of sites, and quite recently I called in at the club at Perranporth and even there, because they have the right spirit and initiative, hangarage exists, which proves that you do not have to have a huge semi-State-run and subsidised club to achieve that genuine enthusiasm on which gliding thrived so well in the between-wars era.

Before the war, my wife (née Joan Meakin) and I seriously thought that something on the lines suggested by Mr. Redman would be a good thing both for gliding and ourselves but, after serious research into costs and all that went with it, decided that to consider it we would have to be far more wealthy than we could ever hope to be. I am sorry for his suggestion, but maybe he would like the exercise of delving as we did and pass *his* findings to you for publication.

Is it not a terrible thought to suggest that pushing doors open is a chore? Can we not invent an electric glass-lifter to make our drinking less arduous?

Minstead, Hants. RONALD PRICE

PROFESSIONALISM

Dear Sir,

As "Nimmo" appears to have missed the point of my letter (S. & G. June-July), may I enlarge on this issue?

Of course, the gliding movement needs more capital investment and also more revenue. Equally important, I suggest, is the need to deploy existing resources more effectively, by reducing the wastage which occurs among not only new entrants but

also established members. Draw the line at around the Bronze/Silver C level and the wastage factor must be in the order of 90%, the reasons for which must be found and removed if real progress is to be made.

In addition to the obvious reasons, lack of aptitude and cash, and the reasons given in my previous letter, I believe most intelligent adults will not tolerate indefinitely the interminable fumble, loitering and non-gliding activity found in the majority of clubs and which hasn't improved noticeably for many years.

There are other reasons. By keeping subscriptions, etc., at the level of the local golf or tennis club, gliding clubs attract new members in such numbers that a substantial fraction of the resources available must be allocated to training them. Even before he has gone solo, anyone with an ounce of perception can see that the solo equipment available bears no relation to the ab initio intake, even with the present wastage rate. In other words, clubs depend on a high wastage factor among ab initios to avoid complete saturation of their solo aircraft. Furthermore, when he has gone solo, the new member sees a never-ending vista of non-gliding activity, and a privileged class of private owners who depend on his voluntary effort to minimise their own costs, while chasing after Gold, Diamonds and a place in the League.

What is to be done? First, capital and revenue must be increased by a substantial margin by raising subscriptions, etc., to provide more solo equipment and professional help, and also to discourage the non-serious ab initio. At the same time, a system of earning credit by voluntary labour must be devised for the impecunious enthusiast with time on his hands. Secondly, the private owner must be really soaked for the privileges he enjoys at the expense of less fortunate members—he is obviously rich anyway! Thirdly, a booking system must be introduced so that the average solo pilot flying club aircraft can expect to achieve, say, 20 to 25 hours in a season without having to spend all of every week-end at his club to get it. If he wants more flying, he can "go private".

Finally, the B.G.A. must itself decide for what purpose it exists. Are its only functions the provision of sites, airspace, and to supervise training and airworthiness, or does it exist solely for the purpose of producing a handful of potential world champions supported by slave labour in the guise of ab initio pilots? I suggest that its primary function is to provide the solo pilot with the essential facilities he requires, and that all other activities are of an ancillary nature.

Compared with most other forms of individual sporting activity, the needs of the solo pilot are largely ignored. Yet the B.G.A. has within its power, by withholding C.s of A. from member clubs, the means to enforce a square deal for the solo pilot. I submit that the B.G.A. has abdicated from what should be its primary task; furthermore, it appears determined to perpetuate an outmoded system which demands its quota of voluntary effort because it has always been done this way.

Is there not an alternative approach, short of complete commercialism and government control, which would permit the solo pilot to practise his chosen sport as and when it pleases him? Or is he forever doomed to be ultimately grounded by an attitude of mind which regards actual flying time as a special privilege—a bonus to be earned?

Birdingbury, Rugby. DENNIS CAREY

MORE PROFESSIONALISM

Dear Sir,

May I question the suggestion by Mr. Nimmo in the August edition that the introduction of a professional instructor into a Gliding Club would necessitate a large increase in the capital required. Mr. Nimmo suggests that it would have to be doubled.

In my own club we employ two full-time instructors in addition to catering and secretarial staff. The capital investment per member is about £70 each—half the figure of £130 which Mr. Nimmo says is the case in his own club.

It is a common fallacy that capital alone is sufficient. It must be made to work. Gliders must fly as much as possible. This means that launching equipment must be reliable and available. The answer to a club short of money is that it must stimulate

the demand for its services and satisfy it at economic rates.

Although enthusiastic and capable unpaid members will often run a club admirably, their efforts will make it grow often to a point where they are no longer able to satisfy the demand that they have created. Frustration sets in. A full-time professional is necessary.

If Mr. Nimmo's club has a capital investment of £130 per member, I suggest, with respect, that there may be a case for a cost analysis of the club's operation, disposing of any under-used assets, and improving those in current use. Then increase utilisation by a full-time professional. Make the investment earn its keep.

Weatherby, Yorks. J. C. RIDDELL

CAN VULTURES SMELL THERMALS?

Dear Sir,

The letter from Jack Harrison of the Aden Services Gliding Club, which was printed in your August-September 1966 issue, reminds me of my initial reaction to Philip Wills' commentary on vultures and their search methods. I have several times "smelled" thermals arising from the Hershey Chocolate Works at Hershey, Pennsylvania, U.S.A., before the variometer responded. Consequently, I have long thought that vultures might also depend considerably upon their ability to detect odours.

How they calculate the drift of the odour remains to be explained. Perhaps they switch from the nasal to the visual mode under windy conditions. On the other hand they too may not be immune to working a thermal down to the ground while under the spell of thermal smell.

We enjoy the variety and technical depth of your magazine. Best wishes.

Tulsa Skyhawks Soaring Club, Oklahoma, U.S.A. G. W. GILMER

A COMPLAINT

Dear Sir,

At the risk of cries of "Shame, shame" from certain members of the gliding fraternity, I would like to present the following facts about the August-September edition of SAILPLANE & GLIDING. The total number of pages was 87, of which 10 pages consisted of whole-page and half-page advertisements. This gives 77 pages of readable material including advertisements of less than half-page size. Of these 77 pages, 24 were devoted entirely to the Nationals.

The point that I would like to raise is: can we really afford to devote one third of our magazine to a topic that is of no direct concern to the vast majority of the gliding fraternity? Please do not get the wrong impression from this. I feel sure that most gliding types read with great interest the various articles arising from the Nationals. However, of these 24 pages, 18 were devoted to detailed day-by-day reports of Championship weather conditions, tasks, etc.: to be read over two months after they took place. Can it seriously be suggested that this material is of the slightest interest to the average gliding type, who did not take part in the Championships? To those who did participate, the information is surely superfluous. It must be remembered also that a large proportion of the June-July issue is devoted to this subject; there were only 61 pages including advertisements in this issue after the Championship Supplement is discounted.

May I venture to suggest to the powers that be that there is another side to gliding, the needs of which must be satisfied. Surely articles can be found to fill the spaces that are of interest to all. Please remember that it is OUR magazine and not the mouthpiece of the select few at the top.

I should be very interested to hear the views of other non-championship types on this subject.

RAY JONES

Mr. Jones is invited to submit an article on a subject he considers "of interest to all", as articles must be written before they can be "found". Incidentally, his letter may be compared with the last paragraph of the letter above.—ED.

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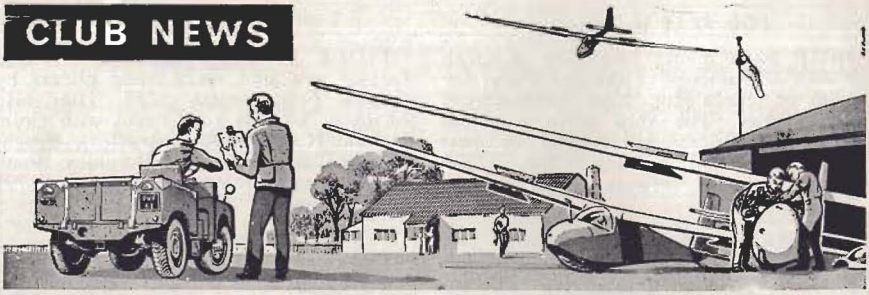
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CLUB NEWS



THE majority of club news correspondents are now taking a good deal of trouble to send in really interesting contributions, particularly when in some cases there is little of note to report because of poor conditions. There are, however, still a few who continue to send in lists of names and when these have been cut little else is left.

It is not that we want to ban names altogether; naturally everyone wants to know about the first solo that was a five hour flight and who did it, but we do feel that lists of names of first solos and certificate achievements, aircraft in for C.s of A. and birth and marriage announcements are items which should properly be included in a club's own news sheet or notice board and not in a magazine such as ours whose circulation is world wide and where space is always short.

However, we must leave it to you, and I am sure when you realise that all we are trying to do is to raise the standard of the section and make it something that everyone wants to read you will co-operate.

Thank you anyway for your letters and the interest you have shown.

A number of clubs have still not sent in the details we require for the new headings; until we have them all we cannot start. Person to contact and 'phone number, and name of site and 'phone number are what we want to know please.

News and photos for inclusion in the Christmas issue must reach me, typed double-spaced on foolscap, not later than Wednesday, 19th October, and that for the February-March issue will be needed by the 7th December, to be sent to 14, Little Brownings, London, S.E.23.

24th August, 1966.

YVONNE BONHAM (Mrs.)
Club News Editor

BATH AND WILTS (Keevil)

FOR the first time one of our members has put our club on the map by winning the regional competition at Nympsfield. Although Ralph Jones came to us as a very experienced pilot we take pride in his achievement and look forward to the day when one of our own club trained pilots can emulate his performance.

We have experienced a very mixed bag of weather but on the limited number of good days we have had our fair share of soaring.

Vince Griffith in his quiet way is building a reputation for soaring storm fronts when lesser mortals are taking shelter beneath the largest available wings. He has twice recently taken off shortly before a storm has hit the airfield and found extremely good lift taking the 463 to around the 10,000 ft. mark on one occasion.

Mixed with the strong lift we have had (so all the victims say) more than our fair share of strong sink. The number of "landing out beers" consumed in recent weeks must surely constitute another club record.

The most interesting recent cross-country can be claimed by deputy C.F.I. Gordon Mealing, who took the Skylark 4 to Long Mynd airspace and then dropped in to Nympsfield for tea on the way back. After tea he had an aero-tow to 1,600 ft. and then flew the Skylark back home to Keevil.

K. N. S.

BRISTOL

WE are pleased to note that Doug Jones was best placed of the Skylark 3 brigade in League 1 at the Nationals. Also congratulations to Keith Aldridge, Roger Barnett and Colin Pennycuick, each a winner in League 2 on one of the five contest days.

Peter Scott is having his HP-14 built. The performance of this aircraft in such capable hands will be interesting to note. The first of the Darts to arrive on the site was towed down from Slingsby's, by its owner — Tony Gaze, with Jim Webster at the helm. Jim is trying to claim his 300 km. for the flight, and what the pair of them have to say about the size of the field they towed out from is unprintable!

Our last remarks about enjoying "chatter" over the R.T. has raised so many ribald comments it is only fair to say that general opinion in the Club is that there is a strong case for less chatter. A really polite pilot can find himself on the ground before he's had a chance to get a word in edgewise!

Good news about Barry Walker who is out of hospital and getting around. Barry hit the headlines as well as the deck during our Regionals. The Blanik is a write-off but Barry's on the mend and we wish him well. R. G.

CORNISH

WHEN visiting England I am often asked, "What have you got in Cornwall now." So here goes: single-seaters — a Tutor, a Swallow and a new Olympia 463; two-seaters — a T-21, T-31 and a Blanik; private machines include a unique Avia and a certain Olympia 419 No. 171. To launch them, on the last count, we had no less than four serviceable assorted tow cars, one or two not so serviceable and one invincible Tiger Moth.

Trevellas airfield on the edge of 300 foot vertical cliffs just south of Perranporth has three tarmac runways most of which are fenced on each side — this assists accurate landings no end, and the unique phraseology from the back of the T-31 when it's on finals has to be heard to be appreciated. The clubhouse has recently been completely refurbished and redecorated and the new false ceiling in the bar is invaluable in keeping certain feet closer to the floor.

We have 145 members which includes 15 instructors and 9 fully catagorised. For eight guineas a year and six bob a launch we fly continuously with courses Monday to Friday and Club flying on Thursday afternoons and week-ends. Apart from the usual solos and C's, etc., we have recently had samples of all three Silver legs and just about cope with all three of Ann Welch's excellent suggestion of training stages, though from my standpoint the Blanik blind flying hood is still more of a threat than a promise.

So there or, rather, here we are, and as someone said to some "power types" recently, "We have about four miles or so of good cliffs here and it would be nice to see you drop over any time you like." J. M. H.

COVENTRY

SITE development is proceeding apace, and we now sport running water and showers (several different types may be seen on the airfield!). Furthermore we hope that by the time this newsletter is printed that we shall have received official consent for our residential caravan park, enabling members to spend the week-end on the site and, we hope, increase both flying and bar takings.

Aircraft-wise, the Skylark 3B has been away at the Nationals and at the Dunstable Regionals, complete with new instrument panel, which now removes all doubts, telling you everything you want to know in the cockpit — including why you are not staying up!

The Committee has evolved a progressive fleet improvement plan to cover the next few years of the Club's growth and negotiations are at the moment in an advanced stage for the purchase of a Skylark 4 for the top end of the fleet.

A new private aircraft in the shape of a Ka-6, run by a syndicate, has appeared at Husbands Bosworth, and the trailer parking area looks like soon being full.

Finally, Doug and Joan Cunningham and the "kids" have now taken their sad farewells on their move to Chichester and a new job.

DERBYSHIRE & LANCASHIRE

IN common with most hill sites, we get in a lot of flying, summer and winter, without the use of thermals.

However, we do need a reasonable cloud base, and a brisk westerly airstream. This year has not been as good as last year in this respect.

We had 25 gliders flying in the Northerns at Camphill this year, and perhaps the most notable feature was the performance put up by the Dart 17's. These machines also coped very well with the roughish surface of our field. Having had experience of some low slung machines damaged by wall roots, etc., it was encouraging to see the way the 17's behaved on take-off, ground handling, and landing.

The number of new club members who join from our summer courses remains fairly constant, and a pleasing feature of these courses is the way year after year we see quite a lot of the same faces sampling a week of High Peak air.

The club fleet remains the same, the only new machines on the site are Olympia No. 99, which was bought to replace Mambo, bent in a fight with a tree, and a Skylark 4, No. 121, bought to replace No. 100, an Olympia 460, blown away in the recent gales.

Blue John, an Olympia Mk. 1, recently left the site to reside at the newly formed club at Sturgate. This is the last of the Mk. 1 Olympias which came to the site in the 1947/1948 period. From memory the others were Kinder 1 (renamed Mambo), Jacob's Ladder and Derwent.

A welcome is extended to old friends and new, and if you could bring some decent weather with you, all the better.

E. R. B.

ESSEX

THE soaring season has been a mixed bag with superb Mondays and Fridays and often indifferent week-ends. Still, there have been a few oasises and our members have made the most of them, notably Alan Vincent, in completing his Silver C with an epic flight to Southwold.

Six members obtained their Bronze C's, while three others gained their C's. Several members also went solo.

The Kent Club visited us twice, affording us immense pleasure and I hope despite the unfavourable weather at the time, equal pleasure to them. We all hope to see them again.

Pete Guest, our energetic Sites Officer, besides dropping in at the Land's End Club and gaining his Silver C endurance leg, has been busy financing and organising our new launching system. This is to be the pulley method as used by the Dublin Club.

J. W. R. U.

ESSEX & SUFFOLK

ORIGINALLY formed in 1960 as the Colchester Gliding Club, we have for the last 15 months found a permanent home at Whatfield, near Hadleigh in Suffolk. With a membership of around 40 we operate a Tiger Moth, a Ka-7 and an Olympia 460 from two grass runways every week-end and during the normal school holidays — this is made possible as three of the tug-pilots and instructors are schoolmasters. All launches are by aero-tow and visiting pilots, with or without a sailplane, are very welcome. At present the club has four instructors and seven tug-pilots. Five of the tug-pilots are also solo glider pilots.

So far it has not been possible to do a great deal of cross-country flying as we had no trailer for the sailplanes. However, we hope that a trailer will be available before the end of August which will take the Ka-7 and the 460.

E. R.

KENT

IN spite of typically British summer weather our statistics indicate that once again we shall have a record-breaking year — so much so that an "allonge" has had to be fitted to the list of A and B achievements.

The Club was represented at the Northern competitions and was in strength at Dunkeswell for the Task week where the Club's first newly-weds for some time, Peter and Pauline Kingsford, spent part of their honeymoon. Dave Brown, deciding to fly home, declared a goal flight to Challock, but was forced down by an unfriendly thunderstorm only 15 km. short of Gold distance.

Our holiday courses have been highly successful but quite a few potential visitors have had to be disappointed due to over-subscription. However, the lucky ones appear to have gone away well satisfied.

On the social side, an excellent Spring party was held and in July there was a pleasant mid-week "Soiree" at the kind invitation of the Chairman. Plans are well in hand for a barbecue in September followed by the annual dinner in October.

A. C. B.

LAKES

IN brief, our exploration of the Lowther Park site has been extended to a full week's flying by selected members with a view to exploring the possibilities and snags to the full. As a thermal producer the site is A1, but at this stage we are not in a position to formulate plans for the future until other possibilities have been examined. The visit did result in one member of the party setting off on a cross-country jaunt.

A party from the Lakes was privileged to visit the Cleveland Club during the week-end 30th-31st July to take part in competitive flying. In spite of all the host club had done to provide for the comfort of their guests the weather was unkind and resulted in "No contest". We did, however, have the satisfaction of seeing two of our own members lead the field on the first day. Our thanks are due to Clevelands for their generous hospitality and an enjoyable week-end.

F. G. R.

LAND'S END

OUR prolonged absence from these notes has been due simply to pressure of work. With all our courses fully booked as early as May, and a considerable increase in intensity of activity at Land's End airport, of which we are the managers, our hands have been pretty full.

In spite of much atrocious weather a considerable amount of soaring has been done, and it is a comparatively rare flying day when soaring of one sort or another is not possible. One of the prize examples was when C.F.I. Brian Pritchard, with a pupil in the T-21, experienced heavy sink and a complete reversal of wind direction on the launch, which was abandoned at 300 ft. Strong lift then produced a vertical acceleration of 3*g* and three circles took them to 1,800 ft. at which the pupil cried "enough"! The next launch produced the same result — all in a clear blue sky. The analysis was a strong sea-breeze front lying precisely across the middle of the airfield.

Several cross-country attempts have been made, without yet producing any "legs", but the best so far has been a very fast run to Plymouth, where Brian Pritchard fetched up against a complete wall of thunderstorms when he was en route for Lasham after 1 hr. 40 minutes airborne.

With two Club instructors now available to take some of the load off Brian, who has been the only instructor for so long, activity is building up and we are looking forward to quite impressive statistics for our first full operating year. The solo list is growing nicely, and many ab initios are nearing solo status.

We hardly dare mention it in these columns, but by the time this is in print we will also have started power flying

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training in the Auster, which will increase the scope of activity very considerably.

Finally, a new social committee is really making things swing, with a party every Friday evening, and many functions in the advanced planning stage for the autumn and winter. The bar, naturally, works overtime (within the permitted hours, of course!).

W. D. T.

LEICESTERSHIRE

DESPITE the dreadful weather it has been a fairly eventful summer with many members obtaining Silver legs and Christopher Simpson his Diamond goal. Together with Peter Martin, he came 6th in the Western Regionals. The flying hours are very satisfactory and the Rearsby Fleet now has two Darts, one 463, two Olys, one Blanik, one Capstan and two Ka-6's.

Congratulations to Bernard Fitchett having come third in the Northern Regionals and fourth in the London Regionals. At only 19 he must have a great future.

D. A. H.



Bernard Fitchett with his Ka-6 at the London Regionals.

LINCOLNSHIRE

OWING to hangar difficulties at Swinderby, we have taken occupation at our originally proposed site, Bardney. This move would not have been possible if we had not heeded the advice of John Everitt, regarding subscriptions, etc.

The past six weeks have seen a few hard working members doing jobs that one would think never took place in a gliding club! Solid clay makes hard digging material for a 300 ft. long water trench! Renovations to the old control tower are making it into what looks like being an adequate clubhouse.

To start the flying at the new site there will be a new syndicate owned 463 and the club owned Swallow. In the not so distant future we hope the delight of aero-tows will be available.

Due to the hard work of the ladies, a drink and hot meal is available at nearly any time of the day. R. J. R.

LONDON

THE earliest part of the year produced a few outstanding days, and hopes were high for the summer months. This was not to be however, and it turned out very mediocre. The only noteworthy flight was by Chuck Bentson, who completed an out-and-return to Castle Donington, and reached over 12,000 feet on the way back. Most other flying during June, July and early August was mainly local, and even the Plate stayed firmly on foreign ground.

The Regional contests turned out to be something of a washout, only three days being declared as a contest. (A report on this appears elsewhere in this issue.)

The Dunstable scenery continues to change, the latest addition being the laying of a vast sheet of tarmac in front of the hangar (see photo in August issue). This is the main result of tipping on the site by local contractors during the last year or so. We used to have a vast gulley on the south-west side of the clubhouse, but this has been steadily decreasing in size with over a hundred lorry loads of chalk or soil being dumped every week. In a few years we hope to have this section of our land level and useable. Buying of additional

land is under consideration, as we are still somewhat cramped when it comes to operating aero-towing as well as winch lines.

Clubhouse and outbuildings are also being renovated, both outside and inside, and many years of steady depreciation is being reversed. We have yet to find the cash to expand our launching equipment, fleet and general Club facilities, but a combination of the Ways and Means Committee, tipping, and a manager with an eye for making money is already bringing about a brighter picture in the Club accounts.

M. P. G.

MIDLAND

WITH representation at the Nationals, two entries at Nympsfield, one at Camphill and three at the Dunstable Regionals this season has seen wider participation in competitions by Mynd-based syndicates. Congratulations to Stephen Wills on his win at Camphill; a particularly creditable performance since he had little time to get to know his new Dart 17R.

Our very best wishes to Alan Parkinson and Elizabeth Allen, who were married at Cheltenham on 30th July. Needless to say the happy couple did not escape the practical jokers assembled to repay Alan for some of his past deeds.

With guidance from the local representative of the Ministry of Agriculture, those parts of the airfield which have become entirely devoid of grass are being reseeded. We are sure that our efforts will be appreciated by the Mynd sheep, although we are advised that we can also expect an improvement in the drainage of the areas involved.

We are now feeling the benefit of the new instructors produced by an Instructors' Course run earlier this year. Another variation in our course programme was a course restricted to club members. This was a success and will probably lead to further similar courses being included in next year's programme.

K. R. M.

OXFORD

JUST prior to the start of our annual flying "Fortnight" at the end of July our intrepid winch builder, Keith Plummer and helpers rolled out the trim little green and yellow concoction with the big heart and two drums of gleaming cable. A number of runs were made with tyres attached in order to watch the functioning. With "all systems go" the T-21 was launched with a noticeable lack of grunts and moans from the new B.M.C. 3-litre engine which will cope well with third gear operation even on calm days. With only minor adjustments and a drop more paint we shall be rather sorry to pension off the trusty old V8 winch constructed by Ray Stafford Allen nearly 20 years ago.

The "Fortnight" came and went with flying possible on only half the days and the abandonment of the task flying. To dampen our enthusiasm even more, on the last day the Olympia was inexcusably too low to reach the airfield with the result that a very late decision to choose a suitable field caused it to bury itself in a large hedge sustaining considerable internal damage and a complete break of the rear fuselage, laying it up for the rest of the summer.

How important it is to keep a keen lookout in cloud and observe the rules of entry. John Gibbons, one of our instructors, records a near miss in cloud at 5,000 feet when a yellow apparition passed across his front leaving no alternative but to loose height rapidly.

On the brighter side, we are pleased to record that after several attempts Tony Taylor is the first to fly his Silver C distance on our new Skylark 3F with a good cross-country to Old Sarum.

C. J. T.

SCOTTISH

THERE has been a decline in ab-initio training during the past few months, partly due to our best T-21 being absent at Slingsby's, but the high-performance side has been forging ahead, aided by some splendid soaring weather. The longest cross-country was, as usual, made by Andrew Thorburn — to Stonehaven and very nearly back — 200 km. However, the club pundits have been startled by Alistair Dick's second cross-country, a 120 km. out-and-return to Arbroath in the 460. A number of 50 km. flights have been made, in a variety of directions. These included Silver distances by Jack Melrose, and by your scribe, who did

his by going to 8,000 ft. in cloud. Cloud flying has since become fashionable, and it has been proved that wave is not the only means of going high at Portmoak. Chas. Morgan has been teaching instrument flying at 11,000 ft. in one of the T-49's, and Alan Milne, one of the current keen batch of Swallow pilots, went to 7,000 ft. for Silver height. Graham Smith reached 8,000 ft. one evening, and was back on the deck in 15 minutes from take-off.

Latest shape in the Scottish skies is the Glennie-Docherty Dart 17R, which was promptly entered in the Western Regionals. Another competition-minded member is Frank Reilly, who took the Skylark 3 to Camphill for the Northerns. We must congratulate the Fulmar club on gaining the first Gold distance to be flown in Scotland.

B. M.

SOUTH WALES

WITH the arrival of a rebuilt Tutor we will have five gliders — all different — on the site. Our four-cylinder retrieve winch continues to present the launch end with a cable every five minutes, much to the amazement of all the members, including those who rebuilt it. Our thanks go to them.

The canopied T-21 is doing sterling work in turning out solo pilots — no less than three in one day recently. Further up the flying ladder we have earned our first Silver C and Gold C.

The would-be five hour pilots are positively looking forward to winter when we shall be flying at a new ridge site north of Newport facing S.E. With a hill rising to 1,500 ft. from sea level let's hope we sample enormous lift, lots of five-hour flights and occasional wave.

Our first ever week's course was a huge success with 130 launches totalling 17 hours flying time in spite of torrential rains.

I. H. S.

STAFFORDSHIRE

THE coincidence of the soaring weather with week-ends has been very poor recently and no notable flights have taken place since May. While waiting for thermals many members have been taking advantage of the Capstan to get in conversion checks, aerobatic training, simulated field landings and Bronze C flying tests. Bronze C's are now held by five members.

John Everitt reported favourably on the members of the instructors course and the two senior members of it are preparing to take their category tests. Gordon Hudson has recently been awarded his category so the percentage of categorised instructors is likely to rise steeply in the near future.

The further increase in the price of petrol is providing the necessary stimulus to change to diesels and a diesel Land Rover has been acquired. The diesel winch is also operating whenever the demand for launches is high.

A. W. H. L. W.

SURREY

THIS has not been a summer of great flights, and great events. If ever glider pilots needed an excuse to escape to happier climes, this appalling season has certainly provided it. All soaring activity has declined, and the crop of Silver and Gold legs has indeed been pitiful.

There have been some notable flights, however. Brennig James climbed to 18,000 ft. and J. Barrows to 23,000 ft. late one Friday evening, in cu-nims.

Of our entries in the Nationals, the highest placed was the team of David Kerridge and Peter James, who were placed 11th in League 2. They also became winners of the Kemsley Cup. Our entry at the Western Regionals was placed fourth, and at the Northerns, eighth. The performance at rain-soaked Dunstable was somewhat more modest.

Notwithstanding, plans are still being made for the future. Some members are taking an aircraft to the Long Mynd in September. A visit to Portmoak is possible, while a visit with glider to sunny South of France has been considered.

A. R. I.

WORCESTERSHIRE

NOTES from the Worcestershire club have not appeared on these pages for some time. This is not because there has been little to report, but rather that things have been changing quickly

enough to make it impossible to draw a line and say; this is a picture of the club as it is.

Undoubtedly the availability of aero-towing, thanks to Jeremy Quinney and his Tiger Moth, has been the basis of our increased activity. Our fleet has now grown to, T-31, T-21, two Tutors and a brand new Swallow with a syndicate-owned Skylark and a beautifully maintained Grunau adding to the colourful scene on most Sundays.

Courses for members have been well supported, C and Bronze C certificates have been achieved, as have several first solos, including the first by a lady member.

The increased fuel costs have underlined the necessity of changing to diesel winches and to this end a bus chassis is being converted and a programme of work for the winter months is being prepared. The site itself has been vastly improved by the provision of a terrace outside the clubhouse and the fact that the access road and the hangar area have been made up, which has won for us the first round with our old enemy, mud. We still suffer from drainage problems on the runway, although plans to deal with this are now in hand. It is hoped that we shall not, after all, have to fit the Tiger with floats.

There is now a feeling that the club is really getting somewhere and there is a wave of optimism which even the doubtful weather has not been able to dispel.

R. C. S.

WYCOMBE GLIDING CENTRE

AS the end of the soaring season looms into view, an atmosphere of competition is building up at every level. With members poised and shivering on the brink, ready to qualify for the next badge up their individual scale. The Swallows rise from the ground and gyrate in ever smaller and faster circles struggling to keep up for just another two minutes — one minute — thirty seconds even. And that's another C. The Olympias depart into the grey and murky distance carrying pilots with the look of battle in their eyes. Some to return glowing with pride and waving barograph charts that prove another leg for a Silver C. While others slip wearily

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home, their story worked out to describe their heroic battle against impossible odds and how they would have got it if only . . . but you've heard them yourself.

And then, at the top of the scale, the pundits — pretending not to care, of course, are streaking nonchalantly, in ever lengthening legs across the land dreaming of Gold distances while they pretend to us lower mortals, they only intended to go to Stokenchurch in the first place. Far be it from me to disclose how far that is and anyway you can look it up on the map. Suffice to say that Gold distances have so far eluded them all.

The new collectors' pot is hanging in the bar waiting for the first member from the Swindon Club who cares to come and collect it. Not that we intend him to keep it for long. And if you want any more news, the best way is to declare Booker as a goal and come and see for yourself. R. M. W.

SERVICE NEWS

BANNERDOWN

IT is doubtful whether farmers around these parts are any different from any others, but locally they are never satisfied with the weather and neither are gliding types! Just as launch rate varies (inversely!) with temperature, weather requirements vary with site; when we are about to batten down the cry is "Get out the bunjy" at the Mynd.

Speaking personally, your scribe is sorry that S. & G. can no longer print club personal pars; "naming names" is a guarantee of circulation and of survival for example of local newspapers. Personal achievement is the best form of publicity for movement and club alike, so here's to our achievers this month which includes you all on account of the record 130 launches on 4th June, of which 123 were circuits.

In League 2 Phil Hutchings flew locally for 5 hrs. 41 minutes on 18th June and in League 1 George Lee attempted a 300 km. triangle which somehow gave him a 365 km. "diabolo", three turning points, no "leg", 7 hours odd in the air, and corns. There was also an occasion when the Daniels/Willson hot ship rolled out for a 100 km. record but without luck this time. But the big story is C.F.I. Tug Willson's near miss in the Western Regionals. After finishing in front on two days and second, third and fourth on the remaining three he lost first spot on account of a low score on day four. And this after "winning" two no contest days as well!

Recently we lost the services of "Mac" Macintyre and D. Collins as instructors and welcome the present Bicester course on which, as we go to press, three of our aspirants are sporting themselves — Bruce Coutts, George Lee and Bob McGinn.

Thinking back to the instructors away on course coping with the new syllabus prompts us to remind post-solo graduates up to 20 hours that they must not regard it as infra dig to go back to the Barge from time to time for advanced instruction. No one knows it all and the mark of a good gliding type is his willingness to learn. All our archangels would give a lot for experience in daily sea breeze effects, mountain flying, rotor flow, wave flying and Texan "fermals", and graduates should be equally anxious to progress with repeated instruction and practice in cross winds, aero-tows, turbulence, spin recovery, thermal soaring, instrument flying, field landings, difficult situations, use of calculators *et al.* P. H.

FENLAND

AUGUST is a busy month for us at Fenland. Starting with two soaring weeks, then an ab initio week, and finally no less than six of our members are representing their Commands in the R.A.F. Inter-Command Championships on the 22nd August.

Due to postings, two changes of personnel have taken place. "Mac" McMillan takes over as Secretary from John O'Dwyer Russell, thank you John, and on his arrival at Fenland, Geoff Barrell is able to relieve the C.F.I. of the "Treasury".

New equipment is expected very soon in the shape of a Bocian in exchange for a T-21 and a Ka-6E for our current Ka-6CR.

Mick Ensor made our "highest" this year when he reached 14,000 ft. in his Skylark while chasing Gold height, some icing was encountered.

The club boffins are working hard on some home built radio equipment, which they hope to fit to all our competition machines.

Finally, we are to stay at Feltwell for the time being. Visiting pilots, who are always welcome, should note that all circuits must be made to the north side of the airfield. R. G. J.

R.A.F.G.S.A. (Bicester)

DURING the Junior Championships held at Bicester from the 20th-29th August, seven contest days were flown by League 1, and eight contest days by League 2. François Louis Henry, France, the current World Champion Standard Class and Maurice Delvigne, another French Air Force pilot, both flew *hors concours* in League 1.

Final leading results: League 1: 1. C. M. Greaves, Olympia 419, 6118 pts.; 2=. J. Stanley and J. N. Stevenson, Skylark 4, 5238 pts.; 2=. D. S. Bridson, Ka-6CR, 5238 pts. Henry, flying an Edelweiss, finished above No. 1 with 6962 pts. and Delvigne, Edelweiss, above No. 9. League 2: 1. R. J. Hale, Skylark 2, 5471 pts.; 2. R. McLuckie, Olympia 2B, 4545 pts. and 3. G. R. Ross, Olympia 2B, 4520 pts.

WREKIN

SINCE our introductory report in the last S. & G., the Club has become well established. We now have a fleet of five — T-21, T-31, Tutor, Grunau 2 and Olympia 2, with the relevant supporting equipment, and our launch rate has risen from 450 in the first month to over 1,000 in July. We hope to beat this soon!

Twelve A and B's have been gained, plus eight C's and four Bronze C's. We hope to expand our cross-country flying, now we have a trailer. Johnny Morris, our C.F.I., showed us the way with a quick dash to Swinderby (declared).

Many R.A.F.G.S.A. members will know Olympia 2 No. 26 — I doubt they will recognise it, resplendent in a new finish, the result of much time and effort by Jim Pignott. Jim has taken over as aircraft member, and has never stopped working since!

We were very lucky to move into splendid new premises recently, thanks to our Chairman, and the improved facilities make life much easier and more pleasant.

H. F. O.

CRUSADERS (Cyprus)

THE hot summer sun beating down on our airstrip brings no thermals, merely cool sea air. Flying has also been limited by the regrettable damage, in flying accidents, to two of our aircraft; this has left us with a single serviceable T-21. On a few days in mid-July the sea air held off and we had several hours soaring at a 5,000 ft. cloud base. On one trip the T-21, after entering a dust devil after a winch launch, made 5,000 ft. within nine minutes of take off!

When the sea air comes in all soaring is cut off, but we do have one interesting local phenomenon, a minute standing wave which forms at the inversion on the top of the sea air. With the strong sea breeze this will give areas of zero sink at about 800 ft., enough to prolong the winch launch considerably.

At the end of the day, the stronger sea breeze front from the other side of the island often crosses the site, this not only provides some interesting soaring but the sudden gusts which accompany the front give some hard work to the ground handlers.

We are still without a hangar and have to derig the aircraft after flying.

If we are not allowed names in the club news could we put in a plea, for all certificates, granting of instructor categories and other personal items to be printed somewhere in the magazine, even in the smallest possible type.

R. P. S.

TWO RIVERS (Laarbruch, Germany)

THE R.A.F. Germany Competitions were held at R.A.F. Butzweilerhof from 28th June to 11th July, 1966. Our

C.F.I., Jack Collins, started off well at one stage, but got led astray by an Autobahn that sat itself down in the middle of the countryside when he wasn't looking, though the map said it shouldn't be there! Someone else, who shall be nameless, dented our beloved new Swallow on a retrieve — he might at least have done it when flying, and introduced a little drama into this report. All-in-all, perhaps we'd better quietly draw a veil over Laarbruch's efforts — better luck next year.

The redecorated and enlarged clubroom was formally opened on Friday, 5th August — well, it was opened, anyway. No longer do club members have to grope their way into a twilight Hole of Calcutta — now we can see our friends in time to avoid them. Many thanks to the members of other clubs who came along and helped reduce the place to a shambles! Also thanks to the 20th Century Sounds, who played music for dancing, and, apart from free booze, accepted no payment for their services. We're still trying to work out which would have been cheaper!

No certificates to report this time, rather unsettled weather resulted in few flying hours, and the Comps. accounted for the loss of several more, as far as non-comp. standard members were concerned.

V. E. G.

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

QUEENSLAND Soaring Championships, held over the Easter holiday, were won by Max Howland with a Ka-6, who earned 1,000 points on each of the two days when he flew. I. Aspland and K. Wright, 2nd and 3rd, shared a Mucha. The first two tasks were out-and-returns. The third was a 52-mile triangle, twice round for League 1 (only Aspland did it) and once round for League 2 (four completed it, F. Maiden in a Kingfisher averaging 30.5 m.p.h.). The last task for League 1 was an 86-mile triangle in which only two scored, starting off in opposite directions; in League 2, all six who tried completed a 41-mile out-and-return. Entries numbered 17, most with alternate pilots.

At an Easter Regatta at Gawler, attended by four clubs, the last task was a 45-mile out-and-return to be flown one, two or three times; this was to enable the overall average speed to be brought up if the first lap was a slow one, but anyone failing to complete a second lap was marked for 30% less than the actual speed on the first one. In consequence most people, after completing a good lap, handed the machine to another pilot.

The Victoria Easter Competition, with three tasks, was won by Sue Suter, with Bob Martin second and Alan Patching third; each flew an ES-60.

A third generation of Igguldens has begun gliding: Brett, son of G.F.A. president Bill, and Roberta, daughter of vice-president Jack. Their grandfather, who died recently, was a pioneer of Australian gliding.

Australian Gliding

AUSTRIA

THIRTY-FIVE pilots flew in the Austrian Nationals which took place from 29th May to 11th June at Mariazell. Foreign guests included Penaud (France), who flew an Edelweiss; Lehmann (Switzerland), a Ka-6; Chiesa (Italy), an MS-100, and the German Stuhr, who flew an SHK-1.

During seven contest days 57,117 kms. were flown in one of the most exciting competitions ever held in Austria. On one day two tasks had to be flown, both out-and-returns. Final leading results:

1, Johann Fritz, Libelle, 6527.3 pts.; 2, Harro Wödl, Ka-6CR, 6319.9; 3, Erich Schreibmaier, Ka-6E, 5872.7; 4, Alf Schubert, SF-27, 5419.6; 5, Ernst Schraffl, Ka-6, 5254.1; 6, Franz Ulbing, Ka-6CR, 5198; 7, Reinhold Stuhr (Ger.), SHK-1, 4768.4; 8, Walter Kniely, Ka-6CR, 4707.9; 9, Erich Gehrer, Diamant, 4637.2; 10, Adolf Girschick, Ka-6, 4344.8. Penaud came 12th.

BELGIUM

NATIONAL CHAMPIONSHIPS. — These were held at Saint Hubert, and all the leading pilots competed except M. Baeke and Legrand. 30 pilots entered.

The first task, out-and-return Virton, 110 km., was not completed; Stouffs did best with 85 km. The second was a 116 km. triangle via Bouillon and Martelange; Defosse took 1 h. 57 m., Stouffs and Lacroix each 2 hr. 3 min.

Lacroix won a 168 km. triangle in 2 hr. 38 min., with Cartigny 2nd and Stouffs 3rd. Then a 134 km. out-and-return Verviers was won by Lacroix in 2 hr. 7 min., followed by Litt.

The longest task, 220 km. out-and-return Zwartberg, was won by Lacroix in 3 hr. 47 min. 45 secs. Stouffs took 3 hr. 50 min. 35 secs. and Cartigny 3 hr. 59 min. 30 secs. The final task, a short race of 60 km. to Temploux, was held in thundery conditions with a 30-knot wind; Drory, the winner, was credited with 64 km. and 961 points in his Zugvogel.

Overall winner and National Champion was Henry Stouffs. He received a prize from the Minister of Communications, Litt had one from the Minister of National Defence, and Sander a prize from the Minister of Culture.

LEADING FINAL RESULTS

Stouffs (Ka-6)	5141
Litt (Ka-6E)	4540
Sander (Foka)	4072
Lacroix (Austria)	3943
Cartigny (Edelweiss)	3853

La Conquête de l'Air

CANADA

MUCH has happened here since the last item of Canadian news appeared in SAILPLANE & GLIDING. Two Clubs have held local contests of the popular long week-end type, on what is known here as Victoria Day week-end — that is, Saturday, Sunday and Monday, 21st, 22nd and 23rd May, three days of contest flying. These were held at the Red Deer Soaring Association in the Western province of Alberta, and by the Gatineau Gliding Club whose headquarters are in the nation's capital, Ottawa, and who are flying from the Pendleton gliderport, some 35 miles to the east. Both of these contests enjoyed very good weather, with the conditions at Pendleton being anything up to 1,400 ft./min. thermal strengths, and cloudbases anything up to 9,000 ft. above ground. In the course of this contest, the national record for the 100 km. triangle fell to the V-tail of an Austria SH, ably flown by one of our last year's World Contest pilots, Chas. Yeates.

When these results were settled, the Nationals were the next event to get ready for. This year the event was hosted by the Regina, Saskatchewan, club, with Canada's F.A.I. Awards authority, Julien Audette, being the contest manager. A well-organized contest was expected from him, and he did not let us down. Pilots responded in fine style, providing an entry of 32 sailplanes flown by 40 pilots. (Wot, eight two-seaters?) This is the best entry to date in a Canadian contest, the next largest being one of two years ago, when the venue was Brantford, Ontario, and 26 sailplanes took part.

The contest was prepared as well as was expected, and was run with ability and enthusiasm. Of the ten days spanned by it (5th to 14th July inclusive), tasks were flown on seven, and could have been flown on eight. Pilots were expect-

ing better conditions than materialized, having heard stories of fabulous prairie soaring, but the normal booming prairie soaring did not come our way during those days. Nonetheless, some national records went by the board, including the 200 and 300 km. triangles.

The new national champion is Wolf Mix, a champion of a few years ago. Who said they never come back? His flying was amazingly consistent, winning on four of the seven days. For technical interest, he was flying an Austria SH. The team winners were two Ontario pilots, Peter Trounce and Hal Werneburg, flying a Ka-8.

A number of air cadets were present to help on the field and on retrieves. This is the first time the experiment was made, but it seemed to work well, and we hope it will be repeated at future contests.

It is notable that the contest took place on a controlled international airport. This imposed certain restrictions on movements, but everyone seemed to rise to the occasion and behave themselves — just to show it is possible. On their hand, the control operators did their part to co-operate, and perhaps turned a blind eye to an occasional minor technical infraction.

In the meantime an air cadet introduction programme at Penhold, Alberta, seems to be quite successful. Two-seat sailplanes have been drawn to it from as far as Vancouver, on the west coast. Some of the clubs operating it must have restricted their normal operation, but it surely is an investment in the future of soaring as a whole. Not many of the cadets exposed to soaring will follow it now, but in ten or twenty years they will remember. ONTAERO

CZECHOSLOVAKIA

NATIONAL CHAMPIONSHIPS. — These were flown at Vrchlabi from 22nd May to 5th June. East Germany, Hungary, Poland and Yugoslavia each contributed one visiting pilot.

The first task, a 102 km. Triangle, was won by R. Mestan at 60.0 km./h.; the second, a 204 km. Out-and-Return, by F. Kadlcik at 72.4 km./h. Next, a 203 km. Triangle was won by M. Svoboda at 54.6 km./h.; he rose to the overall lead after the next task, though he did not win it — it was a 103 km. Race, won by H. Rakowski of E. Germany at 98.1 km./h. Then F. Matousek won a 115 km. Triangle at 80.1 km./h.

A 500 kilometre Triangle was set as the sixth task. The wind was variable on the ground, 030/06 at 1,000 m., and 360/10 at 2.000 m. No one completed it, but five pilots covered 486 km. and got 1,000 points each; the shortest distance was 274 km., and one pilot was disqualified for an unstated reason.

After a seventh task, a 123 km. Triangle, Milan Svoboda was still in the overall lead, so became National Champion. Since 1951 he had made 4,000 flights, flown 1,450 hours and covered 27,000 km., and he has also put in 450 hours with power. Jaroslav Novak and Frantisek Matousek were named Vice-Champions. Leading scores:

Svoboda	5504	Mestan	4979
Novak	5452	Honzik	4276
Matousek	5185	Satny	4719

Of the visitors, Rakowski (E. Ger.) came 21st, Petroczy (Hung.) 22nd, Jakob (Pol.) 33rd, and Gatolin (Yugosl.) 38th. *Letectvi*

Types flown: Orlik (all Czech pilots), Libelle Laminar (E. Ger.), A-15 (Hung.), Foka 4 (Pol.), Delfin (Yugosl.).

DENMARK

DANISH B-CHAMPIONSHIPS.—Since 1951 the Danish National Gliding Championships have taken place every second year with a growing number of participants. They will still continue so, but in the intervening years a sort of "League 2", or as we call it B-Competition, is now being flown with the idea to let new people get an opportunity to fly a real competition, and the best each year will be admitted as newcomers to the A-Championships, while the least good here will go back to the B-class.

29 sailplanes participated in this year's B-Competition at Arnborg gliding centre in Jutland, from 19th May to 30th May; that is, nearly the same time as the British Championships. Although we had two more possible days, only the 19th, 21st, 25th, 28th and 30th were actual competition days.

We started with a 114 km. Triangle;

24 came through, Karsten Christensen fastest at 55.6 km./h., flying a Vasama. On the 21st only three came back from a 126 km. Out-and-Return to the south, Leif Corydon (Vasama) winning with 33.6 km./h.

After three impossible days, the 25th was overcast and not very promising, but the Free Distance showed it possible to fly farther north in Jutland than ever before. Kæld Wiehe (Ka-6CR) won with 201 km., only 10 miles from the most northern point of Denmark, Skagen.

The next days the weather maps tended towards the famous "north situation" with an anticyclone over Great Britain and Western Norway and a low over the Baltic. This situation is anticipated late in April or at the beginning of May, but has been absent for several years. What luck to get it for a competition!

On the 27th the wind was from the north, but with low stratus until the evening; but on Saturday, 28th, the morning brought a strong north wind, wonderful cold, and a clear blue sky. The task-setter, Ejvind Nielsen, told the competitors to pass a turning-point at Tönder in the south-western corner of Jutland and then do whatever they wanted!

Launching with the four Air Force KZ-VII's did not start until 09.42, which was about half-an-hour later than possible, and at the same time Aage Dyhr Thomsen took off outside the contest for perhaps his tenth try at the 500 km., which only Niels Sejstrup had ever done from Denmark, flying 504 km. in 1962 in the same Lom Libelle which is now owned by Dyhr Thomsen.

Although the turning-point was not much outside a straight downwind flight, it meant difficulties especially for the last to start, as there is often in this situation a tendency for the weather to overdevelop at the Danish-German border. Big showers forced some down here, and some competitors did not go via Tönder but went for Gold and Diamonds straight south.

In the late afternoon the map showed landings farther and farther down in Germany with a record number of 300 km. flights (8), two of more than 400 km., and 7 over 500 km. The 1,000 points went to Kæld Wiehe, who landed at his goal, Kassel Airport, with a new Danish national and local goal record of 525 km., his second Diamond, a Nordic goal record, and the highest score ever in the decentralized Danish Contests.

Leif Corydon also landed at Kassel and also got 1,000 points, but it was not his goal. Who really was third was not revealed until many days later, because late in the evening when also Dyhr Thomsen had reported his landing with a new Danish National Distance record of 635 km. to Sahlmünster and the first Danish complete Diamond Badge. Jörgen Nesgaard had disappeared in his Ka-6CR. Police, Air-Sea Rescue, etc. were alerted, requests for information from East Germany gave no results, until 24 hours later when a News Bureau extracted the information from East Germany that he had actually landed, at Mühlhausen. It took several days before he was allowed to go home and five weeks before his Ka-6CR was delivered at Warnemünde together with a bill of about £100!

It was an expensive flight, the longest in the competition, 545 km.; but as the rules stipulated that distance was not counted into "inaccessible" places like the Eastern countries and all the Eastern Danish islands, from which transport back was too difficult, he only got 525 km. and 993 points — and a Diamond.

Fourth was Leif Midtböll (Foka) with 508 km.; fifth Ib H. Jensen (Ka-6CR) with 501 km., so he just got his Diamond although he had no exact idea about his landing place, having run out of maps a long time back.

Without turning at Tönder, the only female participant, Signe Skafte Möller, in a Ka-8 flew 515 km., once more doubling her own female distance record. We are looking forward to seeing her doing this once more.

Next day, the 29th, had to be a No Contest day as many had not yet returned, but the weather was even better, and a special contest for the helpers, the leaders of the contest and those competitors who had been unlucky was arranged: a 320 km. speed contest to Lüneburg in Germany. Four landed there, and about ten flew more than 300 km., a few more than 400 and one,

Verner Pedersen, 500.7 km.

The 30th also showed fine anticyclonic weather with less wind, and the contest itself ended with a 200 km. Triangle, which 12 were believed to have got through. However, the photographic evidence later showed only seven to have proved this, with Leif Corydon fastest at 55 km./h. The final results and scores were:

1.	Leif Corydon (Vasama) ...	4715
2.	Evar Jensen and P. G. Jörgensen (sharing a Ka-6) ...	4504
3.	P. V. Franzen (Ka-6) ...	4175
4.	Bent Hagel (Ka-8)	3894
5.	Ib H. Jensen (Ka-6) ...	3763

PER WEISHAUPT

CORRECTION.—In the April-May issue under Denmark, the 737 and 690 km. by Marquardsen and Wiehe last year were not single flights but their aggregate of three flights which count in the Danish Decentralized Competition.

FINLAND



This latest version of the 15-metre Finnish UTU, known as the KK-1e, is the outcome of much experimental work with glassfibre-polyester laminates. An article with three-view drawings and principle data appears on page 364.

FRANCE

FIRST INTERNATIONAL MOUNTAIN SOARING COMPETITION. — The Association Aéronautique Verdon-Alpilles, a young club at Marseille, decided three years ago to base itself on Vinon-Verdon airfield in the Var Department. Their experience of mountain flying encouraged them to organize this competition, which was held from 19th to 26th June. From the results, a very big participation can be forecast for 1967.

The airfield, large and flat, allows a large concentration of gliders. The only disadvantage is its flat, open-country position, which forces the pilots to fly 25 miles before reaching high ground. On the other hand, long final glides free of obstacles can be made. The country is surrounded by large valleys with a lot of large fields and airfields. Aerology is similar to that at St. Auban, with an earlier sea breeze setting in.

For this first competition pilots were relatively few, but were largely above average level, some having flown in World Championships. The weather was not what we should have expected in Provence in early June. However, it allowed the 13 competitors to fly 6,700 miles and 382 hours in five task days. The winner, Harro Wödl, flew 840 miles.

The tasks were hard enough and the last one was very hard; this was the opinion of all the pilots. Each day at least four pilots completed the course and some went round it twice. All completed the 187-mile triangle (300 km.), but some took five hours over the very tricky first leg.

SUNDAY, 19TH JUNE.—Out-and-Return Mallefougasse, 49 miles. Nine of the 13 completed it and four improved their speeds on a second circuit. 1st, Cartry (C-30S); 2nd, Wödl (Austria, Ka-6CR); 3rd, Weiss (A-60).

TUESDAY, 21ST JUNE.—Out-and-Return La Motte, 89 miles; seven completed it and four went faster a second time. 1st, Wödl; 2nd, Giovanini (Ka-6); 3rd, Delbarre (M-100S).

THURSDAY, 23RD JUNE.—Out-and-Return Serre Poncom dam, 122 miles;

nine completed, three faster a second time. 1st, Doutreloux (Belgium, Ka-6); 2nd, Klein (Zugvogel); 3rd, Wödl.

FRIDAY, 24TH JUNE.—Triangle via Die and Savines, 187 miles. All 12 pilots completed it. 1st, Wödl; 2nd, Stouffs (Belgium, Ka-6); 3rd, Klein.

SATURDAY, 25TH JUNE.—Out-and-Return Pont du Roi, 159 miles. Four of 12 flying completed it. 1st, Cartry (C-30S); 2nd, Giovanini; 3rd, Wödl.

Final order of competitors: Wödl (Austria), Cartry, Weiss, Giovanini, Doutreloux (Belg.), Delbarre, Klein, Peuto, Stouffs (Belg.), Huertas, Delylle, Rodriguez, Gallizi.

The Association has decided to renew this event in 1967, at approximately the same date. Pilots should not exceed 30. Those interested should write to: Association Aéronautique Verdon-Alpilles, 19, Route Nationale de Saint-Antoine, Marseille XVe. France.

MARCEL MARCY, *Chairman*

Huit Jours d'Angers

Since the inception of this competition in 1957 the French Aero Club has emphasised its intention to make it a European Championship. Six European countries were represented and one pilot came from the U.S.A.

After an opening ceremony in traditional French fashion, Friday dawned clear and bright, and when puffs of cumulus began to form at 9 a.m., it was obvious that a good task would be set. But the met-man warned of the possibility of large patches of spread-out cumulus. Everyone was surprised to be set off on a 300 km. triangle to Parthenay, Montbazon and return. At Angers, stratus began to form early so that a start immediately after the launch was indicated. To the south, conditions improved and a fast run was possible to the second turning-point.

Rounding a turning-point often seems to be like running into an instant warm front — from one direction the clouds appear bright and full of promise, from the other they look like decayed scraps of stratus. Montbazon was like this but the apparent change in conditions soon developed into a true change and many pilots were *aux vaches* on this leg. Seiler (Switzerland, Elfe MN/R) won the day in 4 hr. 20 min. at 44 m.p.h. The French international team, Henry, Cartry and Penaud, were pair-flying and made identical times to be placed second.

On the next two days no task was set although, if cloud flying had been permitted, tasks would perhaps have been possible.

A cold front cleared Angers during Sunday night and there was a forecast of cu-nims on Monday. Without cloud-flying another early start seemed essential in order to stand a chance of getting round the 100 km. triangle set as a task. The second turning-point again proved the most difficult part of the flight, with about half the pilots landing out near it. But the clouds cleared completely to enable the pilots who were back to go round again, to such good purpose that most of them improved on their first times by as much as half an hour. The French team again pair-flew and were again second, being beaten by Memmert (Germany, Phoebus). It is an interesting fact that pair-flying rarely improves on the speed possible on a given task; what it does is to make a fairly high speed consistently possible.

The next five days were either rained off or blown away. Memmert was the overall winner — the first time that the Coupe d'Europe has been won by anyone but a Frenchman.

Final results: Memmert, 1949; Henry, Cartry and Penaud, each 1939; Bucher (Ger., SHK-1), 1798; Schneider (Ger., D-36), 1572; Burton (Gt. Brit., Dart), 1496; followed by Lemaire, Ragot, Mattern (all France, each with Edelweiss).

Condensed by permission from "Flight" from account written by GEORGE BURTON

HOLLAND

FOR those pilots who are not of championship standard, a summer contest was organized at Terlet from 17th to 26th July. Lack of "summer" nearly spoiled the contest, but at the end, after the 19 contestants had been looking for six days at rain and low cloud, the four last days turned out quite reasonable and became valid contest days. Tasks set were 160 km. out-and-return to Venlo, race to Boberg (327 km.), race to Borkenberge (98 km.) and free dis-

tance. The first and last tasks were very marginal and proved again the imperfections in our marking system, as people got 11 and 6 points respectiyely per kilometre on these days. Both races were flown in nice weather and Aart Dekkers (not competing, being a pundit), who flew the tasks to see the competitors arrive at their goal, met two of them at Boberg and 11 at Borkenberge. Best placings were: 1. J. Beeks (3192); 2. H. Wouterse (2698); 3. P. Dekker (2505); 4. M. Franzen (2408); 5=. H. v. d. Linden and R. Slot (2353 each).

Apart from two Diamonds and one Gold Distance in this competition, there were no remarkable flights to report.

The Ka-6E now gets its Dutch C. of A..; for the four Foka's ordered, the Department of Civil Aviation, after eight months looking at the necessary paperwork and calculations accompanying the application for a C. of A., found out that these were in the Polish language, which they don't understand. So these C's. of A. will be delayed again for another period of undetermined length. J. TH. VAN E.

IRELAND (Dublin)

AUGUST looks like being our best month for flying this year. On August Monday, Dave Hooper (that man again!) flew the Petrel to his Declared Goal at Dunmore East, nearly doubling his points on our "ladder system", and maintaining his huge lead. He averaged the same speed as his retrieve crew, too (35 m.p.h.)! Not bad for a 27-year-old T-13! On the same day, Stanley Dunne flew the Ka-6 to Mullingar, and our C.F.I. Gerry Connolly was "going like a bomb" near Kilkenny, when he was forced to land by a loose instrument panel, after meeting severe turbulence.

The following Thursday, our tug was used to aero-tow Mike Slazenger's new Blanik from Oxford to Dublin Airport (the first time a glider has landed there), and then to Kells on Friday.

The following Sunday, most of the Club fleet departed *en masse* for Kells. Stanley Dunne soared the Ka-6 the 32 miles there, the tug brought the Ka-7, and the Ka-8 went by road. At the same time, Paddy Bradley flew 66 minutes in the Kite for his C. The ensuing week produced lots of air experience with the Blanik, which Michael is generously lending the Club for advanced instruction.

The Club fleet has returned to Baldonnel, the writer joined the Petrel syndicate, and *ex* Bank of Ireland linoleum appeared on the clubhouse floor.

At the end of August we are booked for a glider aerobatics display during the "Rose of Tralee" Festival. September is usually our best soaring month, and our waves usually start in October, so we should be kept busy. Readers contemplating a gliding holiday should consider Ireland, but do bring your own glider and trailer! "C. GARR"

ITALY

NATIONAL CHAMPIONSHIPS at Rieti, 2nd-12th August. — Seven tasks were flown. The weather, although not as good as in 1965, was, by British standards, marvellous — every day worked up to 6-knot thermals.

The Free Distance day was won by Vergani (Dart) with the longest flight yet from Rieti, 440 km. to a point in the "heel" of Italy, south of Taranto.

Wills won three tasks, Vergani two, Manzoni one, and Orsi one. Final results: 1st, Orsi (SHK), 6370; 2nd, Manzoni (Skylark 3G), 6148; 3rd, Wills (Dart), 6041; 4th, Vergani (Dart), 5951; 5th, Adele Orsi (Skylark 4), 5617.

The organisers did not declare a task for the closing day, which proved the best from the weather point of view — 10-knot lift everywhere! So Manzoni, in his first flight in the Dart, beat the Italian 100 km. triangle record in 65 minutes, to be immediately beaten by Vergani flying the SHK, doing the 100 km. in 58 minutes, whilst Adele Orsi took the feminine 100 km. two-seater record.

The victory of Giorgio Orsi was a fitting climax to the gliding career of the man who (with his wife Adele) has done more than anyone to put Italian gliding on the map. General Nannini put in the foundations, Giorgio has erected much of the structure and is now showing the way in the actual flying. Our congratulations. P. A. W.

NORWAY

THE THIRD NORDIC GLIDING CHAMPIONSHIPS took place at Gardermoen in the neighbourhood of Oslo, Norway, from 22nd May till 4th June, with three gliders each from Denmark, Norway and Sweden, while Finland and Iceland did not participate this time (the Finns preferred to stay at home for their own Championships).

There were seven competition days, mostly out-and-returns and some triangles. On 31st May there was a free distance after turning at a point 152 km. to the north. Three flew more than 500 km., two more than 400 and one more than 300.

The new Nordic Champion is a "new" man, Birger Bulukin of Norway, who won with 6,973 points after a hard fight, beating the last champion, Sture Rodling of Sweden, who got 6,842, and Carsten Thomasen, Denmark, with 6,708 points. They flew respectively Standard Austria, Vasama and Ka-6BR, and were followed by Göran Ax, Sweden, on Ka-6CR, Ib Braes, Denmark, on Foka 3, and Niels Sejstrup, Denmark, Ka-6CR.

Nationally Denmark won with 18,787, while Sweden got 15,964 and Norway 15,036.

PER WEISHAUPT

POLAND

POLISH NATIONALS — This year's "poor" weather also blessed the Polish Nationals at Leszno. Throughout the Championships Poland was under the influence of a high-pressure centre located around Western Europe. Strong winds and changing conditions limited the scope of task-setting and no "mass 500 km. triangles" were even in sight. Average lift was reported to be 1.5-2.5 m./sec. with maximum on the best days of 4-5 m./sec.

Thirty-five pilots competed in Foka sailplanes and two flew in Zefir 2's *hors concours* (Wroblewski and Krolikowski).

Results: First, E. Makula, 4445 pts.; second, H. Muszynski, 4429 pts.; third, J. Popiel, 4269 pts.; fourth, F. Kempka. J. Wroblewski, *hors concours*, 4832 pts.

All four representatives from South Cerney were conspicuously at the top of the list, with H. Muszynski staking a fair claim for the top honours.

1st Day.—Task: 2 × 102 km. Triangle. No pilot completed the task. Winner, E. Makula, 198 km.

2nd Day.—Task: Out-and-Return, 127 km. 32 pilots completed. Winner, Mrs. Pela Majewska, 69.2 km./h.

3rd Day.—Task: 333 km. Triangle. 13 pilots completed. Winner, F. Kempka, 71.4 km./h.

4th Day.—Task: Out-and-Return, 551 km. No pilot completed. 3 pilots made 483 km. and 31 over 300 km.

5th Day.—Task: Out-and-Return, 222 km. 5 pilots completed. Winner, J. Popiel, 49.7 km./h.

6th Day.—Task: Out-and-Return, 222 km. No pilot completed. Best distance 180 km.

7th Day.—Task: 309 km. Triangle. No pilot completed. Best distance 228 km.

OTHER EVENTS.—Polish pilots flew in a number of events abroad throughout the year. A strong team of four was sent to the International meeting at Orel in Russia. Krolikowski and Wroblewski topped the Open Class in Zefir 2's; Kempka collected the Standard Class honours in a Foka; and Mrs. Pela Majewska in another Foka came second in the Ladies' class.

In the U.S.A. E. Makula flew his Foka to gain 5th place in what must have been the most fabulous competition ever.

In Switzerland Wroblewski came 8th in a Foka. Wroblewski has never flown in high mountains and his selection for Switzerland was obviously (*sic*) intended to give this talented young pilot an additional post-graduate polish.

An interesting new Standard Class glider, the Pirat, will soon be offered by the makers of Foka.

E. JERZYCKI

NEW SAILPLANE. — "An all-purpose glider designed specially for you!" is the marketing slogan of the latest Polish 15-metre sailplane, the SZD-30 "Pirat". It is designed for . . .

"First solo and Diamond flights; rough fields and runways; weak and strong thermals; cloud flying and aerobatics; day and night operation; young and old; small and tall; cautious and brave; competitors and week-end pilots."

It is of wood contruction; the wing



"Pirat" Gehriger about to fly the Pirat. Photo by W. Stachowiak.

is in three parts, the outer sections being tapered with a small dihedral angle; it has a Wortmann laminar section. The machine has a T-tail, a wheel with brake, a back-rest adjustable on the ground and pedals adjustable in flight. Disposable load is 125 kg. (265 lb.). Never-exceed speed is 250 km./h. (135 kt.). Proof load factor +6 & −3; ultimate load factor +10.5 & −5.25. Estimated gliding ratio 33; min. sink 0.65 m./sec. (2 ft. 1½ in./sec.).

Price is not given in the handout, but *Flyv* says it is $3,000 (about £1,100) at the Polish frontier, fully instrumented. Exporters are: Motoimport, Warsaw, Przemyslowa 26.

RHODESIA

FLYING is proceeding at a hectic rate and we seem to have a sufficient number of pilots to keep us going for some time. The numbers are proving a bit of an embarrassment to our small nucleus of instructors who have been sadly depleted by the absence of Paul Hodge, now in U.K., who made the first 500 km. out-and-return in Rhodesia.

We seem to have adequate fuel supplies and up to now this problem seems to have been overcome thanks to friends. Rhodes and Founder's week-end was not very promising weather-wise but there were many flights of over an hour. Jimmy Arnett's Vasama enjoyed its first flight in over six months on completion of its C. of A. and what a wonderful job Jimmy has done. The syndicated Vasama has had its C. of A. and is back in the air.

As usual, bush fires are the main sources of lift just now and we often wonder why so many boxes of matches go astray from the clubhouse.

Roy Smith from Bindura claimed our Beer Stein by landing in his Dart but was unable to make it back again as conditions died pretty early and Jimmy Aitken had to tug him back.

The Annual Championships will be held from 3rd to 15th October. It is hoped that the Prime Minister, the Hon. Ian Smith, will be able to open them.

MIKE MCGEORGE

SOVIET UNION

FEMININE WORLD RECORD. — Tamara and Valeri Zagainov, making the first "group flight" in Soviet gliding history, flew from their home town, Orel, to their goal at Volgograd (*ex* Stalingrad), a distance exceeding 740 km. (460 miles), both flying A-15's.

Tamara Zagainova thereby beat the official feminine world record for goal flight held by Adela Dankowska of Poland with 391.46 miles on 7th July, 1964. Valeri came close to a national record; he is the sixth Soviet glider pilot to fly approximately 750 km. (It is not stated whether Valeri and Tamara are husband and wife, brother and sister, or what.) *Novosti Information Service*

SWITZERLAND

A NEW ELFE.—The designer of the Elfe series, A. Markwalder, has made considerable modifications to the Standard Elfe. The wing area has been reduced by 5% by lessening the taper ratio to 0.4, thus increasing the aspect ratio to 20; but owing to new construction methods the maximum wing loading is still only 25 kg./sq. m. (5.12 lb./sq. ft.). The elevator is raised to avoid the fuselage slipstream and ground damage. To maintain laminar flow over the front of the fuselage, its surface is completely unbroken and it slides forward as a whole to allow the pilot to get in.

An Open Class version, incorporating the same improvements, will have a span of 17.8 m. (58.4 ft.), an aspect ratio of 23.3, and a wing loading of 22.5 kg./sq. m. (4.608 lb./sq. ft.).

Swiss Aero Revue

NATIONAL CHAMPIONSHIP at Hausen, 14th-21st May. — Eighteen Swiss and four foreign pilots flew on six contest days.

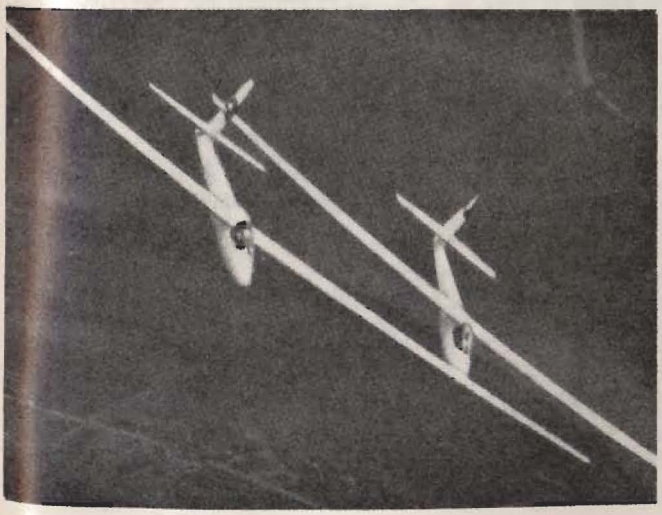
SATURDAY, 14TH MAY.—196 km. Out-and-Return. Hans Nietlispach was the only pilot to complete this task, with a speed of 40.53 km./h.; second, Fritz Wanzenried 126 km.; Jan Wroblewski (Poland), flying a Foka, came third with 122 km.

SUNDAY, 15TH MAY.—120 km. Out-and-Return. Weather conditions were better than the previous day and 11 pilots completed this time. Hans Nietlispach won again at 50.35 km./h.; second, Emil Bucher (Germany), 48.92 km./h.; third, Walter Spychiger, 47.14 km./h.

MONDAY, 16TH MAY.—233 km. Triangle. This race took place with plenty of thunderstorms along the route, and it is therefore not surprising that only a handful of pilots completed the course which was won by Rudolf Seiler, 60.4 km./h.; second, Urs Bloch, 54.8 km./h.; third, René Lüscher, 54.19 km./h.

TUESDAY, 17TH MAY.—Goal race via two turning-points; total distance 163 km. Pilots experienced difficulty in getting away from base and again heavy thunderstorms were encountered along the route. First, René Lüscher, 66.38 km./h.; second, Rudolf Seiler, 65.05 km./h.; third, Hans Nietlispach, 64.93 km./h.

WEDNESDAY, 18TH MAY.—160 km. Out-and-Return. Although only two pilots completed this task, some excellent performances were noted. A thunderstorm belt tried to move in from the west and several pilots experienced



Elfes in formation.

some hair-raising times flying in hail, lightning and thunder. First, Robert Wetli, 42.21 km./h.; second, Hans Nietlispach, 40.26 km./h.; third, René Lüscher, distance 155 km.

THURSDAY, 19TH MAY.—No task. Wroblewski gave a fascinating aerobatic display in his Foka.

FRIDAY, 20TH MAY.—Again after several postponements of briefing the task had to be cancelled.

SATURDAY, 21ST MAY.—103 km. Out-and-Return. Towards noon the showers disappeared but starting was very difficult although the weather looked promising. Most of the pilots landed back and Hans Nietlispach gave up after two abortive launches. 16 pilots did not score, but some of the rest got round. First, Rudolf Seiler, 40.3 km./h.; second, Rudolf Hächler, 36.45 km./h.; third, Emil Bucher (Germany), 32.34 km./h. Nietlispach, however, was far enough ahead to maintain his overall position and after a break of four years became National Champion for the eighth time.

Several "special" days were held during this Championships, one of the nicest being the day for "Old Timers". The doyen, August Hug, who at 72 is still active and officiated at Hausen with tremendous spirit, welcomed another 110 well-knowns from yesterday and yesteryear, including the holder of gliding licence No. 1 issued in 1930 — Willy Farner from Grenchen.

The discussions between the older generation and the present one about past experiences and discussions on the technical aspect could easily fill two pages of *Aero Revue*.

Final Leading Results:

1. Hans Nietlispach (SHK)
2. Rudolf Seiler (Elfe MNR)
3. René Lüscher (Elfe S2)
4. Urs Bloch (Elfe)
5. Rudolf Hächler (SH-1)
6. Emil Bucher (Germany, SHK-1)
7. Erwin Lehmann (Ka-6)

8=. Jan Wroblewski (Poland, Foka 4)
8=. Robert Wetli (Ka-6)

Swiss Aero Revue

HERMANN GEIGER. — The famous Alpine pilot Hermann Geiger, who ran an air rescue service and was stated to have an unrivalled knowledge of mountain air currents, has been killed at the age of 51. One report states that he collided with a glider during take-off with a pupil at Sion, but further details are not yet available.

UNITED STATES

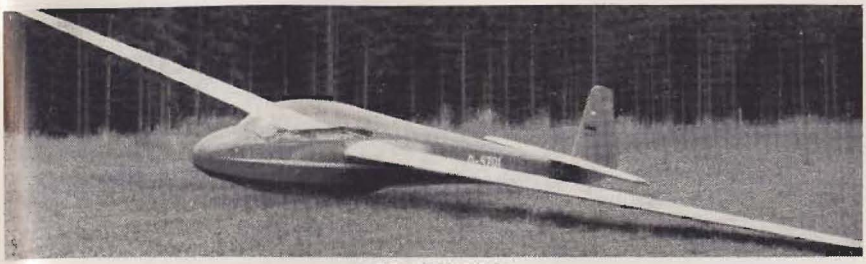
TWO NATIONAL RECORDS. — A multi-seater distance record is claimed by Edward G. Minghelli of Palmdale, Calif. With a passenger, Lawrence E. Cavell, of Palmdale, he flew 403 miles on 9th July from El Mirage Field, Calif., to 25 miles south of Carlin, Nevada, in a Prue 2. The flight was difficult at first, with several prospects of early landings, till the White Mountains were reached 130 miles out. From there, with a cumulus-filled sky and a 60 m.p.h. tail-wind, the going was easy until near sunset when a thunderstorm blocked further progress. Flying time 9 hr. 4 min. Previous record, 309.7 miles by Dick Johnson in 1946. The world record, 515.6 miles, is held in Soviet Russia.

Paul A. Schweizer claims a national multi-place record for speed round a 500 km. triangle, 48.25 m.p.h. He flew with Clyde McCarthy in a Schweizer 2-32 from Odessa, Texas, with turning-points at Snyder and San Angelo, both in Texas, over a distance of 318 miles (512 km.) on 29th July. This is the first U S. record of its kind; the world record of 52.0 m.p.h. was set up by H. and H. Sorg, of West Germany, in South Africa on 1st July, 1964. S.S.A.

HIGH WAVES. — Among absolute altitudes reached on 22nd May at Westcliff, Colerado (8,000 ft.), were 38,000 ft. by John Brittingham in a 2-32 (solo), 37,500 ft. by Louis Feierabend in a Ka-8B, and 37,400 ft. by Ed. Smull in a 1-26. Brittingham also took two passengers in turn to 32,000 ft. on the same day. *Soaring*

WEST GERMANY

NEW TWO-SEATER FROM POPPENHAUSEN. — The AS-K13, a further development of the Schleicher Ka-7, has its wing lowered to the mid-wing position to improve visibility in turns. This also allows the canopy to be made in one piece from moulded plexiglass with no obstruction to all-round vision. The main wheel is shock-absorbed by



The AS-K-13A

two rubber springs.

The fuselage has a steel tube frame with wood stringers and fabric covering except for plywood behind the cockpit. The nose is of fibreglass. The wing spar is of Polish pine; sweep-forward is 6° at quarter-chord, and dihedral 5°. Schempp-Hirth airbrakes of metal. Aerofoil developed from Göttingen 535 and 549. Tail covering: fixed surfaces, plywood; moving surfaces, fabric. Ailerons fabric-covered. Elevator has anti-balancing geared tab, trimmable.

Data: span 16 m. (52 ft. 6 in.); empty weight 290 kg. (639 lb.); max. all-up 490 kg. (1,080 lb.). Wing loading, solo, 20.5 kg./sq. m. (4.20 lb./sq ft); two up, 25.4 (5.20). Cruising speed 35 kt.; max. 108 kt.; winch launch 54 kt.; aero-tow 75 kt. Min. sink 2.47 ft./sec. solo; 2.78 ft./sec. two up. Gliding ratio, 27.

ALEXANDER SCHLEICHER

YUGOSLAVIA

KOROSKI Aero Club, of Slovenji Gradek in Slovenia (Yugoslavia), has written to the German Aero Club inviting glider pilots to visit the club. They write that they have ideal possibilities for distance flights of 50 to 500 km. across the Slovene plain as far as Banat in the south-east. In S.E. and N. winds it is possible to soar over the neighbouring slopes of the Bachern range. A large hangar houses 30 sailplanes; there is a workshop and club-room with telephone. A neighbouring pine wood is suitable for camping. A restaurant provides meals at 8 DM per day (about 14s.), or one can put up in the town, four miles away, for 10 DM a day. Aero-tows are 1 DM per minute.

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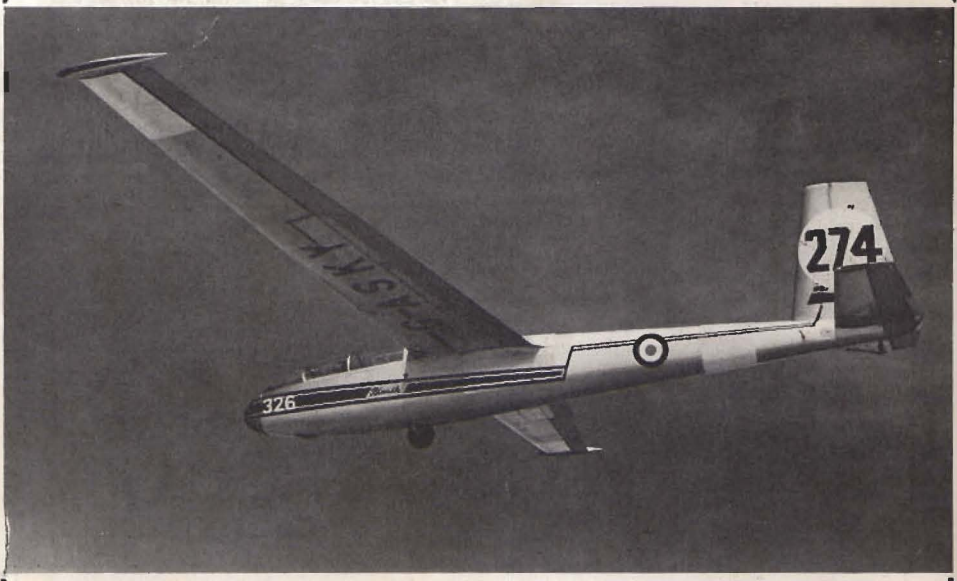
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