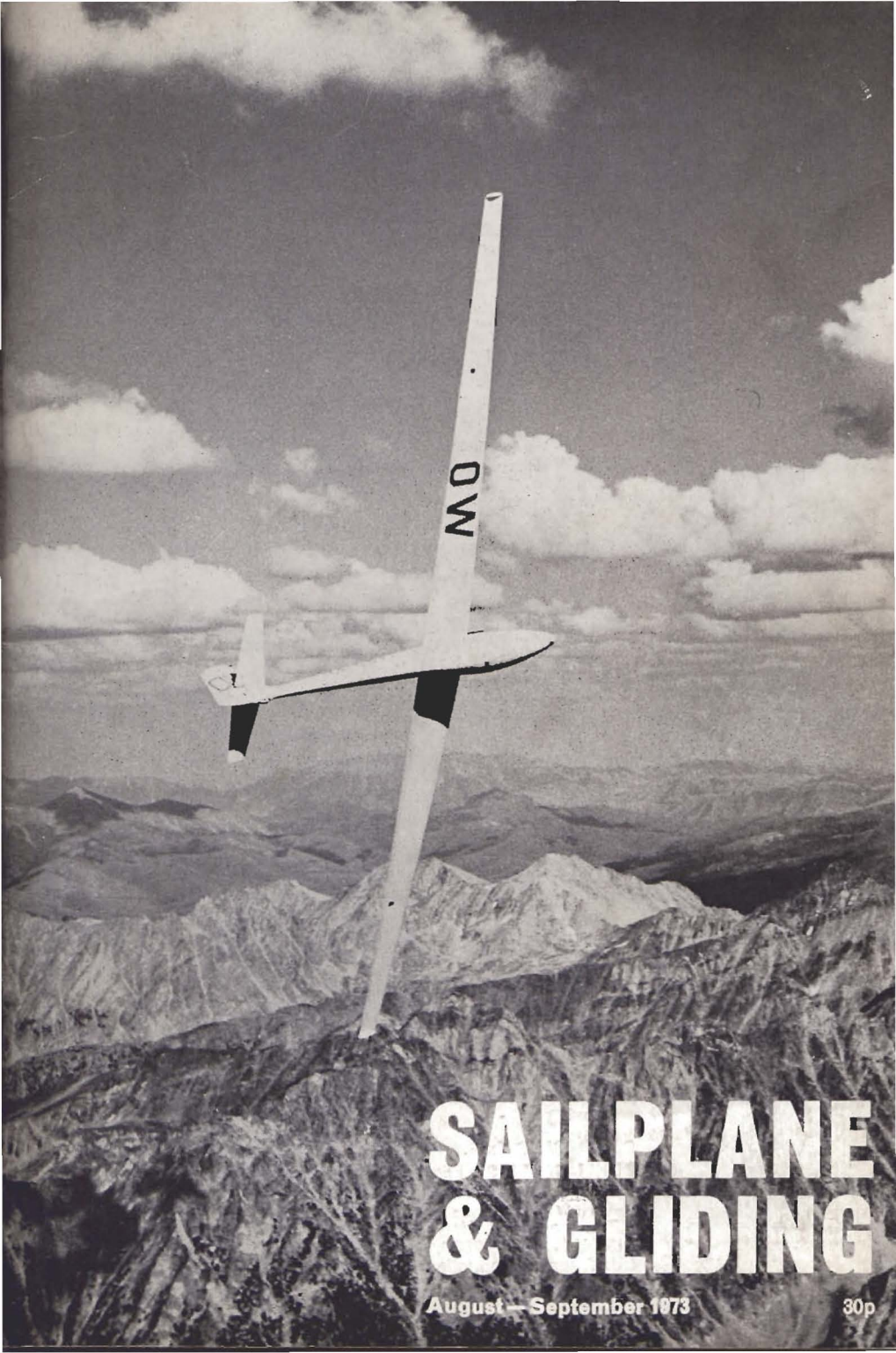


SAILPLANE & GLIDING

August — September 1973

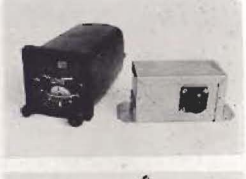
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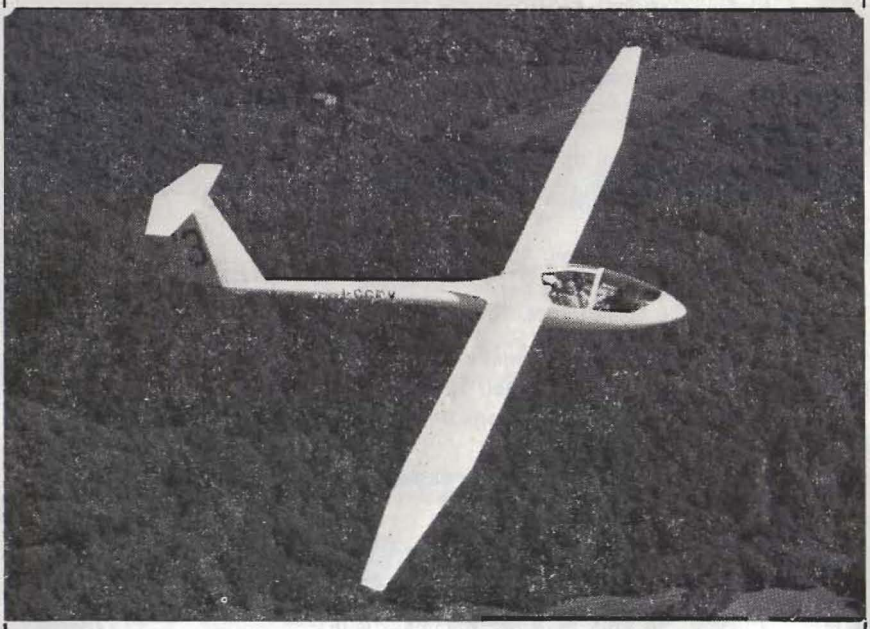
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Cover photograph: A Libelle circling in a thermal above the Sawtooth range by Robert Moore, taken from the book, "Soaring On The Wind" reviewed on p296

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FRED SLINGSBY

A tribute to a great pioneer



THE name of Slingsby has been synonymous with British gliding for more than a third of a century and although Fred Slingsby retired some years before his death in May, there is a strong sense of sadness and a feeling that this is the end of an era.

Those who knew him personally have their own degree of loss and memories of a rich character, but a large proportion of the gliding fraternity reared on his machines are acutely aware of his tremendous contribution to the Movement and owe him a very special affection.

The firm of Slingsby Sailplanes Ltd, which didn't operate under this title until 1939, was for many years one of the world's leading manufacturers and has supplied more than 50% of the gliders in Britain and all those used by the Air Training Corps, as well as extensively exporting its products.

Fred Slingsby joined the Royal Flying Corps in 1914 and served in aircrew throughout the war. In the early twenties he took a partnership in a small woodworking and furniture works in Scarborough, Yorkshire.

But it wasn't until he saw a gliding demonstration in 1930 that he became interested in the sport and was soon helping start the Scarborough gliding club. Not surprisingly, he was the ground engineer to the club and later bought a set of plans of the Falke from Germany to build a glider for his own use.

The Falke was built in his own works in Queen Street and he gained his C in 1931, soaring along the ridge close to the old Rosedale railway incline on the North York Moors.

How it all started

Sling, as he was known to everyone, was a regular competitor in the 1931 and 1932 competitions, touring all over England. It was as a result of his travels with the Falke that he was asked to build another for the late Mr. C. E. Hardwick, founder of the Midland glid-

ing club in Shropshire. And this was the start of the great Slingsby reign.

Soon he was manufacturing primary gliders and the first Slingsby advertisement appeared in *Sailplane and Glider* in November 1933, offering these for £45 complete.

As more and more orders for gliders came in, the furniture side of the business was phased out and a larger workshop was needed. For a few months the empty tramsheds owned by Scarborough Corporation were used, before the move in the autumn of 1934 to part of an engineering factory in Kirbymoorside at the invitation of Major J. E. D. Shaw, a local landowner. Major Shaw had a small aerodrome on his estate at Welburn Hall and a fleet of several aircraft.

The idea behind the offer was to bring more employment to a fairly underdeveloped part of the North Riding, and he offered Sling financial backing. The engineering firm then began operating under the name of Slingsby, Russell and Brown Ltd.

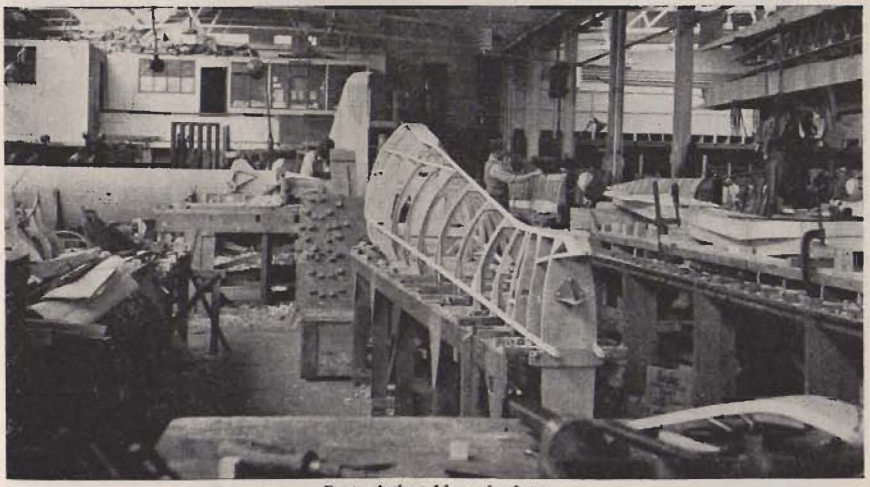
Reasonably free from financial worries, Sling added a two-seater version of the Falcon, the Grunau Baby and the Kirby Kite sailplanes to the number of types being made. In addition he built the Hjordis sailplane designed by Mungo Buxton for Philip Wills, as well as accepting work on the Hütter 17 and Hols-der-Teufel gliders.



In his RFC flying kit

In 1936 another new glider was introduced, the Kirby Kadet, later to be changed to Cadet, and the following year came the Kirby Tutor and the King Kite sailplanes. The latter was designed in co-operation with Mungo Buxton and the three were used by the British team at the first International Gliding Championships at the Wasserkuppe in Germany in July 1937.

Light aircraft were considered and the construction of two types began in 1938,



Part of the old work shop



Sling (third from left) with contemporaries of his early flying days standing alongside a T-31

but these were abandoned and the factory went on to make the Gull and Petrel, which later went into production.

Larger factory needed

With the growing success of the business, it was obvious that larger premises were vital, so a completely new factory was built at the side of Major Shaw's airfield. It was then, when the premises were ready for use in 1939, a separate company was formed called Slingsby Sailplanes Ltd. Major Shaw was the Chairman and Fred Slingsby became the Managing Director and Chief Designer.

The factory was to have been officially opened on Monday, September 4 but the outbreak of war on the previous day stopped all private flying in this country. Just a few sailplanes were completed in the following months, one of these being the Gull 2.

The first war-effort work Slingsby's received was to build spare components for the Avro Anson aircraft, but they were invited to tender for the design of an eight-seat troop-carrying glider. Slingsby's didn't win an order but were later asked to design and build a 15-seater transport glider called the Hengist.

This was the largest glider ever built by Slingsby's and the prototype had its first flight in 1942. Just 18 were manufactured but didn't see active service because of the large numbers of American gliders sent to this country under the Lend/Lease agreements.

The factory did some experimental work in 1942 and 1943 on small towed-target gliders and also built the Baynes Bat, a small single-seater tail-less glider. Later in the war the youth training organisation—Air Training Corps—was started and the firm built a two-seater tandem glider to their requirements for a simple type of dual training, but only the prototype of the T-20 was produced as it was followed by the T-21 in 1944.

This, as we all know now, was an absolute winner. It was manufactured in large numbers until the war ended and the ATC continued with the T-21—known to them as the Sedbergh—after it was found their other specification, the T-24, wasn't anything like as successful. By this stage, the T-21 was being made for civilians in this country and abroad and the factory was kept busy with repairs and refurbishing of the Sedberghs until 1969.

Towards the end of the war the firm reviewed their programme and began to organise their design and production to peace-time conditions.

Work for years ahead

Initially it was planned to make Cadets, Tutors and T-21s for club use with revised and updated Kites, Petrels and Gulls for private owners. The T-23 Kite prototype was redesigned as the Kite 2 and the Petrel 2 and Gull 4 were abandoned for economic reasons while the factory concentrated on the T-21, a modernised version of the Grunau Baby —the Prefect—and in 1950 a two-seater tandem version of the Tutor. The ATC's order for the Tandem Tutor assured the company of work for many years ahead.

The design office then began work on a new sailplane for the 1951 British championships, the Sky, which first flew in 1950 and came first and second in the 1951 competition. It was selected for the British team for the 1952 World championships in Spain and Philip Wills flew his Sky into first place, making us World champions for the only time.

The first of the Skylark series was flown in March 1953 and quickly followed up by the Skylark 2. The latter was put into production and in the following year the two-seater tandem sailplane in the Skylark series was launched—the Eagle. The final member of the Skylark family was completed in 1955 with the introduction of the Skylark 3 for Open class competition. This series of gliders were Slingsby's most successful designs.

The Swallow club sailplane came in 1957 and found a ready market throughout the world and was still being built 11 years later.

When Major Shaw died in 1955 his shares in Slingsby Sailplanes Ltd had to be sold to settle death duties. To avoid a take-over bid, the shares were bought by a Trust formed by the leading members of the British gliding movement. The company was then owned by the Shaw-Slingsby Trust with Philip Wills as Chairman.

Production of the Skylark series continued although the Skylark 3 was redesigned and appeared as the Skylark 4 in 1961. At this time the Capstan was built, followed by the last of the traditionally all-wooden type of construction glider, the Dart. This was also the last type designed under Fred Slingsby's direction.

Sling retired in 1964 at the age of 70, having suffered from poor health for two years. But when the new company was formed in 1969 by Vickers Ltd with George Burton as Managing Director, it was given the old title of Slingsby Sail-



Philip Wills in the cockpit of the Sky with Sling in the centre of the photograph



An informal chat with Prince Philip, Patron of the BGA

planes Ltd, which ensures the continuation of this famous name in gliding.

(*Extracts and details have been taken from Norman Ellison's book* "British Gliders and Sailplanes".)

A PIECE OF HISTORY

THE Slingsby Cadet Mark I is to go on display at the RAF Museum at Hendon and will be the only glider represented in this or, it is believed, any other military museum.

It was owned by Peter Fletcher who wrote and told Sling a short while ago that it was to be in the Hendon Collection.

This is something Peter and Dick Green, as instructors, have been trying to instigate for some time. Sling gave Peter a lot of help when he was trying to improve this machine and it finally achieved a 256km cross-country.

The Cadet Mk I was the first sporting glider ever to be put into large scale production for the RAF and it laid the foundation of all service gliding, leading to the T-21, T-31 etc, so has a firm place in gliding history.

At the moment the Cadet is at the museum workshop at RAF Henlow to be repainted and converted back to its original state when it will go on display as the "Slingsby Cadet Mk I".

Appreciations

By FRANK IRVING

THOSE of us who came into gliding shortly after the War rapidly found ourselves committed to a way of life. It was a remarkably stimulating one which, for over a quarter of a century, has been enriched by Fred Slingsby, both as a person and as the source of our sailplanes.

For most of us, his machines provided many of the more outstanding experiences of that period: the first "high

hop" on a calm summer's evening at Redhill in 1947 in a Cadet; the parched countryside of Spain seen from a Sky after Philip's triumph in 1952; the breadth of the English Channel from the back seat of the Eagle prototype; the north coast of Cornwall whilst final-gliding on a perfect evening with 300km safely behind the Skylark 3; amongst the Alps in a Skylark 4 and, later, a Dart; scraping hoar-frost off the Skylark's instruments at 20,000ft over Issoire —and many more.

Nothing very outstanding compared with the really great flights of others, but deeply satisfying and memorable to me. To paraphrase Dr Johnson: "The seat of human felicity was the cockpit of a Slingsby glider."

In the hey-day of wooden gliders, "the works" was a marvellous place: there was a feeling that here, at least, craftsmanship still existed. In the background was the splendid scent of cellulose dope, now replaced by the more feline smell of resin. And in the middle of it all would be Fred, invariably armed with a short, blunt stub of very soft pencil, ready to sketch modifications or new ideas on anything that came to hand.

This was often the ply on a new wing, so there must still be a lot of machines about bearing strange grafitti beneath the fabric. After a session around the latest prototype, it was never very clear how the drawing office caught up with the ideas sketched on odd bits of ply and paper.

Petrel and Skylark 2

He had a remarkable eye for the elegant shape and a sure feel for balanced proportions. The Petrel was doubtless his most beautiful machine and, amongst the post-war designs, the Skylark 2 was an outstandingly neat and coherent little glider. He had a feel for wood and, with it, the ability to produce neat solutions to awkward problems. After his retirement, he applied these artistic leanings to painting in oils, choosing quite non-technical subjects: a little girl seen in Spain; the hunt setting off along a moorland track. He had a sure touch, and the results were entirely charming.

His humour is almost impossible to reproduce in writing. It depended on the quaint phrase, the word used in an odd context, a wild extrapolation of a casual remark by somebody else or some self-deprecating observation.

No 1 Flight Test Group once became mildly bored with receiving unlubricated gliders with stiff, squeaky controls and rather unkindly suggested that it would be nice if the prototype Eagle were supplied with grease on the bearings and the grit in a separate packet. The Eagle duly appeared complete with logbook, release note, and a neat little envelope containing the grit. Fred, we felt, had emerged with the greater honour.

Whilst the antecedents of some of his pre- and immediately post-war designs were obviously German, any suggestion that the Sky was simply an improved Weihe touched him on a sore spot and was swiftly and bluntly refuted. Although the state-of-the-art was somewhat similar, because few designers had had the courage to use the then new NACA low-drag wing sections, the Sky was appreciably heavier and faster, and rejoiced in decent airbrakes.

Civilised and comfortable

In its day, the Sky was expensive (£1,400!) and the earlier Skylark 3's were significantly cheaper. The Skylarks were all Fred's own and represented a great advance on the rather fiddly detail of traditional designs. Skylarks, after all, still transport pilots to the ends of the country and the upper reaches of its atmosphere. Anyone blessed with one has a nicely appreciating piece of property.

In retrospect his designs were, in the main, eminently civilised machines: you were comfortable, you could see where you were going, the wing loading was matched to the British weather and you could put them into small fields—merits which are again becoming highly desirable.

He would not have claimed to be really happy with aerodynamics of the more theoretical variety and it would be idle to pretend that his instinct for the run of the air along a smooth pencil-stroke was infallible. Wing-fuselage junctions, for example, had a tendency to give trouble. Certainly, he would have been pretty uncomfortable in today's world of computerised optimisation, but there are always several ways of tackling complex

problems, and who is to say that the artistic approach is any less valid than the scientific? In Fred's hands, it provided some very good machines with an impressive list of wins and records to their credit. Even if not entirely devoid of quirks, they were generally rugged, reliable and easy to maintain and they will go on flying for a long time yet.

On the rare occasions that the opportunity arose, he delighted in seizing a chisel and getting to work on a repair job. On the penultimate day of the Spanish World Champs, Geoffrey Stephenson had the misfortune to encounter a small rock sticking out of the surface of what passed for a field in those parts and knocked a fairly large hole in the bottom of his Sky. Fred, by no means as acclimatised to the heat as the rest of us and more extensively clad, got to work.

There was no time to do proper scarf joints if Geoffrey was to fly the following day, so the damaged panel was cut out and a new one glued in place with a simple lap joint around the edges. In an astonishingly short space of time, an empurpled and dripping Fred announced it airworthy, only to find himself parrying a remark from an onlooker about the effect on the drag. So the projecting edges were faired-in with old-fashioned black Bostik. Not very elegant, but eminently practical in the circumstances.

He was a kindly man, often ready to help the youthful syndicate or the incipient club to get into the air. This was done most unobtrusively, even furtively. On the other hand, attempts to haggle were not well received. His kindness and concern for other people were greatly exercised after he had ceased to play an active part in the firm and it was suffering from what might euphemistically be described as sundry vicissitudes. The firm still bore his name and he was not very happy at the way things were going but he was even more worried that some of the old employees had fallen on hard times. It is good to feel that he must have been heartened by the later revival of the firm and its reversion to the original name of Slingsby Sailplanes under the auspices of Vickers.

Glider designers rarely become rich in the material sense. The rewards are mainly intangible: world-wide friendship, the creation of beauty, and the knowledge that a few thousand people have been enabled to enjoy living more fully. In all of these matters, few men have achieved more than Fred Slingsby. He was a great man and a dear friend.

By PHILIP WILLS

FRED Slingsby had been so frail for so long that I should not have been dismayed when I read of his death, but I felt impoverished and utterly bereft. For almost exactly 40 years Fred was one of the pleasant parts of my life, a man it was an honour to know and to be one's friend, almost the only man I have known who gave nothing but pleasure to all who knew him and to thousands to whom he was only a name.

Most of the great moments of my life, and a great proportion of its pleasure, have come about in a Slingsby sailplane. They were beautiful, their craftmanship was superb, they were safe, docile and easy to fly. They were, through the simplicity and integrity of their design, the joy of those who had to maintain and repair them.

As a man, Fred was unique. To a streak of lyricism he added a dry Yorkshire humour all his own, allied to a rugged streak of common sense which quietly but authoritatively over-rode without offence the many too-clever-by-half ideas which were always being fired at him. Oddly enough, he was also a shy man.

His integrity was absolute. Jack Shaw, who in 1933 financed the first Slingsby Russell & Brown, which then became Slingsby Sailplanes, was always tempting him to spend more and more money on expansions in fields which Fred did not believe would be successful, but he resolutely refused. It was not, to a man of Jack's almost over-generous nature, an experience which he often had, but it was one which made Fred the closest and most admired friend of one who, in most circumstances, would have considered himself as his employer.

There are only a handful of men in the world who have started a glider factory and enabled it, from scratch, to survive and become a world-wide name. There were only a handful of men who, by coming together in the early 1930's could have created British gliding in the

Sling with Fluff at Gatcombe Park, Gloucestershire



image in which it has so successfully grown. Responsibility, enthusiasm, integrity, and a mutual bond of friendship and respect between its devotees—a mirror of the qualities of Fred Slingsby.

And how can anyone think of Fred without thinking of Fluff? To her we send our affection, our love, and our sympathy.

By GODFREY HARWOOD

OTHERS are, I know, paying tribute to Fred Slingsby in his capacity as a glider designer, craftsman, manufacturer and pilot. I want to record my own appreciation of him as a friend; one in whose company, and that of his loved and loving wife, Rika and I have spent many most happy days.

Fred was a man of many talents. I need say nothing of his skill in every aspect of gliding; but I think that only a minority of glider pilots know of his special aptitude with the camera in making still and motion pictures. With the brush, too, he displayed great talent, though this was an art that he took up rather late in his life.

Undoubtedly his greatest talent, however, was the unconscious quality of inspiring in others a sense of very great affection. He had an enormous fund of humour and could come out spontaneously with a witticism which would make the tears come with laughing—but never, even when poking fun, was there the least grain of malice in his jokes.

Fred and "Fluff" showed us much of Yorkshire. It was the County of his birth and that of his forebears and he knew it intimately. Indeed there is hardly an escarpment anywhere on the moors from the crest of which he had not been bunjeyed off back in the early 1930s. He was as familiar with the County history as with its geography, and had a store of reminiscences upon which to draw in making our picnic excursions so memorable. If only we could have got it all on tape!—but miniaturisation of recorders had but barely started.

Magnanimity in paraphrase is "Nobleness of Soul". This Fred had in full measure, and Rika and I are indeed proud to have known him.

if you want to get ahead



get a T·21

Photo: Cambridge Evening News

THE HUSBANDS BOSWORTH SAGA

By CHRISTOPHER THOMAS

AT about one o'clock on a dark stormy December night a dripping wet, ex Lakes gliding club T-21 was smuggled into the Husbands Bosworth hangar. A weekend of test rides followed by a week of money swopping and our five man syndicate was formed, Lou Glover, Lou Frank, Guy Gothard and Bill May joining me in the venture.

The glider is sound but scruffy, instruments fitted are an ASI, altimeter, Cosim vario, compass and a turn and slip that doesn't work. The open trailer is just about roadworthy and a closed trailer is now under construction.

Our T-21 is rigged most week-ends, often with the help of non-syndicate club members, some of whom have also acted as ballast. The wiser helpers postponed their flights from the winter until the warmer weather.

An aerotow in a T-21 has been compared to banging your head against a brick wall—it's nice when it stops. But despite this we have flown throughout the winter.

At first sight a T-21 doesn't appear to be the ideal cross-country glider, however we can't all have Kestrels and good soaring days are too few to miss. Sunday, March 25 looked promising and the T-21 was rigged by ten that morning. Lou Frank arrived and after securing a retrieve crew, we declared North Denes (Yarmouth), donning several layers of extra clothing before pulling the glider into line.

It was at this point the two Tiger Moths were withdrawn from tugging duty because of the turbulent cross-wind, so we sat on the line, roasting gently, until at last the Commodore fanned us with cold air and started the tortuous climb to 2,000ft.

LESSON ONE

Off tow we lost height before contacting a worn out thermal that only took us to 2,500ft and as we were about two miles downwind of HB it seemed a good idea to fly upwind and find a better thermal—and here began my first lesson. T-21's don't penetrate well.

At 700ft and still only level with the site things looked black then, for no apparent reason, my co-pilot began a turn to starboard, gently muttering mysterious chants to a thermal I hadn't noticed. The turn tightened, the chanting grew louder and the green ball shot up to 10ft/sec.

The chant seemed to be a form of instruction to the thermal, to enable it to centre correctly around the glider.

LESSON TWO

This was the thermal to choose, it took us to 4,000ft (cloudbase and no turn and slip) and a position about 15 miles north of track. Lesson number two, look twice at the windsock before declaring your goal. The battle to return to track and stay aloft began and we maintained second place.

Our track made good took us north of Wittering, down to Eye, north of Wisbech, down to Downham Market and north of Swanton Morley.

Most of our flight was between 2,000 and 4,000ft, but we did have one or two low spots. We were relieved to see two or three gliders flying at Marham and we contemplated dropping in for a re-launch, but this proved unnecessary. A 20ft/sec thermal saved the day for us, carrying the T-21 to cloudbase and a position north of Swanton Morley without effort.

LESSON THREE

Swanton Morley looked very inviting. We had been flying three-and-a-half hours and it seemed longer. Lesson three, you can't wear too much clothing in an open glider.

With a short message to our ground crew, we began a final glide. My fourth lesson, never call final glide on R/T. We took two more thermals, one for more height, the other because my co-pilot refused to fly through rising air without turning. And then we only just scraped into Swanton Morley.

As we pulled the glider to the perimeter track our retrieve crew arrived and, demonstrating their efficiency, we were hustled off to the canteen for coffee and cakes. The cross-country speed of a T-21 has one big advantage—it enables the ground crew to maintain contact, or even arrive at the goal before the glider lands.

During April the HB T-21 flew to Dunstable twice, the second time with Bill May and Guy Gothard at the controls, and rounded off the month with Bill May and Lou Frank visiting Lasham.

We hope to drop in at other gliding clubs during the year, so if it is soarable and the wind is blowing from HB, look up—there may be a T-21 above.



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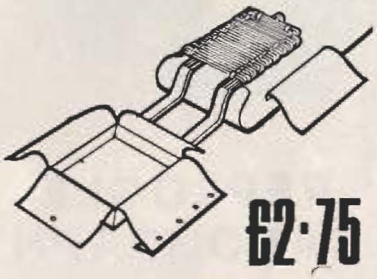
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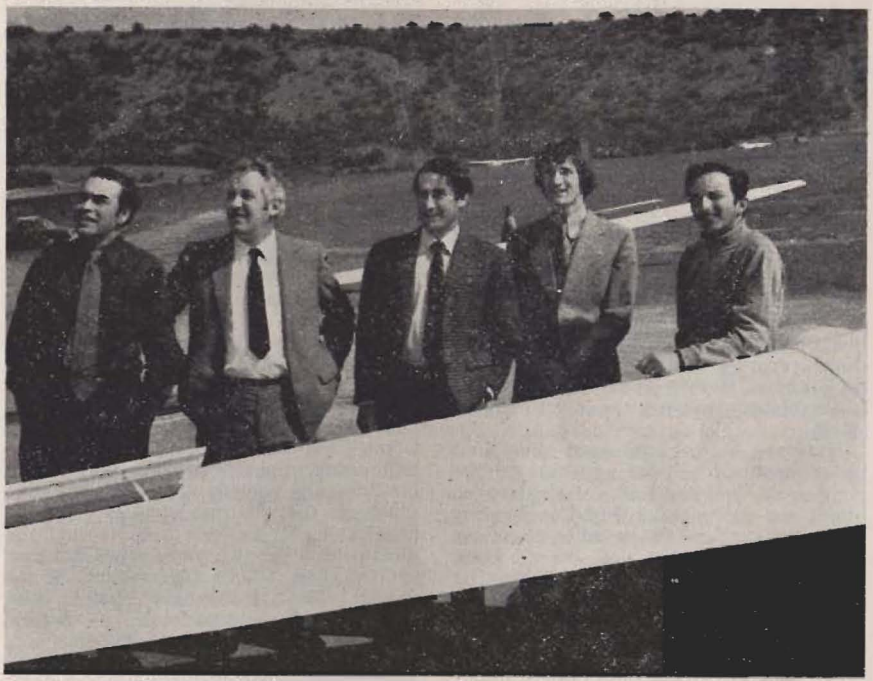
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A Look at the British Team



The British team, left to right, Roger Barrett (Manager), George Burton, John Delafield, Bernard Fitchett and John Williamson
Photo: Rika Harwood

By GILLIAN BRYCE-SMITH

JUST what takes a glider pilot from club standard into world class? It's probably an impossible question to answer but it was one of the inponderables I was trying to rout out when interviewing the British team pilots.

I leave you to make your own assessments, certainly I came no nearer, although what did emerge is their total dedication and single-mindedness. Spurred on by team manager Roger Barrett, with the Nationals weeks away and the constant challenge of the Boomerang contest, this is quite a summer for them and should be the ideal competition climate in preparation for Waikerie.

Most club members can reel off the names of the team and know the aircraft they are flying, but to the majority the four stay as shadowy figures, the elite of the gliding world who have all previously represented Britain.

Before zooming in on the team, I talked to the man behind them:

Roger Barrett

The British might live on the tradition that a sport is there to be enjoyed, who wins is irrelevant, but this isn't the image fostered by Roger.

His attitude is positive. We are going to Australia to win. But he concedes the greatest threats will probably come from Germany, Poland and the USA, although confident we have a strong, well-matched team with those extra qualities which are beyond sheer talent — willpower and motivation.

Roger elaborated: "The top pilot must

have the determination to win and the mental outlook which makes him think that coming second is to lose."

With this approach, he is certain that characteristics such as stamina are secondary.

This summer the team naturally has a rigorous flying programme, extra stimulus coming from the Boomerang 200km triangle challenge with club cross-country pilots trying to beat them by completing the distance at more than 90km/h. And Roger is persistently pressurising, encouraging and, no doubt, throwing in criticism if this will help in urging them on to improve performance.

He is still considering personally instigating a keep-fit programme—it might just be acceptable if it was possible to direct press-ups from the comfort of a deck chair. But in reality is likely to leave the team to work this out for themselves.

However, he is concerned that their major problem will be adjusting to the climate at Waikerie and for this reason hopes the Boomerang Fund is healthy enough for them to be able to arrive early. This will allow time for the team to become used to excessive heat after the British winter.

If all goes well, they should be away around Christmas and start experiencing Australia's dry thermals before the end of December.

In recent years Roger has become identified with hot air ballooning as well as gliding and finds that both sports have a curious compatibility.

While gliding will always come first, the principle fascination being its intellectual battle with conditions, ballooning has a sense of freedom and total abandonment from the usual tensions of competition. In fact so far there is no generally agreed way of measuring fairly just what makes one man better than the other at manipulating a hot air balloon.

Roger insisted that the only reason he was in the British team at the first World Hot-Air Balloon Championships in New Mexico last February was because he was well enough known in the British Balloon and Airship Club to collect sufficient votes for a place.

His vision of an idyllic summer day would be to get away in a balloon long before the thermals start—balloons dislike such climatic interruptions—and after drifting across the countryside from perhaps seven until around nine o'clock, land and take to his glider. While the cu builds, he would content himself with a 200km triangle, returning to base and de-rigging before the last of the thermals faded sufficiently for him to step back into the basket and gently float over the evening landscape.

A perfect idea, but it has yet to work out that way.

He came to gliding at the same time as Mike Bird when they both went on a course at Dunstable in 1958 and continued to fly with the London Club. Roger began taking an active part in the organisation of gliding events, flew gliders in the Alps on a number of occasions and competed in various Regionals. He once won a day at Nympswhen he claimed he frightened himself and the finish line officials so much with a marginal final glide that he decided ballooning might be a safer way to get the adrenalin flowing.

When the Nationals were held at Dunstable, Roger was the competition director and for two years was Chairman of the BGA Flying Committee. At the moment he is a member of the BGA Magazine Committee and a natural choice being a publisher of books and two magazines.

Now when not flying his Kestrel 19, ballooning about the country and worrying over the British team, Roger unwinds with another interest, music.

George Burton

George Burton comes into focus more sharply than the rest. This will be the fifth time he has represented Britain in the World Championships and as Managing Director of Slingsby Sailplanes, one of the projects he has developed is the Kestrel 19.

His initial experience of gliding was as an ATC cadet in 1948, but he didn't begin to take it seriously until 1952 in his last year at college when he joined the Imperial College Club. He said that basic enthusiasm for the sport actually came through making model gliders.

After a few years of flying club machines, he bought himself into a Petrel syndicate in 1957 to compete on two days in the forthcoming championships. And

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this was when George first made an impact on the gliding world, being placed well up on one of two days.

In 1958 he helped rebuild a damaged Olympia 2, using his knowledge and love of electronics to give it a splendid instrument panel. The following summer he entered it in the National gliding week at Nympsfield and came second.

Since then he has flown in every Nationals, as well as a number of Internationals, and part of this summer's preparation for the World Championships is to fly in European competitions.

George found his interest in competitions came as a natural progression from cross-country flying and he has always given a high degree of dedication to the sport. In fact, he rates dedication as the second most important quality of a glider pilot, with determination first and high intelligence third.

He threatens to slim as his contribution to a keep-fit programme and is sure that acclimatisation will be the major problem they have to face in Australia.

George is relatively optimistic about our chances—"I think we shall have a pilot in the first six in the Open Class" —and singles out Australia as our greatest rival.

We used a delightful photograph in the Oct 1967 issue of S&G, p413, of John Burton, George's son, sitting in the cockpit of a Dart. He is now seven and still as keen on aircraft.

John Delafield

John Delafield's second sortie in three years to the South African Nationals last December, when he claimed the British National 500km triangle record flying his syndicate owned Kestrel 19, gave a valuable foretaste of the hot, dry weather expected at Waikerie. It must also have resembled conditions experienced in Texas in 1970 when he last flew as a member of the British team.

This season he has been devoting all his free time and holidays to gliding, but admits that this presents a few problems.

"I find it difficult to do as much competition training as I'd like, partly because of club duties, such as instructing, but particularly because of the inordinate expense and time off demanded by contest flying."

But John isn't only relying on gliding practice. He puts in two weeks of cross-country running before each competition to build up stamina and physical fitness. He said it is also a quicker way of exercising the dog than taking it for a walk.

He started gliding in 1955 with the Surrey Club and later, while a cadet at the RAF College, Cranwell, and a member of their gliding club, owned a Kite 2B with Ian Strachan.

As a club instructor and BGA Examiner, John Delafield is all too familiar with the T-21 and this was the machine he first flew in a competition—the Inter-Services Championship at RAF Odiham in 1959.

From then on gliding became his main sport with competition flying "being a natural progression in RAFGSA gliding and as a perk for being an instructor. It was the one sure way of getting a good glider and the chance of some cross-country flying.

"But," he emphasised, "to maintain a high competition standard today it is necessary to give almost all one's spare time to gliding."

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When asked what he felt was the most important quality competition pilots must develop, he said he believed it to be the art of making sound decisions rapidly, even when under pressure.

John thinks that the main opposition in Australia is likely to come from the Americans and the West Germans.

"But I fully expect us to produce a World Champion in the next few years —our competition standards are rising fast and we have some first rate pilots from which to draw our team," he added.

His family's reaction to gliding is about the same as in John Williamson's household. His five year-old son Richard is very keen but seven year-old Judy is the weak link.

Her love in life is horse riding and John said he would welcome contributions to his forthcoming "Judy Delafield Pony Fund".

Bernard Fitchett

The youngest member, 26-year-old Bernard Fitchett, who flew in the 1972 World Championships at Vrsac and was the National Open Class Champion in 1971, believes the competition pilot has a somewhat different attitude to gliding from the average club member.

"He gains satisfaction more from meeting the challenge of and achieving a superior performance than from the joy of simply being aloft in a sailplane," he told me.

Bernard came to gliding in May 1962 having been fascinated by flying for as long as he can remember. At the time he chose gliding rather than power flying because economically it was more attractive. He joined the Coventry gliding club when it was based at the airport and he went solo in a T-21 a few days after his 16th birthday.

His father had the same ambition to fly and gliding became a joint interest. In fact he flew his father's Swallow to collect the Silver C legs and since then they have continued the family syndicate arrangement, working up the scale of high performance aircraft, now sharing a Std Cirrus.

Bernard soon progressed from Silver C to Gold, with two Diamond distance flights—a 300km out-and-return and a 500km triangle—as well as getting a Diamond height at Portmoak.

He started competition flying in 1965 and this interest really evolved "through a desire to be a good soaring pilot. Of course," he added, "a competition is the only way of measuring one's relative skill.

"But I think the personal qualities needed to become a glider pilot are exactly those required to become a safe driver of a motor vehicle."

Bernard is in no doubt that to become a top class glider pilot, as in any other field, means dedication.

"Other interests definitely have to be pruned. Those I have are devoted mainly to developing useful skills."

With the National Championships taking two weeks and the extra time given to soaring this summer, he isn't having a holiday this year. While Bernard doesn't think it vital for a competition pilot to have flexible working hours to reach the top, he is certain that flexible holidays are a must.

So far, after graduating from Oxford, he has been working in his father's building business but will shortly be articled to a leading firm of international accountants in London.

Bernard considers that probably the biggest headache of the World Championships lies in financing the team.

"Apart from this, it will be very difficult to acclimatise oneself and, for me at least, to familiarise myself with Australian gliding conditions in the time available before the competition itself.

"Having flown mainly in England, Australia will be vastly different from anything I have experienced. However, John Williamson and I are attempting to practise the 'pair flying' technique which we think will pay dividends in the predominately dry thermal weather."

Bernard was a little diffident about forecasting possible World Champions.

"At least half-a-dozen countries spring to mind as great threats to our winning but it is impossible to predict the outcome of a world championship when pilots are so closely matched and luck therefore plays an important role.

"It is, however, important to enter confident of one's ability to win, given a fair share of luck, and neither to underestimate nor overestimate the opposition," Bernard summed up his feelings of Waikerie.

John Williamson

John Williamson last represented his country in Poland in 1968 and is one of the better known of our leading gliding pilots and the originator of that valuable piece of equipment, the JSW Calculator.

The warmth and exuberance of his personality forces itself across in his writing, whether he is describing a flight or giving technical details. Thankfully, he sometimes writes for S&G and has obviously inherited the gift from his father, author Henry Williamson.

Both the John's in the British team are in the RAF, John Delafield is a Squadron Leader at RAF Cranwell and John Williamson a Flight Lieutenant at RAF Farnborough—and they share the distinction of having competed in Nationals during the depth of last winter.

John Williamson actually had a trial run at Waikerie where, you will recall, he flew a Std Libelle *hors concours* in the Australian Nationals and finished in 12th place. He counts this as his "most important bit of training" and extraordinary good luck to have had the opportunity of seeing just what was needed for next year.

Meanwhile he flies as much as he reasonably can, picking his days so far and competing at most of the Regionals at weekends.

He started gliding in 1948 with the RAF in Germany, using confiscated gliders and equipment and said he was attracted to the sport because "as a frustrated (medically unfit) aircrew aspirant it seemed a logical substitute."

For a fleeting moment it looked as though horse-riding might have claimed his interest, but gliding put out its tentacles and within the first year he gained his Silver C. From then on it was total addiction.

John has always been in RAF clubs with the exception of one important phase from 1952-56 when he was in the Army club operating at Lasham.

"Reciprocal arrangements meant that I could fly any of the fleet at 5s (25p) an hour! Being stationed, as now, at Farnborough there were also times when I could glide mid-week," he said.

It is easy to appreciate why he never felt the need to own a glider or to join a syndicate.

His second ever cross-country was on the first day of the 1951 Nationals when he flew from Camphill to Sleaford, the fourth best of the day, and also in that competition he took part in the first race to be set in the United Kingdom—a 100km triangle.

He was flying an Olympia 2B and remembers getting back much too high. "This was when I conceived the need for a means of computing height versus distance and wind etc. Even so, the JSW Calculator didn't arrive until 1958."

What makes a competition pilot? John finds the interest is always there. He explained: "The essence of gliding to me has been to pit myself against the best available, *eg* competitions and records. I think competitiveness comes from the basic personality. Some people get enough of it in their work, others burn it up in a sport."

As to the qualities needed for World Championship class, John puts stamina first.

"One must be physically fit, 'bright eyed and bushy tailed' is my phrase! So far I haven't started a specific keep-fit programme."

Other essentials, though he stressed these were not in any order of importance, are mental alertness, good organisation (of necessary gliding things at least), competitive personality, impatience tempered by good judgement and an ability to concentrate for hours on end.

He went on to speculate: "Actually I think we will win the 19m class; won't be listed in the first five in the Open but should feature in the first ten in the Standard.

"Our flying in the UK is more of an art than a science. There is little room for artistry in the hot dry places. The top places will go to those who can fly like machines, consistently."

John good-naturedly stuck his neck out further with these predictions for the winning places—Standard class, Ingo Renner, Australia; Open class, Germany; and if we don't take the 19m class, then Poland with a big question mark.

Holidays are out for this year with the exception of an annual event—a weekend sailing with his brother.

John's wife and 11-year-old son are one hundred per cent behind his gliding but his daughter, aged seven, finds it all a bit of a bore.

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MY EPIC FLIGHT, OR GLORIOUS GAWLER—Part 2

By RHODA PARTRIDGE

IF you read Glorious Gawler part 1 you will know a bit about the Adelaide Soaring Club flying from Gawler, South Australia. Now I'll tell you about two cross-countries.

On February 13 Gordon Redway, weekday CFI, said the weather looked good and I should declare 500km out-and-return to Yanyarri. Peter Thomann declared it too. He had just come second in the Sports class at their Nationals and is a really good pilot.

The Pawnee-235 was away having its 100hrs check so we took off on autotow. (They are buying a second tug). I'd never done an autotow with a glass-fibre ship and was delighted by the way the Libelle flew.

I failed to stay up the first time, then scratched about in one or two knots for nearly an hour after the second launch before I made a painfully slow creep up track. I discovered later that another pilot who had declared Yanyarri found the first bit so disappointing that he turned back after a couple of hours.

I made a miserable time and got to Jamestown at 3.30pm. I called Peter and he said it was even worse further north, he would try to turn at Yanyarri but was very low. If I was going home, please would I come on his retrieve?

At the speed I was averaging I calculated I would be back at Gawler at 10.15 by moonlight, so I turned at Jamestown and crept off home again. I didn't find that 311km very easy at all.

No retrieve. Peter, following a number of alarms and clawings back to cloudbase, landed triumphantly back at Gawler with his 500km achieved just as the sun was going down.

The synoptic chart looked good on February 16. A high tracking east, centre gone through and a northeasterly to bring hot (and I mean hot) air off the roasting plains. Fortunately Peter's photographs had been developed so I could see what the turning point looked like. A small bungalow, a couple of shacks, a Y of dirt roads and a creek marked by a wriggly line of bushes. Personally I prefer something more positive like the Eiffel Tower.

I took off at noon and it was pretty scratchy. I didn't get away until 12.45 and it improved to a reliable six knots with the odd burst of eight. Cloudbase was 5,500ft. I'd got reasonably used to this crazy dolphin swooping, but it's hard work and you don't half bang about.

Although I reached Jamestown in good time, the next 50km weren't so easy and the ENE wind became more noticeable as the thermals got more difficult. By three o'clock I was feeling tired, cross and wondering why the hell I subjected myself to being flung about like a pea in a rattle when a beautiful wedge tail eagle, burning chestnut and with an eight foot wing span (oh all right, seven-and-a-half) came and thermalled with me for a bit. That woke me up and I flew on feeling distinctly jolly.

Low over rocks. The last 50km to Yanyarri were really awful, flying over dark, hard baked, desolate highlands that looked as though the rocky ground would sizzle if you spat on it, like testing an electric iron. I got lower and lower and thought I would have to land at the turning point when I came tip-toeing back, scratching away at every little puff of lift and thinking "there, that's saved my crew a mile or two."

When I was back to Jamestown it suddenly improved and cloudbase was way up at 9,000ft, but there were not many clouds and it was getting late. I had marked the map for final glide, right up to 9,000ft and I was about 20 miles from the spot, climbing carefully and looking unbelievingly at an enticing fat cloud sitting over the said spot.

In a matter of minutes the fat cloud started to look ill, disappeared altogether and took all the other clouds in the sky with it, leaving what some people would call a beautiful evening.

I flew on, gently, knowing I'd have to land out and hoping I'd do it nicely and not hurt their lovely Libelle. I found a big stubble field, flew all round it, peer-

ing anxiously, did a copy book circuit and touched down impeccably at 8.15pm.

Trembling with relief I got out and then realised I had been concentrating so hard on the field I hadn't a clue where the nearest house was and didn't even know in which direction to start walking. Within minutes a car came over the stubble and a surprised driver took me to a farm to phone.

The farmer (a widower) asked "Where are you from?" and I said "The UK". His reply: "Another bloody Pom! Dropping out of the sky now."

Quite a meal. He was wonderfully hospitable and cooked me one of the best mixed grills I've ever tasted. His home-produced meat—"we send the rough stuff to the butcher"—followed by fresh peaches and cream from the farm were washed down by great comforting draughts of beer, ending up with a really distinguished port (30 year-old Yalumbra Galway Pipe).

When my crew came we de-rigged by bright moonlight with the Southern Cross on the horizon and a soft warm breeze. I felt really good and not a bit disappointed by my failure. Just astonished and delighted that I had got so far—425km. It wasn't only the alcohol either. I still feel that way.

Some figures about cross-country flying in Australia. In 1972 there were about 4,600 solo pilots and 880 in training at 77 clubs. There were 63 300km goal flights and 25 500km flights for which badges were claimed.

From Gawler there were 44 300km flights in 1972 and one flight of 520km. These figures are for flights, not necessarily all for badge claims. There were 250 cross-country flights with 39,000km covered (still from Gawler) giving an average of 156km per flight. The longest flight from Gawler in 1973 was 792km.

Does this give you a clearer idea about cross-country flying in Australia? I suppose that by having done three good cross-countries from Gawler I have just reinforced the "any fool can do it in Australia" attitude.

The truth is, you need to be lucky. January and February are their best months and I'm told that November can be good too.

The ab-initio training at Gawler is impressive and so is their post-solo and cross-country training. They have two K-13s and a Falke for dual flying and will take a big step forward when Harry Schneider's glass-fibre high performance trainer is flying.

Harry, who designed the Super Arrow and the Boomerang, showed me the drawings and male mould and he has hit it exactly right, 17½m, side-by-side, conventional tail, retractable wheel, 36.2 to one. It is just what is needed as a lead-in to the first solo in glass-fibre and absolutely ideal to teach speed flying on cross-countries.

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My last week at Gawler was very stable, no more dashing off on cross-countries, so I did a bit of training with Gordon including a double hook-up, being brought down behind the tug and landing with the rope on. We did touch and go the first time and came to a stop in the second time round. It was astonishingly simple and unalarming.

I spent my last evening in Adelaide with the Salisbury's and Harold was talking nostalgically about ridge soaring at Sutton Bank on beautiful June evenings in the open T-21 with the scent of bluebells rising from the ground.

It made me a bit thoughtful. Rocketing through the sky, strapped down tight in my sealed capsule, beady eye glued to MacReady, hadn't I lost a bit?

It's certainly exhilarating the way the country streams away under you. I love the split second precision of the controls, a long flight gives you a marvellous feeling of achievement, but let no one call it peaceful. Who's for an open T-21 in bluebell time?

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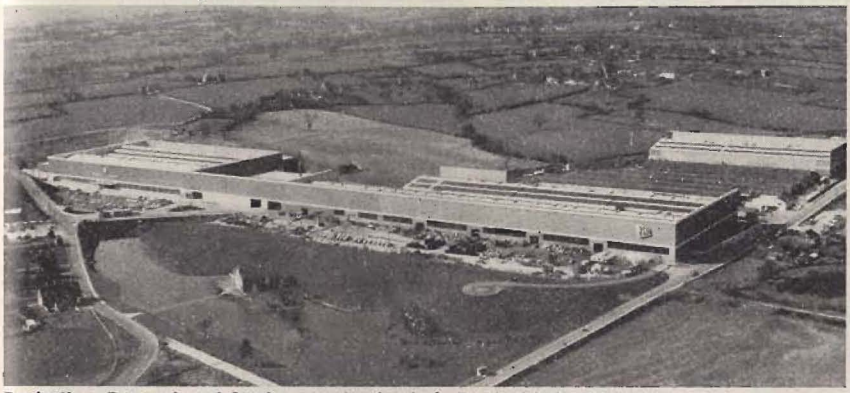
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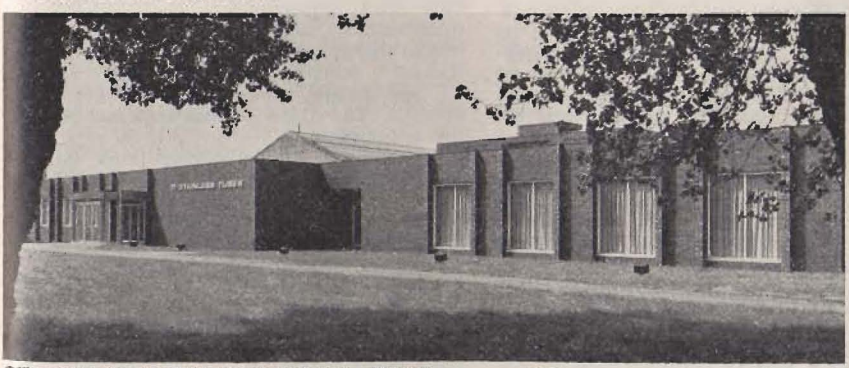
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ROGER BARRETT takes a look at gliding and suggests an event with a difference — a positive way of bringing back some of the adventures and romance.

FAIRNESS versus FUN

I SOMETIMES wonder what makes people take up gliding these days. For me, in the late 1950's, Terence Horsley's "Soaring Flight" and Philip Wills's "On Being a Bird" were the triggers that sent my imagination soaring off to join Philip in his Rabelaisian upcurrents and his Rubens clouds, while the more prosaic me drove an old Morris Minor up the A5 to Dunstable where I hill scraped at 500ft in a T-21.

But where nowadays can you find their kind of lyrical descriptions of the sheer joy and wonder of being able to fly like a bird?

Look again at the last S&G. It is full of excellent advice: for beginners who are going bungeying or are flying cross-country for the first time, for pundits who are finding their latest glass jobs something more than a handful, and for anyone thinking of taking up instructing.

Then there's a gentleman with some graphs who wants to refine the handicapping system just that little bit more —chasing after the rainbow's end of ultimate fairness. But if you persevere there, on a couple of pages, you will find a hint of what I've been looking for: Rhoda Partridge has done her 300km at last and has, as usual, actually enjoyed her flying!

Romantics and Moderns. It was Tony Ryan's reflection in this same issue ". . . somewhere along the route gliding has lost its sense of fun and adventure" and Philip Wills's remarks about "Romantics" and "Moderns" in his new book "Free as a Bird" that halted me in my tracks. Could it be true that modern competitive gliding is set on a course that leads to more fairness at the expense of fun and adventure?

There are certainly some warning cones around. One Regionals this year was cancelled for lack of support, and the Husbands Bosworth Nationals very nearly went the same way. Perhaps it is true that Organised Competitions no longer give the majority of cross-country pilots what we are seeking from gliding?

Philip Wills certainly thinks so. At precisely the same time as the BGA has abolished all distance tasks (except Cat's Cradle) in British competitions he writes:

"Now the measurement of performance on a free distance flight is superficially easy—you can persuade yourself that if Smith flies 100 miles and Jones only 50 miles, Smith should get twice the marks. But since the last war, for various good and some not-so-good reasons, distance flying has increasingly given way to speed flying over a set course. How does one fairly equate Smith, covering the course at 40mph, against Jones who only achieves 20mph?

"The whole fallacy at the heart of this subject is the pretence that you can accurately measure something which is only very approximately measurable—pilot skill. A marking system presents one of the most remarkable of confidence tricks—it actually persuades highly intelligent people that it can do the impossible, and these people then act on this assumption.

"At the end of the competitions, out of a total possible 7,000 marks, Smith may come tenth with 5,000 marks and Jones ninth with 5,005 marks. People really believe that Jones is 0.1 better a pilot than Smith—whose future gliding life may be substantially affected by this piece of nonsense.

"As an example, on a race day the most skilled pilot may achieve the goal, but only after a long slow struggle, when another less skilled one lands short, rushes back for a second start, the weather unexpectedly improves, and he covers the course which has now become easy, more rapidly than his competitor. So the marking systems announces that he is the most skilled.

"Now your Modern will say of such a day 'I had much rather we had not flown at all', whilst the Romantic will

say 'Nonsense, it was a lovely day, full of beauty and interest. I am a better man as a result of it, I have learnt a little more, I came here primarily to fly. If a bit of bad luck crept in as far as I was concerned, it will cancel itself out'."

A backward step? Now the Moderns will say Philip Wills's suggestions (keeping free distance and open-ended tasks, pilot-selected starts, second launches after outlandings, but throwing away the thermal snifter) are all backward steps. And of course they are right—if you accept the criteria by which they judge any new idea. Does it help to eliminate chance from gliding so pure pilot skill can be more effectively measured?

Have we got here the glimmer of a solution to our dilemma? Surely the reason there are disagreements between the Modern and the Romantic is because their objectives are different?

The latter puts as a top priority the kind of gliding that gives fun, adventure, colour and romance and, though Philip Wills seems reluctant to admit it, logically he ought not to be at all concerned if a Meet for Romantics produces a results list most pilots think is an unfair comparison of pilot skill—because that's not what the Meet set out to measure.

Just because we accept there is a street well worth flying down that starts at Regionals, involves fairness, handicapping, grid starts, flying triangles in the best few hours of the day, and ends at a World Championships it ought not necessarily to rule out another parallel street that has some good cu down it but looks rather underpopulated at the moment. This one leads nowhere in particular because the means of getting there are more important than where you end up. If we start off by saying we will not worry about finding a fair winner it all becomes a lot easier.

So why doesn't someone organise an Open Meet for Romantics in 1974? It would not be recognised by anybody for entry into Nationals but it would set out to give pilots some fun and adventure.

Tasks would be set so that wave might be picked up over mountains and valleys; we might even see the sun setting over Snowdon, Exmoor or the Cuillins from our cockpits. It could be that somebody would keep a scorecard and there might be a winner.

But if the Meet had been truly successful no-one would mind very much who had won. And at the end of it all, who knows, Nick Goodhart's 1959 distance record of 359 miles from Lasham to Portmoak might have been broken, retrieve crews would have had a job to do for a change and everyone would have flown whenever they, not the organisers, thought they could stay up.

More important, someone might have had time to look out of his cockpit long enough to wonder again—about the wind, the clouds, the everchanging horizon—and to write about gliding so another generation of groundlings would be reminded that Philip Wills is right, Man cannot live by fairness alone.

If a Meet like this is to get off the ground we need to know how many pilots would like to take part. So if the idea appeals to you please scribble a postcard to me c/o S&G and we will see what can be done.—R.Q.B.

'Yarbury' Start at Buno-Bonnevaux

By WILLIAM MALPAS

WE are all looking for ways of simplifying competitions and one frequent proposal is the regatta start. During our recent series of weekend competitions at Buno-Bonnevaux (ex La Ferte Alais), France we tried this with very satisfactory results.

The day started badly and the Met was bad, but by midday the pilots were beginning to take an interest and the two-seaters were soaring. A hurried briefing at 1pm and launching began with the two available tugs.

The start was signalled when everyone was in the air by rotating a glider trailer through 90°. We knew in advance that the start would be exactly on a quarter-of-the-hour, but we didn't know exactly which quarter. At 1.45pm we were all holding close to the field near cloudbase with brakes cracked open (not the same cloud, fortunately). By 1.47pm we

were all across the line under 3,300ft and on track for the 160km triangle.

Of the 15 gliders taking part about 13 crossed within half a minute. There was no bunching because cloudbase was well above 3,300ft, and no cheating because we were obliged to photograph the trailer on the field.

There was a conveniently located Prefect circling about 4km on track, and he must have wondered what had happened when we all pounced upon his thermal (it was a good one).

I have the impression that provided the cloudbase is *at least 300ft above the maximum starting height*, the collision risk is acceptable and that as many as 25 gliders can be started safely by this method—perhaps more.

The spectators enjoyed the spectacle and the finish was much more absorbing than usual, because the first man home was obviously the winner. I'm told that several people climbed on to the top of the hangar to identify the early finishers as they came in low.

Nearly everyone was flying Standard Class glass-fibre gliders and therefore, except for one K-6 and two Edelweiss, the rest of us had absolutely no excuse for not crossing the finishing line with the winners:

1. Alain Mazalerat (LS-1), who exceeded the world 500km triangle speed record in South Africa in January.
2. Jacques Rantet (Std Libelle), winner at Angers 1972.
3. Francois Roget (LS-1), winner at Angers 1971 and member of the French National team.

More About That World Record

IN the last issue we mentioned briefly that Bill Holbrook, 51, of Cumberland, Maryland, USA had broken the world out-and-return record on May 5 by flying 1,260km in his Libelle 301 (with 70lbs water ballast). More details have now reached us about this flight from Lockhaven, Pennsylvania to Hansonville, Virginia and back. (This flight has now been homologated at 1,260.44km.)

He took 11hrs 59min, shattering the existing record of 1,095km by almost 160km or 15%.

Alerted by a forecast of ideal weather for the record attempt, Bill had an aerotow at 6.04am, releasing over the airport three minutes later under 3,000ft overcast in light snow—fortunately the water ballast included antifreeze.

The expected upcurrent from a steady 15kt wind on the adjacent ridge was reached and used for the run southwest at about 90kts. It was this combination of wind and a long mountain ridge with only a few gaps that made the flight possible.

There was some light icing on the canopy and wings initially but it didn't have a noticeable effect on performance.

He reached the gap at Altoona, Pennsylvania, about 7am where he headed upwind over the valley to find wave lift in the lee of the facing plateau. This enabled him to climb to 5,000ft and cross the gap, after which he went back to the ridge.

Clouds became more broken with higher bases as he proceeded south, the turning point being reached at noon. The booming ridge lift was now boosted by excellent thermal conditions, though faster time was made by keeping to the ridge.

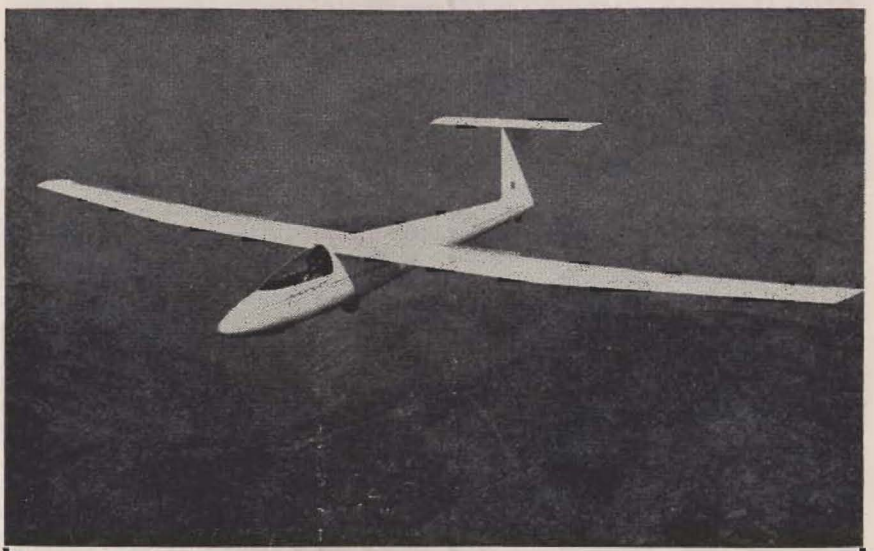
For the final part of the flight, Bill was escorted by two friends in their gliders, Tom Knauth and the holder of the existing world record for out-and-return, Karl Striedieck.

The average speed for the flight was 105km/h, although the actual distance travelled along the curved ridge was 1,310km and more than 112km/h was achieved for much of the flight.

Bill, who is the manager of flight operations for the Kelly-Springfield Co, of Cumberland, Md, has a Gold badge with Diamonds for altitude and goal and this record flight should complete his Diamond badge.

As to the Met report, the National Weather Service makes special forecasts for attempts at national and world records. For this particular flight, it was given by Charles Lindsay, a glider pilot who saw the condition developing and so advised Bill.

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Sport and Club Class Nationals
Husbands Bosworth — May 26 to June 3

By A. E. SLATER

Meteorological Notes in italics by Peter Wickham

WHAT with two Championship Classes, an International Vintage Glider Rally, and a weekend rally of traction engines and steam rollers, some of which remained immobile there for the rest of the week, the Coventry gliding club's airfield was kept pretty busy. The traction engine people had been promised a weekend before they had specified a date, and it was a coincidence that they chose this one. Luckily, their vast crowds did not intrude upon the gliders.

There were so many bad patches in the weather that only near the end did each class achieve enough contest days to make it a Championship, in spite of Peter Wickham having two meteorological assistants, Bill Cameron and Jeremy Page. Here is his summary of the whole meeting:

The Competition opened with a southerly airstream over the country. To the east there was fine weather with an anticyclone over Germany. To the west was cloudy and rather thundery weather associated with a low near Biscay. The movement of these systems was very slow during the first few days of the meeting.

Saturday, May 26

HB and areas to the south and east were in clear, anticyclonic conditions. Moderate thermals were present, with only small amounts of cumulus cloud (base 4,000ft, tops 6,000), and the thundery cloud to the west of the country was not expected to affect our area. As it turned out, the main feature of the weather was the very thick haze streaming north from London and being concentrated into a particularly thick band near the second turning point. This haze cut down the thermal activity quite severely.

Philip Wills, in opening the meeting, welcomed the Vintage Rally visitors from overseas, saying that we could not call them "foreign" any more. The various officials were introduced, including Vic Carr the task setter and Claud Woodhouse the club sercretary. It had been decided to use the points, not place, system of scoring. One or two tugs had failed to turn up, but there were enough to carry on with and more were expected later. (Incidentally, some of the tugs found it difficult to fly slowly enough to please the vintage rally pilots.)

The first task was a 180km triangle: ENE to Peterborough Cathedral, Henlow hangars, HB; that way round to forestall the sea breeze at Peterborough —the previous day it had actually reached Market Harborough before retreating again. Winds light except at HB.

The first leg to Peterborough was easy but, on turning the corner, nearly all found the thermals weakening and the contrary wind stronger than forecast. All but a few outlandings were before or around the second turning point. Thus Ted Shepherd found two good thermals after Peterborough, then a weak one, pressed on to another weak one, spent an hour over St. Neots and landed at Henlow. On the other hand, Vann, who was launched early, thought he did not press on fast enough from weak thermals. The point where things went bad, said Robertson, was halfway along the second leg. But a Henlow thermal sent John Cardiff up so high that he nearly got back.

In the Club class only St. Pierre got round, his handicapped speed being 45.15km/h. Three made it in the Sport class: Mike Garrod at 50.42km/h (handicapped), Ralph Jones at 49.33 and Tom Zealley at 45.15. At next morning's "howidunit" both winners were taciturn: St. Pierre said "It's bound to happen to



The briefing session photographed by A. E. Slater

everybody some day", and Mike said "Don't smoke".

Sunday, May 27

A disappointing day, on which the sun was seen all morning at HB but the thermals refused to pop. This was partly due to the thickening high (cirrus) cloud which spread up ahead of the thundery low in Biscay, and partly to the fresh easterly wind at HB spreading in moist sea air at low levels.

The morning being sunny, though with a hazy sky, a 212km triangle was set, Cheltenham Racecourse and Bicester, but it had to be cancelled later. Owing to someone switching off the Post Office van, there was no teleprinter Met report. Whether that led to undue optimism was not revealed.

Monday, May 28

Belts of rain, with a few bright periods, came and went during the morning as the thundery low (now over Southern Ireland) spread its effects across the country. The low pressure extended over the Midlands during the day and heavy thunderstorms affected HB in the evening and most of the night.

Peter Wickham quoted a BGA regulation that we should remain optimistic till half past twelve.

At the briefing pilots were warned that a farmer one mile SE of Sywell "is hostile and demands money with menaces".

Tuesday, May 29

A very wet day, with a slow-moving low over Central England.

Wednesday, May 30

The final fronts of the low cleared by briefing time, with convective conditions in the westerly airstream improving slowly. These improvements were not consistent, however; some brief bursts of convective activity in the middle of the day being followed by longish periods of spread-out stratocumulus cloud.

Rain postponed briefing till noon, when we were informed that, although the weather was now on the move, for this very reason tomorrow would be another wet day and the weekend would be fine. However it improved sufficiently for a task to be set: a 124km triangle via two churches at Olney and Oundle.

When the weather became promising enough, there was a hurry to get everyone off in time and the 13 Club Class competitors were launched in 14 minutes. But they all came down and although some were launched again it didn't make a contest day for that class.

The Sport Class soon found the going slow after a promising start and only five went far enough to score. R. P. Saundby,

with a scoring distance of 51.4km, reached Oundle and became the day's winner with 147 points, raising himself from 21st to 15th place overall. Ralph Jones, with a scoring distance of 49.1km to Corby, scored 141, enough to reach the overall lead with 1,135 points against the 1,000 of Mike Garrod. D. J. Robertson made a scoring distance of 48.7km, John Cardiff 24.5, and R. Hale 1.9km.

Other overall positions: Tom Zealley third with 810 total points, John Cardiff fourth with 704, and Stafford Allen (father and son, who flew on alternate days) tied with A. Hogg for fifth place with 619.

Thursday, May 31

Another weak low-pressure system made this a non contest day.

Friday, June 1

One of the best days of the year. A weak ridge of high pressure gave excellent thermal conditions over southern England. Early in the day the winds were rather fresh NW'ly, but during the afternoon they dropped right away and only over-convected conditions in central England stopped it being outstandingly good. Thermal strengths were reported up to 6-8kt in the afternoon, with cloud base around 5,000-6,000ft.

The Sport Class was given a 312km triangle, Pangbourne and Nympsfield, and the Club Class a 236km out-and-return to Nympsfield. After they had all been launched, there was plenty of good weather for the vintage gliders to fly to Dunstable.

The Sport Class went first and there was some question whether Ralph Jones had beaten the British record for a 300km triangle by going round in 3hrs 26mins, because each leg has to exceed 28% of the total distance, and from Pangbourne to Nympsfield is just on the borderline. It would have been all right if Booker had been chosen instead of Pangbourne, but the Booker route would have suffered from airways trouble. Somebody suggested using the naval method, which takes into account the earth's curvature, instead of measuring the distances on a map; but I should have thought this would only make matters worse, because it would lengthen the long legs more than the short leg.

Mike Garrod won in the Sport Class with a handicapped speed of 70.16km/h, putting him in second place overall with a total of 2,000pts; while Ralph Jones, second best with a handicapped speed of 67.34km/h, retained his overall lead with a total of 2,074 points in three days. Other overall positions were: the Stafford Allens third with 1,402 total; D. Bowden fourth, 1,364; and E. Shephard fifth, 1,298.

In the Club Class C. Rollings won at a handicapped speed of 55.38km/h and jumped into second place overall; Ian Strachen averaged 54.11 with motor shut off, and A. St. Pierre, with 51.95km/h, retained his overall lead with 1,884 pts. Charles Ellis, with his Skylark 3 handicap applied, nearly equalled this with 51.79km/h, and K. Kiely, fifth at 51.27km/h, reached third place overall.

Saturday, June 2

A bright start to the day, but a weak occluded front was moving slowly towards the Midlands. Moderately good convective conditions ahead of this front allowed some aircraft to go away on the task, but most found the thermal conditions too weak to counter the fresh cross-winds on the first leg. Soon after midday the conditions at HB became overcast and no further departures were possible. Of those who had got away, the majority had a tough job flying into wind on the first leg, but thereafter there were few troubles.

Both Classes had a crooked course of 192.25km via Henlow and Downham Market Station to Swanton Morley. The rainbelt, Peter Wickham said, was approaching more slowly in the south than in the north. It was not a warm front but an occlusion.

In the Sport Class seven got to Swanton Morley and four scored for distance. In the Club Class six got there and one scored for distance.

Fastest for the day was Ralph Jones with 67.58km/h (handicapped), which earned him the maximum day's points of 527 and kept him well in the overall lead with 2,601. John Cardiff came second at 53.23km/h and lifted himself from 20th to tenth place overall. Mike Garrod, though in second place overall, only scored for 7.78kms distance. D. Bowden,

in third place overall, jumped to it from 4th place by making the longest distance without getting there: 134.78km handicapped.

In the Club Class C. Rollings, by winning at 47.7km/h, raised himself from second to top place overall, and C. Waller, second with 41.06km/h, was in second place both for the day and overall.

Sunday, June 3

A mixed bag of convection today with a fresh W'ly wind; thermals likely to become moderate or strong at times during the afternoon but complications by way of spreading-out and some showers expected.

The final task was out-and-return to one of three alternatives: Barton Mills Road junction, Newmarket railway station, and Saffron Waldon railway station (which, somebody said, is defunct, so the neighbouring cemetery was used instead). There had been so few task days that it was thought best to give a good task and postpone the prize giving. But, as no daily report of results could be issued, and nobody seemed to know where anybody had landed, you will have to consult the big table of final results. In the Sport Class A. T. Farmer won the day, and Ralph Jones became Champion. In the Club Class, J. A. Welsh won the day and C. C. Rollings became Champion.

Final Results Sports Class Pilot	*H'cap* % *Sailplane*	26.5 1000	27.5 147	1.6 1000	2.6 527	3.6 1000	*Total Points*
1 Jones, R.	74 Nimbus 2	994(2)	141(2)	939(2)	527(1)	784(5)	3385
2 Garrod, M. P.	88 ASW-15	1000(1)	0	1000(1)	19(10)	844(4)	2863
3 Farmer, A. T.	74 Kestrel 19	290(20)	0	697(8)	426(5)	1000(1)	2413
4 Hill, M. B.,		—	0	—	0	—	
Winning, E. J.	88 Std Cirrus	491(9=)	—	680(10)	—	965(2)	2136
5 Bowden, D.	88 Std Libelle	491(9=)	0	848(3)	334(8)	391(13=)	2064
6 Lilburn, D. W.	88 Std Libelle	446(12=)	0	632(13)	284(9)	668(7)	2030
7 McLuckie, R.	74 Kestrel 19	542(7)	0	693(9)	399(6)	280(18)	1914
8 Shephard, E. G.	88 Std Cirrus	491(9=)	0	807(4)	0	605(9)	1903
9 Stafford Allen, R. C.,		611(5)	—	791(5)	—	—	1852
Stafford Allen, P. R.	88 Std Cirrus	—	0	—	0	450(10)	
10 Harrison, K. A.	88 Cobra 15	446(12=)	0	205(17)	443(3)	734(6)	1828
11 Hale, R. J.	88 Std Libelle	296(18)	5(5)	773(6)	436(4)	274(19)	1786
12 Robertson, D. J.	74 Kestrel 19	388(16=)	138(3)	579(14)	0	541(11)	1646
13 Cardiff, J. D.	88 Cobra 15	664(4)	70(4)	107(20)	453(2)	309(17)	1603
14 Hogg, A. J.	88 Std Cirrus	611(5=)	0	646(12)	0	312(15=)	1569
15 Saundby, R. P.	88 Std Cirrus	283(21)	147(1)	168(18)	0	911(3)	1509
16 Simpson, C. R.	74 Kestrel 19	388(16=)	0	478(15)	3(11)	613(8)	1482
17 Vann, E.	84 SHK-1	418(14=)	0	477(16)	363(7)	195(20)	1453
18 Fay, F. W.	88 Std Libelle	295(19)	0	735(7)	0	391(13=)	1421
19 Nicholas, A.	84 Phoebus 17	418(14=)	0	675(11)	0	193(21)	1286
20 Zealley, T. S.	74 Kestrel 19	972(3)	0	DNF	DNF	DNF	972
21 Lyndon, R. J.	88 Std Libelle	532(8)	0	126(19)	0	312(15=)	970
22 Chinn, G.M.	88 Std Libelle	271(22)	0	44(21)	0	434(12)	749

Figures in brackets denotes daily placing. DNF=did not fly.

Final Results Club Class *Pilot*	*H'cap* % *Sailplane*	26.5 1000	1.6 1000	2.6 620	3.6 1000	*Total Points*
1 Rollings, C. C.	94 K-6E	611(4)	1000(1)	620(1)	972(2)	3203
2 Welsh, J. A.	94 K-6E	421(10)	807(7)	477(6)	1000(1)	2705
3 Waller, C. J. N.	94 K-6E	784(2)	694(13)	546(2)	384(11)	2408
4 St. Pierre, A. H. G.	94 Pilatus B-4	1000(1)	884(3)	0	475(8)	2359
5 Kiely, K.	94 K-6E	644(3)	862(5)	0	752(4)	2258
6 Strachan, J. W.	96 SF-27M	498(7)	957(2)	538(4)	175(14)	2168
7 Torode, H. A.	94 K-6E	387(13)	751(10)	499(5)	515(6)	2152
8 Seth-Smith, M. P.	94 K-6E	434(9)	763(9)	0	926(3)	2123
9 Dickson, W. W.	94 K-6E	400(12)	744(11)	544(3)	428(10)	2116
10 Brindle, G. F.	94 K-6E	485(8)	700(12)	302(7)	468(9)	1955
11 Oulds, T.	94 K-6E	535(5=)	781(8)	0	497(7)	1813
12 Sharman, R. C.	94 K-6E	535(5=)	811(6)	0	404(12)	1750
13 Ellis, C. A. P.	100 Skylark 3	414(11)	880(4)	0	211(13)	1505
14 Jarvis, H. R.	102 Olympia 463	367(14)	32(14)	0	578(5)	977







EARLY BIRDS

Petrel (top left); Kite (top right); Minimoa (bottom left)

THE Vintage Rally at Husbands Bosworth from May 26 to June 3 showed that vintage sailplanes have become an established cult—and not only that, but an international cult. Considering that 7,000 people turned up at the Vintage Traction Engine Rally at the other end of the airfield during the first weekend, perhaps it is just as well that vintage gliders have not yet caught on with the general public.

Chris Wills is to be congratulated for collecting so many participants and firing them with the enthusiasm that induced them to come, especially from overseas.

All the entries showed their owners' pride in getting them into beautiful condition, and probably none could have put in so much work as Max Müller did on his Minimoa, the winner of the Concours d'Elegance prize awarded on the last day.

This machine was found in a delapidated state at a French gliding centre by Rainer Willeker and a friend, and brought back to Germany. Herr Müller of Münster University rebuilt it with financial help from ten enthusiasts who subscribed 150 DM each (about £20). He started gliding in 1927 and since then has flown 10,000hrs.

A later German arrival was a Goevier from Freiburg. The name of this side-by-side two-seater means the fourth design by Wolf Hirth's factory at Göppingen.

The other two overseas entries came from Switzerland: a Moswey 3 by Willi Bischif and a Spalinger 18 by Willi Schwarzenbach, built in Switzerland in 1944 and 1945 respectively. Both had forerunners which flew in the first International Contest in 1937, namely, Moswey 2 and Spalinger 3.

Seven entries were German types imported into England. These included two more Minimoas. One, flown by Chris Wills and others, was made about 1937 and had full airbrakes fitted by Hirth in 1939. The other was brought from Germany four years ago, as it was likely to be destroyed there; it was restored by Ken Fripp of Southdown Aero Services and is owned by John Coxon of Lasham. About 110 machines of this type were built between 1936 and 1939, but only four are believed to be still in existence.

Another Goevier, stated to have been built by Hirth in 1951, was brought by Ken Crack of the London gliding club.

A Rhönbussard flown by Joan Price at Cobham's air displays between 1937 and 1939 was greeted by her with much affection when she visited the rally during the last weekend; it was owned by the late Frank Foster after the war and brought by Graham Saw of Wycombe Air Park.

Of three Weihes, two were built in







First International Vintage Rally

BY A. E. SLATER illustrated by photographs he took at Dunstable and Camphill before the war of the type of gliders seen again at this event.

Rhönbussard (top right); Grunau Baby II (top left); Gull (bottom right)

Sweden in 1943 and only one in Germany. The latter was flown across the Channel from Redhill to Brussels in 1948 and then by John Williamson to nearly 30,000ft in 1958.

Three of the Grunau Baby type were entered, built before 1945, presumably in England. One was flown by Roddy Morgan of the Kestrel gliding club, who is now rebuilding a Rhönsperber. An Olympia was also in evidence, though not on the entry list.

Of British designs eight were entered. A Gull 1, the only example of its type still airworthy, was flown by Tony Smallwood. A Viking made by Scott Aircraft of Dunstable, was flown by Lou Glover of the Coventry club. The Viking looks rather like a Rhönsperber with straight wings; but the Petrel, flown by Ron Davidson, is admittedly a Rhönadler with bent wings. Both types came out in 1938-39.

The Kirby Kite is a 1935 design, but this one, flown by Derek Ashman of the Enstone Club, was specially built for radar trials in 1940, and is all of wood, including the control rods, to test its reflectivity.

Post-war British types represented were: two of Sky type, one, the prototype, flown by Brian Combes of Lasham, and the other by Ken Brett of Sleap Soaring Group; a Skylark 2 of 1955, with laminar wing, flown by Doug Birch, Stephen Evans and Alan McLellan of Sleap Group and the T-21 two-seater, owned by four members of the Coventry club.

The Vintage Rally, held simultaneously with the National Championships in the Sport and Club Classes, held its own briefings an hour later, and got itself launched after the championship competitors, and at any other time of day when tugs were available. Cross-country tasks, of lesser distance than those of the championships, were usually suggested, such as to Old Warden, where vintage and veteran aeroplanes are on show.

The outstanding day for cross-countries was Friday, June 1, when Dunstable (72km) was set as the goal. All three Minimoas got there, and a Weihe flown by Chris Wills. The Moswey took 88min and the Petrel went there and back in spite of its poor penetration; the Petrel came back against the wind faster than it had made the outward journey, owing to some beautiful cloud streets, while the Spalinger did still better by going there, coming back, and going there again, all without any intermediate landings. This flight of more than 225km compared well with the National's 200km triangle for the day. The T-21, with Lou Frank and Guy Gossard aboard, bypassed Dunstable and went on to the east coast.

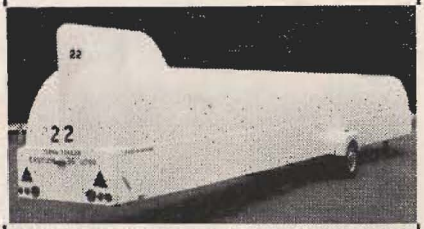
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Comments by Christopher Wills

Summing up the rally, Christopher Wills said that it was only possible to fly on five of the eight days. The weather was often most unsuitable for casein glued gliders, particularly the severe rain storms and strong winds.

Second in the Concours d'Elegance was Graham Saw's Rhönbussard from Wycombe Air Park with the Spalinger 18 third. The Spalinger's pilot, Willie Schwarzenbach, also received a prize for the longest distance flight of the meeting, as did the pilots of the Husbands Bosworth T-21 who attempted cross-country flights on every possible occasion.

The only machine to be slightly damaged was the Swiss Moswey during derigging in a high wind. But despite the bad weather, the impression was that the rally had been a success and apparently efforts were made to get many more old gliders ready in time to take part. In fact there would have been at least four more entries from abroad had the cross-Channel fare for glider trailers been cheaper.

The Outcome

There was an official dinner with Christopher Wills and Dr A. E. Slater as guests of honour during which it was talked about forming a vintage glider club. This idea has quickly been accepted and the Vintage Glider Club of Great Britain is now launched with Christopher as the President.

The aim is to encourage the preservation of worthy gliders of the past, particularly by the ownership and active flying of these machines, Rallies are being organised several times a year, both in this country and occasionally abroad, and cross-country tasks will be set when possible.

A news letter is to be sent out three or four times a year giving details of events, information on vintage gliders and details of local groups.

The Club's first rally is at the Doncaster and District gliding club from August 3 to 6 and there will be a veteran-vintage weekend at Booker on September 29-30.

Owner or associate membership is available. Details from Mrs Frances Furlong, Otford House, Otford, near Sevenoaks, Kent. Tel. Otford 3277.



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READING A WEATHER MAP

This is the second of three articles written by ANN WELCH for the pilot with relatively little cross-country experience. The last of the series will be "Foreseeing a Collision".

NO weather map can guarantee a soaring day, but the best thermals of the year could be missed if you don't know how to get information from it. Not everyone is looking for 500km, more pilots use weather maps—surname synoptic charts—to find if the wind will be too strong for solo, or visibility too poor for Silver distance.

The trouble with charts, even the good ones, is that they supply only general data. The customer, however, wants both specialised *and* local information; you hope for thermals while the farmer looks for rain on his land. It stands to reason, therefore, that charts must be complete, up-to-date, and accurate so that they contain enough basics from which all concerned can extract the information for their purpose.

This is why charts covered with cherubs and umbrellas are useless—they are just anonymous second hand interpretations with the facts removed. The BBC TV 1800hr forecast is good, but spoils an otherwise excellent chart by invariably omitting pressure values, and by having the nice forecaster stand in front of the Western Approaches—that bit from where tomorrow's weather frequently comes.

The Times is cunning in that it produces only forecast charts and never shows what actually happened. They are also undated, so if you keep one for your Silver distance happy memories, remember to transfer the date from the top of the page. *The Guardian* maps are on just too small a scale, and this applies also to the otherwise very useful *Sunday Express* Atlantic chart.

The Daily Telegraph is good in that it gives an actual chart of the whole Atlantic area and a forecast chart of the British Isles. Not only is it possible to see better how the weather is changing, but by looking at the actual with the previous day's forecast, you have a sort of reliability guide. This is not to criticise the forecaster; it is just that while some weather situations are predictable others behave in a highly temperamental manner and it is helpful to be forewarned.

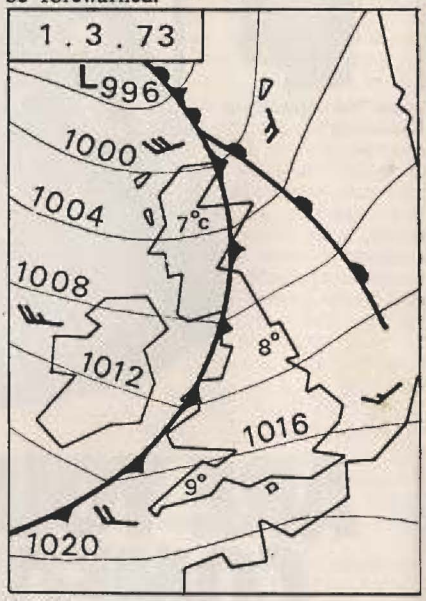


Figure 1

It is no problem to pick up superficial information from a chart. For example, you can see at a glance that on March 1 (figure 1) there was a cold front lying across Western Britain, with a weak warm front ahead over the North Sea. N of Scotland the faster moving cold front had caught up with the warm, and they had become occluded Isobars — connecting places of equal pressure—show that this was 996 millibars towards the centre of the depression well N of Scotland, becoming steadily higher, reaching 1020mb, off Cornwall. The average, "standard" pressure of 1013.2mb lies across the Midlands. In the North the

isobars are closer together, this steeper pressure gradient giving strong winds. In the Channel the gradient is slacker and so are the winds. Temperatures range from seven degrees centigrade in the North to nine degrees centigrade in the South. Easy; but the radio already gave all that.

We want to know what the sky is actually going to be like.

Types of cloud

Look again at the isobars in figure 1. These show air pressure, but they also tell you about temperature and the amount and type of cloud, because the behaviour of pressure and temperature are interconnected. If the pressure of a chunk of air increases so does its temperature without aid from any outside heat, (remember pumping up that bike tyre?). If pressure lowers so does the temperature; and the amount of dampness air can carry in the form of invisible water vapour also depends on this temperature. The warmer the air the more water vapour it can contain, and the lower the temperature the less.

When air is increasingly cooled there comes a point when it cannot continue to carry all its moisture and so it throws some out, by the processes of condensation, as tiny water droplets. This is cloud. So when pressure rises, or is raised, the temperature will rise, and there will be a reduction in cloud, because the air is able to contain, or evaporate, moisture. If the temperature is really high the quantity of moisture contained may be vast, as is only too apparent when it gets flung out by a thunderstorm. When pressure falls the temperature falls and cloud will increase, as water vapour condenses into visible cloud droplets.

So what starts this process? Our thin atmospheric blanket would much prefer a steady state of higher pressures and temperatures at the surface, both reducing with height up to the stratosphere. However due to such confusions as the rotation of the earth and its seasonal travels around the sun, plus the cold of the Poles with equatorial heat sandwiched in between, it is never able to achieve equilibrium. Instead, vast chunks of air of different pressure, temperature and humidity are constantly on the move both vertically and horizontally. Warm air meeting cold will float up over the top, its pressure and temperature falling and cloud developing. Elsewhere air will be sinking back, increasing its pressure and temperature and evaporating its cloud. In addition, of course, air has it's temperature altered by external heat sources—like cold sea air moving over sun hot ground—which has to be taken into account.

Returning to figure 1 which shows the depression. This is an odd name in some ways because although the pressure is depressed, air is, in fact, going *up*. Ahead of the warm front it is rising gently on a massive scale over the cooler air ahead of it and is, therefore, producing cloud—quantities of drab amorphous stuff over a huge area, perhaps 50,000 sq miles. The front line on the map is only where the warmer and cooler air is finally in contact at ground level, figure 1a.



Figure 1a

Where the cloud becomes thick enough and the air in it cool enough, rain will fall. Following the warm front, pressure steadies and so will the cloud. If the sun is high and the air reasonably dry it could be a good soaring day, but if the sun's heat is weak and the air moist, the

sky will probably be covered with complete or patchy stratus or strato-cumulus. The following cold front occurs where cool higher pressure air is pushing along under warmer, (or less cold) air. It not only cools the undersurface of this air but pushes it up, lowering its capacity to carry moisture. The cold front is a more aggressive animal than the warm; the cloud it produces over a narrower belt may grow high and fast, and the rain that falls from it is heavier. Cold fronts with a wide disparity in temperature produce a highly unstable situation with hail. Figure 2 shows quite a different situation with a High, or Anticyclone, over Britain.

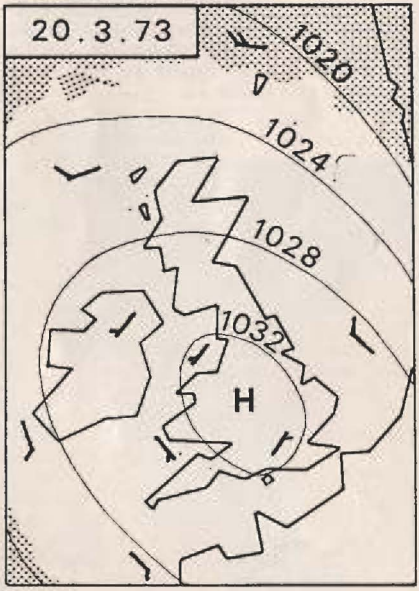


Figure 2

Capacity increased

With our simple approach it will be apparent that cloud in any quantity will lessen towards the centre of England as the pressure rises steadily towards the centre of the anticyclone. As air subsides into the system from high levels its pressure, temperature and capacity to carry moisture are increased—and so the sun must shine. But the very subsidence of this air can create a situation where the temperature is higher in the medium levels than in the lower, and this puts a lid on air expanding upwards—which is the normal way in which pollutants escape. Under such an inversion they are trapped in the lowest levels, and by the time an anticyclone has persisted for several days the visibility may have become unacceptable for flying.

So far we have considered depressions and anticyclones like fixed furniture, but they are, of course, moving and developing or dying all the time. Not only will their pressure, temperature and humidity be affected by these changes, but modified also by the surface over which the air passes.

Figure 3 shows, on March 22, a vast High from the Azores to the Urals. The pressure gradient is slack, the area generally windless, but the High is not intense, only 1024mb. There is therefore likely to be sunny weather without much haze, so NW Europe and S Britain will warm up during the day. However NW of Britain an occluded front, clearly a frustrated depression, is being pushed around the edge of the High. The front symbols, on both sides of the line, tell of a wide belt of substantial cloud trailing along and accompanied by strong winds with the sting in its tail of a new Depression; so what of tomorrow?

Well, the central pressure of this Low is lowish at 992mb, so it may have some success in shoving the weak anticyclone out of its way. If it does it will probably track fast across Scotland. Cloud will increase, not only because pressure will be falling but also because the damp Atlantic air will be forced upwards as it reaches mountainous land. The substantial cooling of such large quantities of sea air spells capital R rain. Southern Britain may still be warmly influenced by the High but as pressure will then be falling, increased cloudiness must be expected. The problem with trailing fronts occurs if the High collapses more quickly than anticipated. With little warning the line of cloud and rain sidesteps into the weakened region and pours rain on to a forecast dry day.

Cloud and rain

Sometimes in a Low you will find that the Met man has written the word trough on the chart and enclosed it with dotted lines. This means that pressure will lower along this line due to an up-

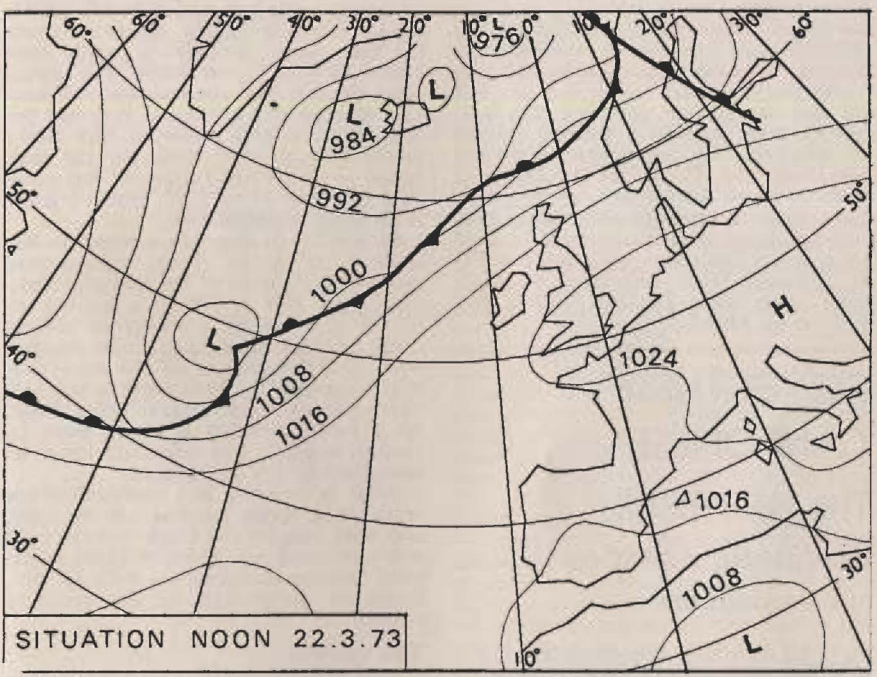


Figure 3

ward expansion of air within the existing air mass. It will bring exactly what you would expect—cloud and perhaps rain, depending on the extent of the pressure fall.

One situation that can provide a good gliding day in the middle of seemingly continuous poor weather is a *Ridge* of high pressure (Fig 4). Between depressions the compensating ridge swings the wind, usually gently, from a generally NW flow well behind the cold front through N to SW ahead of the next warm front. Pressure rises rapidly, with consequent increasing warmth and reduction of cloud; there may even be no cloud at all except for small scale convection cumulus due to local surface heating—thermals to you. Wind will veer until the peak of the ridge passes over, after which it will back, when it may be possible to see high cirrus ahead of the next Low on the SW horizon. Doing circuits you can check on the progress of the ridge from the altimeter. Set at zero airfield height it will read increasingly below zero on landings up to the peak of the ridge, then as pressure starts to fall again it will return slowly to the setting-pressure reading. If pressure con-

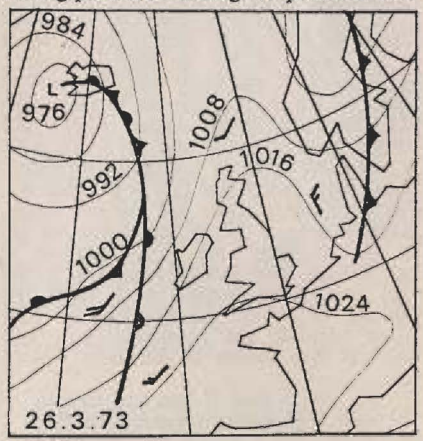


Figure 4

tinues to fall further than this, and you are not yet worn out doing circuits, the altimeter will increasingly overread on landing—showing height you haven't got.

But everything said so far is basic, and the weather is very complex. The best way to learn to read a weather map is to interpret the newspaper chart at breakfast, and check the accuracy of your diagnosis before you go to bed—daily. Study a series of charts over consecutive days; and most important of all compare them with what the real life sky actually looks like. And you will soon learn when the best gliding day will be on Monday.

CLEVER THESE CANTONESE—

The new Bohli magnetic compass

By BRENNIG JAMES

AT a £100 plus a magnetic compass has got to be good. First, the basic principles. The magnetic lines of force in this country point a few degrees west of north, they also point down into the ground at an angle of 57° to the horizontal, (as in baked beans).

In the ordinary compass the card would be difficult to read if it was tilted at an angle of 57° to the horizontal, particularly if the card was free to roll about this axis. To prevent this happening the card is suspended above the centre of the magnet and the south pole is weighted to bring the card horizontal.

For ship board use this is satisfactory, but for gliders there are various snags. Accelerations E or W cause the weight of the southern pole of the magnet to lag behind, but more important is the fact that when turning with bank, *eg* circling in cloud, the compass is confused between the horizontal axis and the dip axis which it normally cannot see.

This means that if you are circling to the right and facing magnetic north in a 90° bank, the compass will point down at the dip angle and read 360°-57°=303°. When you are facing magnetic south in the same attitude it will read 180°+57°=237°. So while the glider turns through 180° the compass will only turn through 66° and, being lazy like the rest of us, it will prefer to flick backwards through west, than all the way round so that when facing 90° the compass will read about 270°, which I guess is an error of about 180°.

In practice if you are circling to the right at 30° to 40° bank, the compass reads westerly most of the time and flicks back from NW to SW at a heading of SE. If you can fly a steady 20 second circle and can count, you know roughly what your heading is all the time; but it is unnecessarily hard work when you have so many other things to think about. As a result, centring in cloud tends to become a crude and uncertain affair of straightening out on a surge.

What is required is a compass which reads an accurate heading all the time; and until recently the Cook was the only one one could use, however many pilots have become disenchanted with its performance, particularly in the reclining cockpit.

The answer

The Bohli compass seems to answer this need very well. Basically it consists of an Alnico rod about 20mm long and about 2mm in diameter. From one end a stiff nylon thread about 40mm long with a bobble on the end consisting of a 4mm diameter sphere of polystyrene foam painted day-glow red. This unit is held in a small very neat gymbal having bearings lying in the two horizontal axes, and it is balanced so that the CG lies at the intersection of the axes.

The thread has a period of about 4cycles/second and the needle in its gymbals has a period of about 2cycles/second. From a 30° deflection, the needle settles after three or four excursions, *ie* about 1.5 seconds, however, although damping is not critical; in practice there is no exciting stimulus in the 2cycles/second band so oscillation is unlikely.

The magnet is housed in a box looking rather like a space craft (Fig. 1). The top is transparent with a cursor drawn on it, the clearance between the bobble and the cursor is about 2mm so parallax is slight. The housing is mounted on a

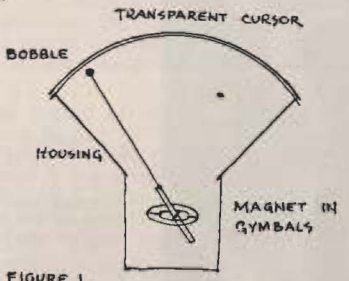


FIGURE 1

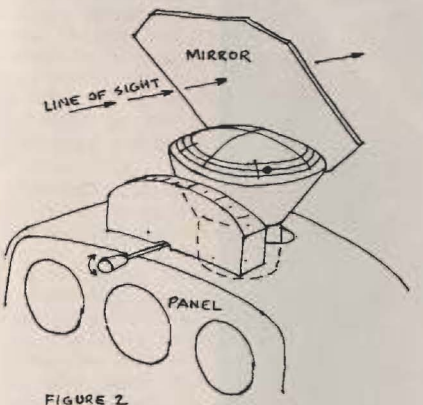


FIGURE 2

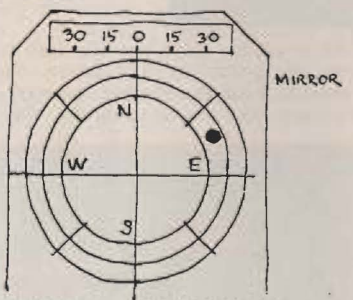


FIGURE 3 VIEW IN MIRROR

bracket screwed to the instrument panel and is free to roll about the fore and aft axis of the aircraft.

Above the housing is a mirror which looks down on the cursor (see fig 2). From the aft end of the compass housing runs a Hooks universal joint and about 30cm of shafting with a knob on the end. This enables the reclining pilot to twist the compass housing so that its vertical axis coincides with the ground vertical axis, much in the same manner as in the Cook compass.

An accurate course

In practice, while flying straight and level, the bobble is always within 10° of an E2A compass reading, so it is satisfactory for flying an accurate compass course. There seem to be no acceleration errors so that flying an EW heading in cloud is easy. When circling one feeds enough bank into the compass to keep it vertical and, as one turns, the bobble steadily creeps around the rings on the cursor (fig 3). Furthermore, the movement is in the correct sense, *ie* clockwise, when circling to the right; in fact, the bobble represents the glider going around the circle.

If you listen to the audio variometer and watch the compass, centring on lift is quite easy; in fact, the compass is quite hypnotic and one's eyeballs go round in circles on their gymbals too. Cloud flying is about as easy, one just needs to make an occasional glance to the artificial horizon to make sure that the bank is not building up too much.

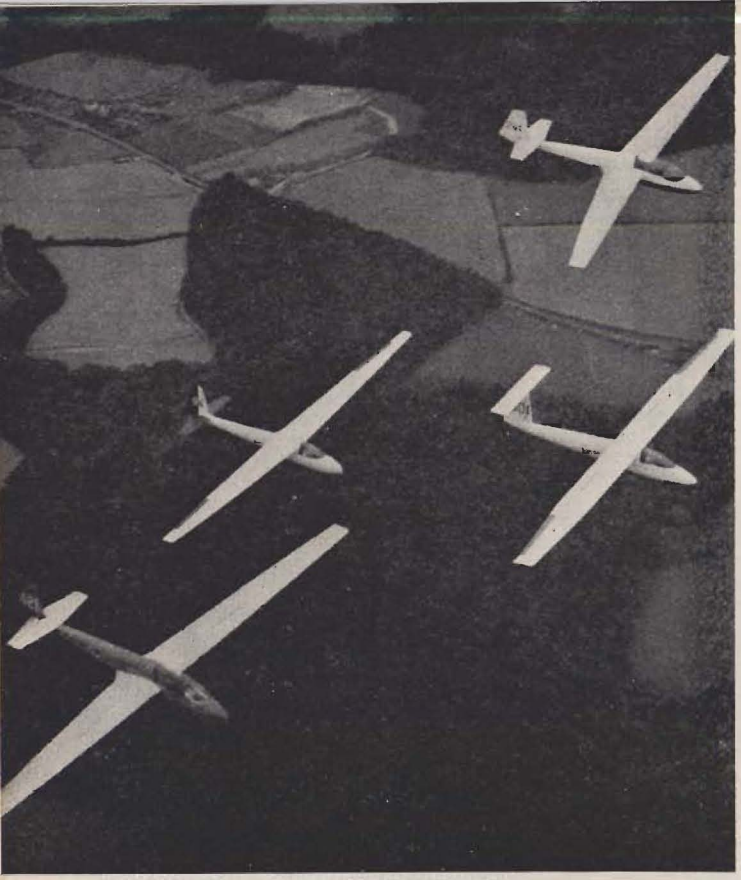
Coming out on the correct heading is quick and easy too, the glider and compass just require to be levelled out together. In flight the main impression given by the compass is how badly one flies, particularly in cloud, as the bobble staggers drunkenly from one corner of the compass to the other. The general impression of the instrument is that the compass and its housing is a little gem; however, it is a bit flimsy and the mirror and twisting bar are rather clumsy.

I have modified my compass in two ways: firstly, by fitting half-silvered glass, (made by rubbing the back of a mirror with scouring powder) so that I can see through the mirror and I have replaced the Hooks joint and shafting with a piece of plastic tubing, not so professional looking, but much more practical.

Cryptic comment from a Yorkshire grass-widow:— "I think now that we have a woman editor, S&G should be given a fresh image. How about Sitting and Gazing, the Organ of the British Gliding Wives Association?"

FORMATION GLIDING

By THOMAS QUINN HALL



Sailplanes flown during the display were a Pirat, two K-13s and a Dart 15 but in these photographs, taken later by Peter Gilchrist and Mike Baker, the Dart was replaced by a K-6

BUT for the photographs accompanying this article you might think "who's kidding who" if the idea of flying gliders in tight box formation was suggested. Nevertheless, it can and has been done at least once in the United Kingdom. The occasion was the 50th anniversary of the Kings Cup Air Race which was held, together with an air display, at Booker Air Field in 1972.

However, before anyone decides to "have a go" at this form of flying I would like to emphasise that without formal training it can be extremely dangerous. A glider, unlike a power plane, has low rolling rates, poor acceleration characteristics and, being very light, is extremely sensitive to air turbulence effects. The risk of collision can be very high if appropriate safe guards are not taken and this, I repeat, needs formal training by an experienced formation pilot.

So much for warnings. To turn to the event itself, this was the direct result of a request from the Booker manager Jack Atkinson and Norman Smith the CFI that I, the local idiot who performed aerobatics at the Booker annual air display for a number of years, should think up something special for the Big Show.

Being myself an ex Royal Air Force pilot and having been trained in formation flying, the idea occurred to me that a formation of gliders would be novel and therefore, as desired, different to the usual gliding events. The only difficulty was where to find some more idiots.

Fortunately amongst the other instructors at Booker I had four such friends, Douglas Walker, Victor Minot, John Stenton and Peter Jeffers, who all agreed to have a go with me. Of these four only Vic had any previous experience being another ex RAF pilot, although, as he pointed out, Bomber Command did not fly tight formation as a usual thing.

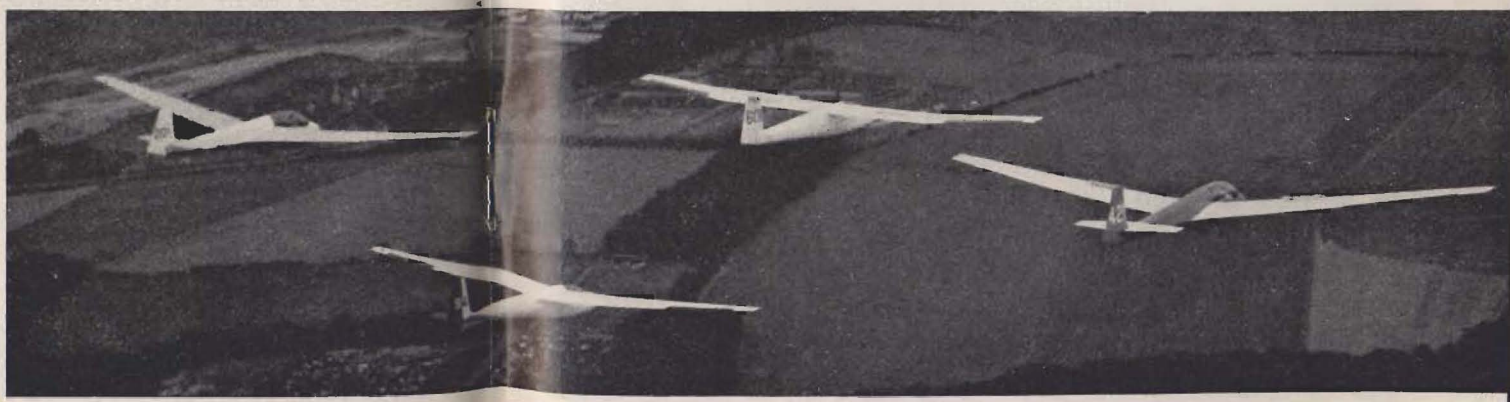
Having six months in which to prepare the event, we went into a training routine in which two members of the team would fly one K-13 as the lead aircraft, while I gave another member dual instruction in formation keeping in another K-13. Each pilot had to be taught to fly echelon and line astern formation, in addition to filling the lead role, which in itself is not easy, since it requires very precise flying. Needless to say, this form of training involving a large number of flights was highly expensive and the whole operation was only made possible by the provision of funds by the Airways Aero Association and the *Daily Mail*.

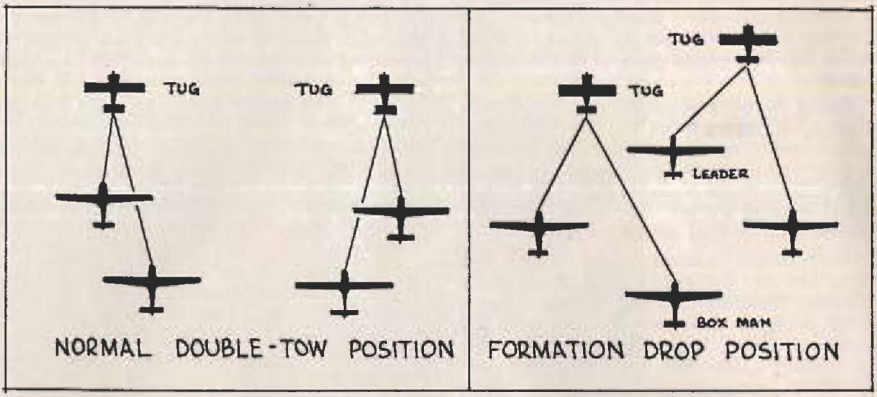
Another difficulty which had to be overcome was the communications in that, for formation flying, you require voice communication by radio and, since both your hands are occupied with the controls, this means head sets with boom microphones and "press to speak" buttons mounted on the control column or dive-brake lever. Again we were lucky; due to the generosity of the Plessey Company Limited, we were lent the necessary radio installations.

To return to the actual flying, the technique used is for the lead aircraft to fly with a small amount of dive brake exposed thus giving all the other aircraft in the formation a better glide angle performance. They can then, by using their dive brakes as throttles, hold station on the lead aircraft, closing their brakes to overtake or opening them wider to slow down.

Difficult process

Since the response time in acceleration when closing the brakes is relatively slow and the combined wing spread of the formation is over 150ft, the making of turns in which the outside man has to increase speed at the beginning and the inside man has to increase speed on straightening up is a very difficult process, necessitating very fine judgement on roll rates on the part of the leader. When you add to this the difficulties introduced by air turbulence *eg*, the inside man may be in an "up" while the outside man may be in the corresponding "down", the problem on a hot day becomes highly exaggerated.





This is where thoroughness in training becomes essential if mid air collisions are to be avoided, similarly radio discipline in terms of the commands to be given and strict adherance to the executive command "go" is absolutely essential. Provided that these difficulties are known and appreciated by the pilots, then it becomes perfectly possible to manoeuvre a box formation of gliders and to land them still in tight box formation as we have now done many times.

The entire process begins with getting the aircraft into formation in the first place and this itself is not as easy as would at first appear.

The technique we favoured was to fly two double tows and immediately prior to release to open the tows from the above and below positions out to an echelon position (see illustration) with the two tugs holding formation on each other, thus placing the four gliders in relation to each other approximately in the positions that they will occupy in the final box.

Tugs dive away

On the command "release" the four gliders release their tow simultaneously, the two tugs dive away straight ahead, the lead glider opens his brakes a small amount and the other three join up, each calling the leader when in position as the leader can only see the other aircraft by looking under his wing to either side and cannot see the box man at all.

Once the formation has been established in this way all subsequent manoeuvres are by radio command *eg*, "turning left, turning left, go." The executive "go" being the point at which the leader starts to roll into the turn. This then is the basic technique on which the formation gliding event was established.

The actual event consisted of the following manoeuvres which at the dress rehearsal went perfectly smoothly although on the actual day they did not go off quite so well. The four aircraft were dropped at 3,300ft one mile north of Booker. On joining up they flew in a straight line to the west end of the airfield, turned 90° to the east and began a shallow dive parallel to the crowd line. When the speed reached 110kts the command "break" was given, the lead aircraft pulling up at 45° to the stall and then pushing over, the two wing aircraft pulling up into outward chandelles and the box aircraft No 4 pulling over in a loop. Thus performing in effect, the classic Prince of Wales Feathers.

On completion of this manoeuvre the leader (No 1) and No 4 formed a line astern pair going eastwards, while the wing men formed a line abreast pair going westwards. On completing their chandelles the line abreast pair continued to dive until they obtained speed for a loop, the sub-leader's command to loop being also the command for the leader and No. 4 to loop.

Simultaneous loops

The aircraft were now at opposite ends of the airfield and on completion of the

loops both pairs on command chandelled to bring them head on, heading for the centre of the airfield. On meeting in the centre, the line astern pair passed between the line abreast pair and on command from No 4 performed simultaneous loops on the four corners of the diamond they were making.

On completion of these loops the line abreast pair turned north away from the crowd, No 4 performed a second loop, rolling through 90° on the down side to follow the line abreast pair, while the lead aircraft half rolled to return in front of the crowd.

The object of this was for the leader to hold the attention of the crowd with solo aerobatics while the other three reformed Vic formation. The leader having completed the solo aerobatics, finished his performance with a low fast fly-past in front of the crowd, ending in a climbing turn to land in the opposite direction, the remaining three aircraft landing behind him in tight Vic formation.

That this was a highly complicated sequence of manoeuvres is apparent from this text, and emphasises the need for adequate radio communication, a lot of practice and complete discipline in the pilots concerned. I would, therefore, like to complete this article by saying that I have nothing but admiration for my "idiot friends" who took me up on this proposal when it was first mooted and trusted my leadership over months of practice.

I would also like to thank the many club members who gave us their help during rehearsals and on the actual day. In particular, I would like to mention the Plessey Company Limited, the *Daily Mail*, the Airways Aero Association and Eric Giles who very generously lent us his private Dart 15 for this display, which I think can come under the heading "greater love hath no man than he lend his glider to another". A special thank you also goes to Nick Daniels of the Rothmans Team who gave his time as tug pilot during rehearsal and who also gave the commentary on the public address for our item of the display.

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PETER JEFFERS BERT PAGE PETER ROSS

General & BGA News

ATTEMPT ON UK DISTANCE RECORD

ON SUNDAY, July 1, Justin Wills, flying his Std Libelle, set out from Booker in an attempt to beat Nick Goodhart's UK distance record, established on May 10, 1959, with a flight of 579km from Lasham to Portmoak.

Justin took off into a completely blue sky at 11.00 and much of the flight was conducted below 2,000ft in very weak, blue thermals. Wave was encountered for the first time south of Doncaster, and intermittently thereafter, becoming stronger over the Lamermuir Hills and further north. Winds were light to moderate, southwesterly, and the wave activity, together with the advance of a warm front later in the evening, produced almost complete cloud cover for the latter part of the flight.

The Firth of Forth was crossed at North Berwick at approximately 20.10hrs and the flight ended one mile south of Tayport (near Dundee) 40 minutes later—just 19km short of the record.

This flight earns Justin his third Diamond, making him the 29th British pilot to complete all three Diamonds.

Footnote: Sunday was the last day of the Booker Regionals. A 200km triangle was set with turning points at Broadway Tower and Towcester Racecourse. However, the weather proved unsoarable, and a "no contest" day was declared.

HIGHER PRICE OF SUCCESS

VAT has increased the registration fee for Silver, Gold and Diamond claims. Please remember that it now costs £1.10 to register each leg; Silver badges are now 41p and Gold badges £1.10. If there is a long delay in returning your claim, have a look in your cheque book to see if you sent the right money. As VAT seems to affect nearly everything we do, it is wise to check on current prices with the BGA before writing in, particularly if you are using anything but the most up to date forms!

RAPID SILVER C



IT was a Silver C in one day for Jock Pilch of Culdrose (RNGSA), Cornwall, when he flew the club's new Pirat on May 1.

He was about to land in a small field when a strong thermal took him to 5,000ft and on to Plymouth. There, Roborough Airport's co-operation was quite something.

They polished up a rusty 130.4 crystal and kept him awake while he stayed up to complete five hours, fed him into the circuit between the Chipmunks and stayed open late to refuel the retrieving tug. It was all greatly appreciated by Jock and Culdrose.

UK AIR CENSUS — July 16 to 29

THE appropriate forms for this survey will be reaching clubs shortly if not received already. The results are not only of great use to the Civil Aviation Authority but, since there obviously has been a great increase in gliding since the last (1967) census, they are also expected to be most useful in our own airspace negotiations.

It remains to be seen whether or not our activities have increased proportion-

ally greater than those of the noisier gentlemen, but it is most important that the 100% gliding return of 1967 is repeated—Please.

On a similar subject, it is my belief that the cross-country distance figures in the BGA Annual Statistics are becoming increasingly a matter of guesswork on the part of some clubs—if they are included at all!

I do realise that they may be difficult and a bit of a nuisance to collect, but they are one of the basics of airspace negotiations. Could we make 1973 "accuracy of statistics year"?

All cross-country pilots can help in this by ensuring that their own clubs know how far they have flown—excluding competitions for which clubs collect statistics as a matter of course.

JOHN ELLIS,
Chairman, Airspace Committee.

NATIONAL LADDER BOOMING

CURRENTLY the national ladder, headed by Alan Purnell, Surrey and Hants, is so well supported that on June 5 the list was as long as in September last year with 113 entries.

Entries for further listings should be sent to the National Ladder Steward, Michael Garrod, 2 Burford Court, Rances Lane, Wokingham, Berks RG11 2LJ, by July 17 and September 4.

Leading Pilot	*Club*	*Pts*	*Flts*
1 A. Purnell	Surrey & Hants	3057	3
2 J. B. Goldsbrough	Yorkshire	2623	4
3 M. Costin	Coventry	2260	4

OBJECTIONS WITHDRAWN

WE are pleased to learn that the motorway objections which threatened gliding from North Weald have been withdrawn. We hope the Essex Club will be equally successful in overcoming other difficulties in their efforts to secure their site for gliding in the future.

KRONFELD CENTRE

THE Kronfeld Centre, London's meeting place for all light aircraft enthusiasts, is back in business. The premises have been redecorated, the beer is re-installed and will be available every weekday from 6.30 p.m. to 10.30 p.m.

Basement, 74 Eccleston Square, SW7. Five minutes' walk from Victoria station, parking no problem. Tel. 01-828 8740.

Membership details from Juanita Benjamin, 162 Coombe Lane West, Kingston, Surrey. Tel. 01-942 6240, or just turn up. Day membership available at the door at 20p.

NEW FLYING COMMITTEE CHAIRMAN

TOM Zealley has resigned as Chairman of the BGA Flying Committee, a position he has held since 1968 with enthusiasm and a strong sense of purpose. Ian Strachan, Chairman of the Handicapping Committee, is taking his place.

GLIDING CERTIFICATES

ALL THREE DIAMONDS

No	*Name*	*Club*	*1973*
26	J. Delafield	Cranwell	31.3
27	C. M. Greaves	Two Rivers	13.4

DIAMOND HEIGHT

3/163	J. Delafield	Cranwell	31.3
3/164	R. C. Sharman	Chilterns	4.4
3/165	G. Raynor	Chilterns	4.4
3/166	C. M. Greaves	Two Rivers	13.4
3/167	D. Cockburn	Two Rivers	5.4
3/168	P. J. Rowney	Two Rivers	13.4
3/169	A. R. Jury	Four Counties	17.3
3/170	R. D. Parker	Clevelands	3.3
3/171	D. P. Holdcroft	Bicester	23.3
3/172	R. J. Crouch	Two Rivers	13.4

DIAMOND GOAL

2/437	C. J. Ridley	Waikerie	8.3
2/438	W. J. Tyler	Worcestershire	29.4
2/439	E. J. Winning	Swindon	29.4
2/440	F. H. Knipe	Yorkshire	29.4
2/441	R. J. Cunningham	Inkpen	11.5
2/442	M. R. Emmett	Airways	26.4
2/443	R. C. Stafford Allen	London	1.6
2/444	D. W. Lilburn	Yorkshire	1.6
2/445	M. A. Clarke	Eagle	22.5
2/446	M. F. R. Hardy	Eagle	28.5

GOLD C COMPLETE

347	E. J. Winning	Swindon	29.4
348	H. Johns	Bristol/Glos	27.4
349	R. J. Cunningham	Inkpen	11.5
350	N. V. Parry	Swindon	7.4
351	M. R. Emmett	Airways	26.4
352	R. C. Stafford Allen	London	1.6
353	M. A. Clarke	Eagle	22.5
354	M. F. R. Hardy	Eagle	28.5

GOLD C HEIGHT

J. P. Sutherland	Four Counties	21.3
W. S. Y. Stephen	Aberdeen Univ	14.4
G. Raynor	Chilterns	4.4
J. D. D. Argent	Four Counties	17.3
T. J. Walsh	Four Counties	22.3
A. T. Farmer	Four Counties	31.3
M. J. Allison	Clevelands	4.3
C. Walker	Clevelands	3.3
C. D. Street	Dorset	11.4
T. R. Cawthorne	Bicester	25.3
E. A. J. Hibbard	Essex/Suffolk	5.3
P. Kerrigan	SGU	16.4
J. W. Wynch	Four Counties	21.3
R. G. Williams	Two Rivers	12.4
P. S. Wood	Two Rivers	12.4

No	Name	Club	1973
	S. E. B. Field	Two Rivers	7.4
	D. Cockburn	Two Rivers	5.4
	T. A. Smith	Two Rivers	13.4
	P. J. Rowney	Two Rivers	13.4
	D. R. Aston	Two Rivers	12.4
	W. J. Tyler	Worcester	29.4
	E. J. Winning	Swindon	29.4
	A. R. Jury	Four Counties	17.3
	M. J. Webb	Clevelands	31.3
	M. J. Quinn	Hambletons	31.3
	F. G. Wilson	Phoenix	21.1
	H. Johns	Bristol/Glos	27.4
	P. J. Howgego	Anglia	3.3
	M. D. Taylor	Anglia	3.3
	R. J. Sheffield	Chilterns	25.3
	D. P. Holdcroft	Bicester	23.3
	R. J. Cunningham	Inkpen	11.5
	L. H. Webster	Clevelands	31.3
	S. Knox	SGU	18.3
	R. J. Crouch	Two Rivers	13.4
	N. V. Parry	Swindon	7.4
	N. F. Collier	Highlands	20.2
	M. R. Emmett	Airways	26.4
	R. C. Stafford Allen	London	1.6
	M. A. Clarke	Eagle	22.5
	R. A. Robertson	Bristol/Glos	28.3
	M. R. F. Hardy	Eagle	28.5
	SILVER C		
3322	L. Chadwick	Midland	31.3
3323	T. D. Stevens	London	7.4
3324	M. S. Chaddock	Coventry	27.3
3325	E. Warburton	Thames Valley	29.3
3326	P. G. S. Jackson	Derby/Lancs	7.4
3327	T. I. Allsop	Bannerdown	7.4
3328	P. J. Walker	Coventry	7.4
3329	A. M. Fleming	Surrey/Hants	7.4
3330	Caroline McFarlan	Bicester	7.4
3331	N. McNaught	Bath/Wilts	7.4
3332	D. M. Watts	Cotswold	29.3
3333	D. C. Phillips	Enstone	1.6
3334	Valerie Rowell	Surrey/Hants	9.4
3335	J. Richards	Bath/Wilts	15.4
3336	D. B. R. Harris	Humber	7.4
3337	J. D. Green	Wrekin	7.4
3338	I. R. W. House	Phoenix	8.4
3339	D. P. Catt	Bicester	16.4
3340	R. G. Baines	Trent Valley	20.4
3341	L. T. Edmonds	Bicester	23.4
3342	D. F. Cottey	Chilterns	23.4
3343	R. F. Lovett	Portsmouth	25.4
3344	Melanie Pierce	Thames Valley	27.4
3345	D. R. Aston	Two Rivers	29.3
3346	Margaret Young	Inkpen	29.4
3347	A. Spicer	Midland	29.4
3348	M. E. Purvis	Bicester	15.4
3349	T. M. H. Jenvey	Devon/Somerset	29.4
3350	D. S. Jenkins	Cornish	9.4
3351	A. J. Hunt	Inkpen	27.4
3352	R. N. Hunt	Clevelands	2.5
3353	A. D. James	RAE	29.4
3354	W. J. Down	Devon/Somerset	29.4
3355	D. C. R. Pearce	Cambridge Univ	27.4
3356	B. T. F. Beale	Bicester	29.4
3357	M. T. Dugmore	Swindon	27.4
3358	I. B. Gregson	Yorkshire	29.4
3359	J. Wesley	Coventry	29.4
3360	R. H. T. Blacmore	Yorkshire	29.4
3361	S. A. M. Thornley	Cambridge Univ	24.4
3362	T. G. Parrott	Wrekin	29.4
3363	E. Whipp	Inkpen	29.4
3364	J. Bentley	Yorkshire	29.8.70
3365	Barbara Allen	Yorkshire	29.4
3366	M. J. Law	SW District	15.4
3367	T. D. Brocklehurst	Airways	24.4
3368	W. Smith	Clevelands	12.5
3369	G. P. Plunkett	Surrey/Hants	11.5
3370	T. R. Baldwin	Two Rivers	12.5
3371	A. C. White	SGU	29.4
3372	D. C. Sims	Portsmouth	11.5
3373	C. Brown	Derby/Lancs	29.4
3374	J. D. Smith	Ouse	25.4
3375	F. Powell	Airways	16.5
3376	B. A. Foster	London	29.4
3377	G. A. Pilch	Culdrose	1.5
3378	I. J. McGregor	East Midlands	20.4
3379	B. J. Poole	Worcestershire	14.5
3380	J. N. C. Cooke	Bicester	29.4
3381	T. Clarke	Essex	20.5
3382	G. Kelly	Worcestershire	29.4
3383	C. K. Hutley	Ouse	2.5
3384	E. V. Goodwin	Peterboro/Spald'g	16.5
3385	D. Green	Ouse	8.4
3386	B. C. Moore	Bicester	14.5
3387	W. Horne	Airways	26.5
3388	E. A. Staton	Univ of Aston	13.6
3389	J. W. Rice	Trent Valley	2.5
3390	N. F. W. Eyres	Dorset	29.4
3391	S. C. Foggin	Swindon	26.5
3392	S. T. E. Walker	Cranwell	22.5
3393	D. V. Martin	Bicester	15.5
3394	R. W. Gray	Phoenix	27.5
3395	R. A. Jarvis	SGU	22.4
3396	D. J. Robinson	East Midlands	28.3
3397	T. Wright	Yorkshire	29.4
3398	T. J. Wallace	Ulster/Shorts	6.5
3399	G. W. Withrington	Essex	1.6
3400	P. W. Mead	Kent	1.6
3401	P. A. Locock	Heron	26.4
3402	N. J. Hall	Essex	2.6
3403	D. G. Roberts	Cotswold	3.6
3404	J. C. Wylam	Thames Valley	5.6
3405	I. F. Fleming	SGU	3.6
3406	A. V. Stephens	Ulster/Shorts	3.6
3407	G. L. S. Orwin	623 GS	14.6
3408	J. C. Fox	Surrey/Hants	5.6
3409	A. R. E. Webster	Fenland	3.6
3410	W. V. Ogley	Surrey/Hants	4.6
3411	S. C. Bates	Cotswold	1.6
3412	W. Foster	Surrey/Hants	4.6



Support the British Gliding Team

AS Australian prices seem to be rocketing up at the same rate as their thermals are prone to do, trying to balance the British Team's budget for the next World Champs is becoming something of a full-time juggling act. So . . . please keep those Boomerang Fund contributions coming along!

If Fund Representatives have by now sold a sizeable number of Grand Draw tickets for that 1st prize of an 8-day Isles of Greece Cruise for two, it would help our cash flow if they could send

the ticket stubs and the lovely lolly to the BGA now. There's still plenty of time to keep on selling by the way as the closing date is not till the end of October.

We know that a number of gliding people who are not in the official British party intend being at Waikerie—and indeed a number of them have been offering to help us (thanks, fellas, we'll be glad to have you around). A warning for them from Hugh Campbell—our Man in Ozzieland—that accommodation is going to be a problem for visitors next January. So if you want to rest your head on something more comfortable than a sand-dune the wise move is to drop a line now, giving dates and particulars of what is required, to the Administration Officer (C. J. Ridley), 14th World Gliding Championships, Box 320, Waikerie, South Australia 5330.

Our considerable thanks to Kodak for donating Instamatic 155-X cameras and a load of film to the Team; also to Revco Radio Services for supplying magnetic aerials.

ROGER BARRETT, *Team Manager.*

OBITUARIES



INGE DEEN

INGE DEEN, General Secretary of the BGA from September 1966 to August 1970, died on June 7, 1973 at the all too young age of 43.

Inge brought to the BGA a sense of service rarely found, and immediately gained the respect of the staff, colleagues, committee members and the executive committee. The standards she set herself and expected from others was an example to us all.

She was first taken ill at Christmas time, 1968 and subsequently underwent a series of operations, but in spite of considerable suffering she never complained and carried her burden with great dignity always thinking of others rather than herself.

During the final stages of her illness she was able to stay at home, where she wished to be, due to the utter devotion of her husband, Ronald, and unselfishness of Rika Harwood.

She leaves Ron alone. May he take some consolation in the knowledge that the thoughts of Inge's many friends are with him. J.C.L.

Flt. Lt. PETER LANE

PETER LANE, active in RAF gliding circles for many years and latterly a member of the Cambridge University club, lost his life in a RAF flying accident on July 7.

Pete enjoyed several tours of duty in Germany and had been a mainstay of RAF gliding while there. A former CFI of the Phoenix club at Brüggen, Germany, he had also been air member of the RAF German Gliding Association and in this capacity had guided the Association along its very successful way.

His greatest individual triumph came in 1962 when, in a Skylark 3F, he flew 748km down the spring north-easterlies from Brüggen right across France to Bordeaux to set a new British National distance record. (See S&G, Aug-Sept, 1962, pp202.)

This record is still unbroken and is a fitting tribute to a popular and energetic pilot. Pete leaves a widow, Sarah, and a young daughter. J.S.W.

Junior Inter-Services Championships 1973

By GEORGE LEE

THE number of contest days at the Junior Inter-Services Championships at Spitalgate from May 5 to May 13 was limited by generally poor weather conditions with persistently strong westerly winds.

However it was judged an enjoyable competition with 30 pilots flying on four contest days in the Sports class, won by M. Livesay, RN, flying a Std Libelle, and 19 competing on the three days of the Club class, the winner being J. Stockwell, RAF, in a K-8.

This was the first time the competition had been held at Spitalgate, a large grass airfield 415ft above sea level to the east of Grantham. It proved entirely suitable for competition use with airways presenting no problems and the question of Military Air Traffic Zones during the week were negotiable.

Our grateful thanks to the Station Commander, Gp Capt P. J. Tamblin, WRAF, both for the use of the airfield and also for the excellent support from station personnel at all levels.

The competition was split into two classes—the Club class with handicaps ranging from 100 to 124% and the Sports class with handicaps from 74 to 100%. Just as this was the final competition for many pilots in the Club class, so it was to be my first attempt at task-setting.

Air Marshal Sir Neville Stack, Air Officer Commanding in Chief, Training Command, officially opened the Championships to the continuous applause of the hangar doors which were rattling in sympathy with the westerly gale. There was no possibility of setting a task but the wind did drop sufficiently to allow some flying during the afternoon.

On Sunday, May 6, the Sport class task was a race to Swanton Morley via Ely Cathedral (140km) with a race to Swanton Morley via Wisbech (112km) for Club pilots. A cold occlusion was expected to clear Spitalgate at 14.00hrs with moderate thermals behind it initially, though showers were quick to develop.

The two Met forecasters for the competition were Ron Cashmore and Alan Diver and Alan's forecast for the day was very accurate. Unfortunately, the showers proved difficult to negotiate and few pilots managed good cloud climbs. Nobody got beyond MSD, although Pete Cook was nearly there when he chose to enter a good cloud. Everything was fine initially, but then his instruments went awry. Some 20 minutes after entering cloud, he finally emerged at 8,000ft to find himself over the Wash. He then took up a westerly heading to get back over land as soon as possible and this took him to his point of landing—ten miles from Spitalgate.

On Monday, May 7th, the task was the same for both classes as for the previous day. The Met situation was an unstable westerly flow with a trough approaching from the west. Moderate thermals developed but conditions remained good longer to the east. Showers were expected from the west, around Spitalgate shortly after mid-day.

All but one of the Club class reached the goal, the speeds ranging from 36.9km/h to Paul Miller's winning speed of 56.3km/h. In the Sports class all but four completed the task, speeds ranging from 41.1km/h to "Woody" Woodier's winning 57km/h.

Most pilots had relatively straightforward flights and morale was noticeably higher in the bar that evening. Thanks are due to Alf Warminger for his unfailing hospitality in providing refreshments for arriving pilots. Quote of the day was made by Ron Cashmore around mid-day: "Conditions during the next two hours will be the best we'll get for the next two days." How right he was,

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except that it turned out to be three days instead of two.

On Tuesday, May 8, the Sports class was set a race to Dunstable via Melton Mowbray, then either Husbands Bosworth or Watford Gap service station (132km or 137km). The Club class had a race to Dunstable via Melton Mowbray (126km).

A frontal system was approaching from the north-west. Thermals were moderate by mid-day but increasing upper cloud damped conditions during the early afternoon.

In fact, an 8/8 strato-cu cover broke-up during the late morning to give strong thermals and a 3,500ft cloudbase. Unfortunately these conditions only lasted for about an hour before solid cloud approached from the west and progressively killed all thermal activity. Tony Simms (RAF), Std Cirrus, and Mike Livesay (RN), Std Libelle, both in the Sports class, were the only two in the competition to pass MSD.

On Wednesday, May 9, the task was the same for both classes, a race to North Denes airfield via King's Lynn (A47/A17) road/river bridge. A warm sector was affecting the area with 8/8 cirro-stratus expected to thin and break, giving weak to moderate thermals and a cu base rising to 3,000ft.

Gaps turned out to be small, with narrow broken thermals and the base of scattered cu remaining between 2,000 and 2,500ft. In view of the difficult soaring conditions and the strong upper wind, the direction of which appeared to be more like 240°, the Club class was scrubbed. Nobody got past MSD in the Sports class, although Peter Goozee (Army), Dart 17R, seemed certain to score when he reported his position as Spalding—however, after landing he found himself to be on the outskirts of Boston. Another disappointing day, weather-wise.



On Thursday, May 10, both classes were cancelled. A cold front had passed through the area during Wednesday night leaving us in a deeply unstable north-westerly airstream. Squally showers and thunderstorms were expected with strong to gale force winds lasting all day.

On Friday, May 11, we were in an unstable north-westerly flow. Thermals became moderate, occasionally strong, with cu base starting at 2,000ft rising to 5,000ft, though variable amounts of cirrus weakened thermals in certain areas. The Sports class task was an out-and-return to Watford Gap service station via Melton Mowbray (152km). The Club class had a race to North Denes airfield, via Downham Market railway station (165km).

The day turned out to be good with consistent thermals over most of the course. In the Sports class, just over 75% of pilots completed the tasks, speeds ranging from 29.09km/h to Mike Livesay's winning 57.39km/h. In the Club class the success rate was even higher at 85%, and their speeds reflected the assistance given by the tailwind. The slowest was 56.87km/h and Ken Hartley (RAF) K-8 won at 83.06km/h.

On Saturday, May 12, the tasks were a triangle to March railway station and Olney Church—213km—for the Sports class and an out-and-return to Olney Church—167km—for the Club class. A high centred south of the Scilly Isles with an unstable westerly flow was affecting the area. Thermals became moderate, occassionally strong, with the cu base rising from 2,500 to 4,500ft.

In the Sports class, most pilots found the first leg relatively easy but the deeper convection and slackening winds forecast for the southern part of the task didn't materialise and a strong headwind forced everyone down at various points along the second leg.

Furthest distance was achieved by Roger Staines (RAF) K-6E—106km. Bernard Fitchett (*hors concours*) Std Cirrus landed at the second turning point

and reckoned that he was one thermal short of being able to reach the better soaring conditions and more favourable wind component of the last leg. The Club class also found the going difficult with only two pilots passing MSD. Ian Pritchard (RAF) Skylark 3 won by getting all the way to the turning point.

Sunday, May 13, strong winds and intermittent rain put any chance of setting a task out of the question, so all that remained was the closing ceremony performed by Air Vice-Marshall Bird-Wilson, Chairman of the RAFSGA.

The only incident throughout concerned a Chipmunk which acquired a bent propeller when it decided that it had been a tail-wheeled aircraft for long enough. As to task-setting? Fascinating business—must try it again sometime.

Final Results *Club Class* *Pilot*	*H'cap %*	*Sailplane*	*7.5* *28*	*11.5* *25*	*12.5* *4*	*Total Points*
1 Stockwell, J. M.	106	K-8	22(4)	25(1=)	0	47
2 Joslin, C. I.	106	K-8	24(3)	21(4=)	0	45
3 Hartley, K. J.	106	K-8	17(8)	25(1=)	0	42
4 Wood, M.	106	K-8	26(2)	14(10)	0	40
5 Webber, D. C.	102	Olympia 463	19(7)	20(6)	0	39
6 Miller, P. E.	106	K-8	28(1)	10(13=)	0	38
7= Pritchard, I. W.	100	Skylark 3	16(9)	16(8)	4(1)	36
7= Norris, M. K.	106	K-8	21(5)	15(9)	0	36
9 Jury, A. R.	106	K-8	14(10=)	18(7)	0	32
10 Bragg, P. D.	100	K-6CR	19(6)	10(13=)	0	29
11 Berry,G. P.	102	Olympia 463	5(16=)	23(3)	0	28
12 White, D. A.	106	K-8	5(16=)	21(4=)	0	26
13 McPhie, D.	106	K-8	12(12)	13(11)	0	25
14= Williams, D. E.	106	K-8	10(13)	10(13=)	2(2)	22
14= Dean, M. J.	106	K-8	14(10=)	8(16)	0	22
16 Oxberry, J. A. G.	106	K-8	8(14)	12(12)	0	20
17 Harsant, K. E.	106	K-8	7(15)	6(17)	0	13
18= Kiely, B. E.	102	Olympia 463	2(19)	4(18)	0	6
18= Mead, M.	?	?	4(18)	2(19)	0	6

Final Results *Sports Class* *Pilot*	*H'cap %*	*Sailplane*	*7.5* *41*	*8.5* *2*	*11.5* *41*	*12.5* *11*	*Total Points*
1 Livesay, M. H.	88	Std Libelle	39(2)	2(1=)	41(1)	7(9=)	89
2 Woodier, C. J.	88	Std Libelle	41(1)	0	37(3)	10(2=)	88
3 Dixon, R. T.	94	K-6E	32(6=)	0	39(2)	8(7=)	79
4 Cole, R. A.	100	K-6CR	36(4)	0	33(6=)	5(14=)	74
5 Cook, P.G.	88	Std Cirrus	30(10)	0	33(6=)	8(7=)	71
6 Simms, J. A.	88	Std Cirrus	26(12)	2(1=)	35(4=)	6(12=)	69
7 Miller, A. S.	94	K-6E	32(6=)	0	31(8=)	2(20=)	65
8 Butler, D. J.	88	Std Cirrus	28(11)	0	35(4=)	0	63
9 Andrews, P. R.	94	K-6E	34(5)	0	18(18)	10(2=)	62
10 Wynch, J. W.	88	Std Libelle	25(13)	0	31(8=)	0	56
11 Staines, R.	94	K-6E	32(6=)	0	8(25)	11(1)	51
12 Cawthorne, T. R.	94	K-6E	18(17)	0	23(14=)	9(6)	50
13 Manson, J.	88	Cobra 15	32(6=)	0	6(26)	10(2=)	48
14= Spreckley, B. T.	100	Skylark 3	7(24=)	0	29(10)	10(2=)	46
14= Cole, P. H. B.	94	K-6E	23(14)	0	19(17)	4(19)	46
16 Marriott, S. H. C.	74	Nimbus 2	13(20)	0	26(12)	5(14=)	44
17= Bacon, G. McA	96	Olympia 419	37(3)	0	3(28)	2(20=)	42
17= Jones, D. R.	100	K-6CR	19(16)	0	23(14=)	0	42
17= Easton, S. J.	74	Kestrel 19	9(22=)	0	27(11)	6(12=)	42
20 Millward, G.	94	K-6E	16(18)	0	21(16)	2(20=)	39
21 Goodman, C. W. S.	96	Olympia 419	15(19)	0	12(23)	5(14=)	32
22= Cogger, C. B.	100	K-6CR	9(22=)	0	15(20=)	7(9=)	31
22= Johnson, A. S	94	K-6E	7(24=)	0	24(13)	0	31
24 Wray, A. J.	98	Skylark 4	11(21)	0	14(22)	5(14=)	30
25 Arnold, A. V.	94	K-6E	21(15)	0	2(29)	5(14=)	28
26 Crisp, D.	100	K-6CR	3(28)	0	17(19)	2(22=)	22
27 Taylor, A. R., Bishop, J. M.	88	Cobra 15	7(24=) —	— 0	10(24) —	— 0	17
28 Goozee, P. K.	90	Dart 17	1(29=)	0	15(20=)	DNF	16
29 Elsom, M. L.	88	Std Libelle	5(27)	0	0	7(9=)	12
30 Beck, J.	94	Pilatus B-4	1(29=)	0	4(27)	0	5

I Learnt About Flying From That

By GEOFFREY MILLWARD

IT was my first ever Gliding Competition. Although with nearly 400 gliding hours I considered myself to be reasonably experienced, the first day was to prove a bit of an eye opener!

At the briefing the day's task was set as a 100 plus kilometre downwind race from Cosford to Colerne as the forecast winds were expected to be too strong for a closed circuit race. The competition director mentioned, among many other things, that inter-service gliding competitions had an accident free history and he hoped it would continue. With that he wished us luck and we all went to prepare for launching.

I was flying a K-8, a lightweight secondary glider with very good general handling qualities, although its "into wind" penetration is not very good. I had about 50 or 60 hours on type but unfortunately I had only flown this type once on cross-country, and that was over two years ago. Normally a practice week is provided prior to competitions to allow pilots to become acquainted with their machines. Due to service commitments I had been unable to attend so, stifling a nervous twitch (common in flying I'm told), I was launched off on the task.

Crosswind. All went reasonably well as far south as Gloucester, at least once I had sorted out my thermalling speeds etc. One thing I should have been thinking more about was that the wind had changed to a crosswind. I had, in fact, noticed it as I was now fighting like mad to stay on track! That was occupying most of my time.

It didn't occur to me (at the time) that the wind had increased in strength. Why, oh why, didn't I prepare my flight more carefully, where were those notes I had made on expected wind speed and direction left behind in the panic to launch!

Anyway—to continue—or not to continue if you prefer, because at this stage of the flight I was very low and just about committed to land. Fields I thought. *Good grief!* Where on earth can I land? There's a disused airfield below, but all the normally landable bits are covered with heaps of rubbish! Look for another field quick! Now I was down to 800ft, still battling against this damn wind. No concern now with finishing the race, just find a field. That one's no good—standing corn, it will demolish the tailplane as sure as . . . There's one—a meadow, big house in the upwind corner, standing on a hill amongst some big trees. Good in we go.

No Trouble! The approach was obstructed by one or two large trees but it was a big field, if I turned crosswind along the line of trees I should get in with no trouble . . . Or so I thought.

Then it started! Control problems! severe buffeting on crosswind. Fully crossed controls at one stage. The trim was pushed forward—more speed—60kts, final turn, my God! Still over those trees, finals—I'm not going to make it over the second tree, only one thing to do push the nose down, increase the speed, ease the stick back to "zoom", over the tree. *It works!* But now I've lost all my speed and the buffeting is still unbelievable. At this point I see that the field is crossed with those almost invisible electric cattle fences, sited just at the right height to sever my head as we plough through them. The greatest area of clear ground is 90 degrees to my heading (and crosswind). I start to turn, oh no! Speed, I haven't any! The wing drops, aileron fails to have any effect! My left foot shoots out and I push the stick forward and I have a view of the ground which I never wish to see again. Stick gently back which becomes a roundout for touchdown. The wheel touches immediately and I haul on the wheel brake. We slither to a halt.

Down! Safe and sound, but only just. In my training I had been told all about wind gradient, turbulence downwind of large obstacles, and incipient spins, to say nothing of field selection, but there's nothing like a practical demonstration such as I had just had to teach you about flying.

Reprinted from the RAF magazine "Airclues", February, 1973.

OVERSEAS NEWS

FROM EAST TO WEST

UDO ELKE of East Germany flew a Foka 5 across the border to West Germany while taking part in the DDR National Championships held in June at Neustadt, situated about 35km from the frontier, and has asked for political asylum.

He flew across on the fifth contest day, Friday, June 22. The task was a 160km triangle and Udo landed near Soest, Westphalia at about 6pm, having crossed at a height of around 800 to 1,000 metres.

Udo, who has flown in several World Championships and been National Champion several times, became well-known when during the 1968 World Champs in Leszno, Poland, he collided with the Turkish pilot Aydogan on the first day and both pilots had to jump to safety. He is 32-years-old, an electronics engineer and a bachelor.

(From a personal telephone conversation with Rika Harwood.)

AUSTRIAN NATIONALS

HELD in Mariazell from June 2 to 16, these were won in the Open Class by Alf Schubert with 4545.5pts; 2nd, Othmar Fahrafellner, 3843.6. The first 4 flew Kestrel 17's. In the Standard Class, Harro Wödl won in an ASW-15 with 4950.3; 2nd, Andreas Hammerle in an LS-1B with 4664.4. (*Flugsportzeitung.*)

DUTCH NATIONALS 1973

AFTER six contest days Peter Teunissen and Daan Paré (both Std Cirrus) came 1st and 2nd in the Open and handicapped Class at the Championships held at Terlet from May 28 to June 8.

There were 33 participants, 11 of whom flew glass-fibre sailplanes. The tasks included two goal flights 85 and 97.5km, one out-and-return 325km and three triangles, 208.5, 300 and 114km.

Shortlisted for the World Championships are: Peter Teunissen, Daan Paré and Dick Teuling with Dick Reparon and Joop Jungblut as reserves. *Planeur.*

LESZNO LADIES' SUCCESS

WITH 13 national records broken during the nine contest days in which 41,381kms were flown the 21 ladies from 12 countries (all flying Pirats) taking part in the first international all-women championships held at Leszno, Poland from June 24-July 8 can look back on a very successful and interesting contest. This was won, perhaps not surprisingly, by Pelagia Majewska of Poland with 8,580 points, followed by Sue Martin (Australia) 8,261 and third Jindra Paluskova (Czechoslovakia) 8,038 points. Eda Waan (USSR) came fourth with only one point less, 8,037.

Ary Ceelen, Editor of the Dutch magazine *Planeur*, reports that the organisation worked extremely well and all retrieves were carried out by aerotow (Wilgas). In general the conditions were good although on a few days, owing to low cloudbase, no tasks were set.

The majority of pilots completed the closed circuits each day and only a few landed out. It is hoped that in 1975 another Ladies' World Championships can take place which would probably again have to be held in Poland because of the number of one-design machines available. Countries represented were: Australia, 1; Belgium, 1; Bulgaria, 2; Czechoslovakia, 1; Denmark, 1; East Germany, 2; Hungary, 2; Italy, 1; Poland, 4; USA, 2; USSR, 2; West Germany, 2. The youngest pilot was 23 and the oldest 54.

Tasks set:		*Best Speed*
Jun 25	— 187 km out-and-return	77.56km/h
26	— 322km triangle	80.14
27	— 544km along set line	*461km
30	— 206km triangle	71.38
Jul 2	— 306km out-and-return	69.37
3	— 250km triangle	73.68
4	— 2 x 104km triangle	78.33
5	— 187km out-and-return	69.05
7	— 150km out-and-return	50.66

*Best distance

GERMANS CLAIM THIRD 800km TRIANGLE

"SIGI" BAUMGARTL flew his ASW-17 at 82km/h round an 800km triangle on July 8 from Dinslaken, Germany.

Also H. W. Grosse (see p209 last issue) and Klaus Holighaus, Nimbus 2, have completed similar triangles.

The German Gliding Commission is going to propose to CIVV that a 750km triangle is included in the international record list.

MID-AIR COLLISION

A GLIDER pilot was killed in a K-8 in June after a mid-air collision with a Belgian air force Mirage jet over Recklinghausen, West Germany. The jet pilot ejected to safety.

HAHNWEIDE INTERNATIONALS

FOREIGN pilots came from Austria, Belgium, Great Britain (George Burton), Italy, Poland and Sweden. Twenty-one Open Class, 25 Standard Class and five two-seater sailplanes took part in this event held for the 8th time. The contest from May 26 to June 2 resulted in five scoring days. **Leading Results,** Open Class: H-W Grosse, 3,623; S. Baumgartl (both ASW-17), 3,465; K. Hillenbrand (Nimbus 2), 3,280. George Burton came sixth with 3,201 points. Standard Class: E. G. Peter (Libelle H-203), 2,977; K. H. Friedrich (LS-1D), 2,881; L. Brigliadori, Italy (Std Libelle), 2,837.

FINLAND

MATHIAS WIITANEN won all five contest days in the Nationals on the carbon-fibre Kestrel 19 on loan from Slingsby Sailplanes. George Burton who is flying this machine in the Coupe d'Europe at Angers, had only 24 hours before leaving for France to repair the damage which occurred, after the Finnish contest, when another pilot flying the Kestrel made a groundloop.

BELGIUM

BERT ZEGELS (Kestrel 604) won the Open Class Nationals held at St Hubert from June 30 to July 8 with five first places and one second; he also broke two national records during the contest. Michel Bluekens (ASW-15) with four first and two third places won the Standard Class. There were only six pilots in the Open and eight in the Standard Class with a further five in the Club Class which was won by Jaak Vliegen (Mucha) with four day wins, one second and one third place.

FRENCH TWO-SEATER RECORD

WITH a flight of 625km (388 miles) in an ASK-13 from Beynes, near Paris, to Les Alpilles, near the south coast, on April 3, Bernard Balay and Guy Albouy beat the previous French two-seater distance record of 595km set up by Fonteilles and Buffet in 1957.

GORAN AX NOW STANDARD CLASS CHAMPION

AFTER five contest days Göran Ax, World Champion Open Class, won the Swedish Standard Class Nationals (32 entries) with 4,929 points, followed by Ake Petterson, 4,475 and Gunnar Karlsson with 3,839 points. Göran Andersson won the Open Class (8 entries) with 4,658 points. Ax (Nimbus 2), Petterson and Andersson (Std Cirrus) will represent Sweden in Australia.

RHODESIAN NATIONALS

THE Rhodesian national gliding championships at the Salisbury gliding club, from October 8 to 19, have the Open and Standard classes flying the same tasks. Champions will be declared in each class and have equal status. No handicapping will be applied.

Entries to the secretary, CASA, PO Box 390, Salisbury, Rhodesia.

GERMAN NATIONALS 1973

Hans-Werner Grosse, ASW-17, and Helmut Reichmann, LS-1F, are the 1973 Open and Standard Class Champions after eight contest days. A total of 130,000kms were flown during the contest held at Hahnweide from June 10-24. The last three days were rained off.

The largest task was a 490km triangle for the Open and 420km triangle for the Standard Class. No tasks below 200km were set. Leading results:

Open Class		
Hans Werner Grosse	ASW-17	4954
Rudolf Wilsch	ASW-17	4893
Klaus Holighaus	Nimbus 2	4890
Walter Neubert	Kestrel 604	4794
Standard Class		
Helmut Reichmann	LS-1F	5044
Klaus Ahrens	Std Cirrus	4934
Hans Glöckl	LS-1c	4862

Two pilots under 21 years, Manfred Dick, Kestrel 17, and Walter Eisele, Nimbus 2, finished among the first ten.

The two Champions, Klaus Ahrens and Klaus Holighaus, have been selected to represent Germany at Waikerie.

SWISS RESULTS, May 26-June 3

AFTER six flying and five contest days R. Wetli (ASW-12) won the Open (9 entries), and H. Frehner (Std Cirrus) the Standard (21 entries). 2 Nietlispach, 3 Hedinger. Justin Wills came sixth. All in Libelles.

ARGENTINE NATIONALS

LEADING results of this year's Argentine Championships, after application of handicaps, are given in *Volo a Vela*:

1	R. Rizzi	St Austria-S	7491
2	A. Urbancic	Phoebus A	7123

Rolf Hossinger, 1960 World Champion, came ninth with 6009 points.

SOUTH AFRICA'S TEAM PILOTS

HUGH KEARTLAND, who has given South African gliding much financial help in past years, and was manager of the South African team at the 1970 World Championships at Marfa, will perform the same function at Waikerie next year, says *Wings over Africa*. The team will be Heini Heiriss and Tim Biggs in the Open class, and Bobby Clifford and Klaus Goudriaan in the Standard class, with M. Jackson as alternative manager or reserve pilot.

Other South African news: a new gliding club has been formed at Kimberley, with Rolf van Tonder as chairman, Klaus Goudriaan as an instructor, and as secretary/treasurer Charles McLeod, who is an air traffic controller at B. J. Vorster Airport, which the club hopes to be allowed to use for launching.

Two gliding camps at Bitterwasser, a large pan with excellent soaring conditions in South-West Africa, are planned for October 15 to 31 and December 25 to January 10, 1974. Visitors can either bring their own gliders or hire gliders there. Contact Peter Kayssler, Farm Bitterwasser, Post Office Rehoboth Station, SW Africa.

DANISH RESULTS

STIG DYE, flying an SHK, won the Open class at the Danish Nationals at Arnborg from May 29 to June 10 with Finn S. Hornstrup first in the Club class in a Foka 4.

Four days. The final results were:

Open Class, 5days		pts
1. Stig Dye	SHK-1	3593
2. Ove Sorensen	Std Libelle	3243
3. Jorgen Olsen	SHK-1	3201

STRIEDIECK USA WINS STANDARD

IN his ASW-15B Karl Striedieck beat the 56 pilots (5 contest days, 4705pts) taking part at Chester, S. Carolina from June 19-28. 2 Moffat, 4609; 3 Beltz, 4515; 4 A. J. Smith, 4505. All in Std Cirrus'.

Feminine World Records Claimed: Both the single and multi-place records for O&R have been increased to 686 and 518km respectively. The single-seater by Adela Dankowska, Poland. Multi-place by I. Gorokhova, USSR on June 6. (Sub to Hom.)

How to get "SAILPLANE & GLIDING"

"Sailplane & Gliding" can be obtained in the UK at all Gliding Clubs, or send £2.16 post free for an annual subscription to: British Gliding Association, 75 Victoria Street, London SW1H 0JB. Single copies, including post 36p. Enquiries regarding bulk orders of 12 copies or more, at wholesale prices, should be made to the British Gliding Association

OVERSEAS AGENTS

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BOOK REVIEWS

Free as a Bird. By Philip Wills. Published by John Murray. Price £3.50. Obtainable from BGA* mailorder £3.70, personal callers, £3.50.

IN the third chapter of this book Philip Wills reminds us of John Stuart Mill's famous essay "On Liberty". An apt quotation gives the kernel of both men's arguments, that we are free men and our actions should not be controlled except insofar as is necessary to prevent interference with others. A little later in the essay Mill wrote "There is now scarcely any outlet for energy in this country except business. The energy expended in this may still be regarded as considerable. What little is left from that employment, is expended on some hobby; which may be a useful, even a philanthropic hobby, but is always some one thing, and generally a thing of small dimensions".

Philip is living proof that not all Mill wrote in his essay was right, for gliding to him has been a thing of vast dimensions, and we have all benefitted from his experience. Now, in his third book, he conveys this experience to us in a patchwork of soaring recollections and pointed morals.

It must be read, for without his philosophy applied to our sport we shall all be on the ground, like the hapless majority, within a decade. And even worse (if you can imagine a worse thing) we shall all eke out our half-lives lying on a bed of conformity whose length and breadth (metric, of course) are prescribed by public opinion as judged by a one-in-a-thousand stratified sample. "That so few now dare to be eccentric marks the chief danger of the time".

"Free as a Bird" is not the coherent masterpiece of language that makes Philip's first book "On Being a Bird" immortal. That book sprang from the heart of a romantic, whilst his new one springs from the mind of one who, with advancing years, sees with great clarity the need to persuade others to preserve the freedoms the romantic needs. The author's transparent honesty and directness come out on every page, and if this leads to some over-simplication it is a touching fault.

Yesterday I flew my first Danish cross-country from Hornslet, the site of the Aarhus gliding club, to the Silkeborg gliding club. Conditions were bad (1,500ft cloudbase initially) and I think I took three hours, of which two were spent in controlled airspace (airfield TMA's). In the third hour I could not enter cloud, for that is forbidden. During all this time I met but one other aviator, a buzzard, whose startled look when I appeared clearly indicated that he hadn't seen a soul for days and days. He indeed was "Free as a Bird"; why wasn't I?

Buy Philip's book and you will find out; read it, and you will be inspired to help preserve and expand our liberty, "the only unfailing and permanent source of improvement". John Stuart Mill was more often right than wrong.

THE ARM-CHAIR PILOT

Principles of Flight: Lectures 1 to 5 of a series by W. G. SCULL. Published by the British Gliding Association at £1.00 plus 10p for mail order.

THIS is a reproduction, in printed form, of a series of slide-tape lectures devised by Bill Scull, the National Coach, for pilots attending instructors' courses. They can be regarded either as printed lecture notes or as the basis for making one's own recording. In conjunction with a set of slides, and using quite straightforward equipment, instructors can reproduce these lectures for their own pupils.

Bill Scull's enterprise in applying modern audio-visual techniques to ground instruction is most commendable and, in devising these lectures, he has rendered an outstanding service to the gliding community. He has provided a series of neat, concise lectures which help to standardise ground instruction in a thoroughly professional manner.

The task is, of course, an extremely difficult one. Some of the principles involved in the subject are conceptually rather tricky, particularly to a non-technical

audience; due account must be taken of the tendency of large numbers of citizens to shy away from mathematics; the diagrams must be simple and striking; the author has to assume that the pupils have little initial knowledge but, in presenting a simplified picture, he must not seem to be talking-down to them; and finally, however simplified it may be, it must be free from error.

One can always criticise the efforts of others, particularly when the accent they give to certain topics differs from one's own. But there are a few comments which seem to be pretty fundamental:

(i) It would be easy to get the impression that Bernoulli's theorem says that the sum of pressure and velocity is constant.
(ii) It is a pity that some effort was not made to explain why lift depends on speed squared, other things being equal.
(iii) The section on different types of drag seems rather complicated.
(iv) It is also a pity that the relation between induced drag and speed is stated without explanation. Admittedly, this is a difficult point, but pupils are bound to wonder why it behaves in such an apparently curious fashion.

However, these few criticisms should not be allowed to obscure the very real merits of the work: it deals with topics such as longitudinal stability and wing-dropping at the stall—often regarded as obscure—with great clarity. Indeed, I cannot think of a better, briefer, introduction to the subject than this.

The topics covered in the first five lectures are: Lift, Drag, Forces in balance and stability, Stalling and Manoeuvring. The next series will deal with Flight Limitations, Stability, Control and the Polar. Altogether, they should form a very sound basis for an understanding of how sailplanes work.

F. G. IRVING

Soaring on the Winds: a photographic essay on silent flight. By JOSEPH C. LINCOLN. Published by Northland Press, PO Box N, Flagstaff, Arizona, USA. Price $15.00.

MR. LINCOLN's excellent anthology of notable writings on soaring flight, "On Quiet Wings", was reviewed in S&G last October (p436). This has now been followed by an anthology of photographs, many of them covering a whole page (13 by 10in.) or even two pages, like the lenticular cloud that looks like the front half of the Concorde painted white. There are of course many showing sailplanes with beautiful scenic backgrounds, and photos of ancillary activities including the inside of a trailer; also clouds, mainly lenticular, and soaring birds. To start with, we have some historic gliders such as the Lilienthal, Wright and Vampyr types, Mr. Lincoln's anthological habit causes several pictures to be accompanied by quotations from, among others, Milton (Satan puts on swift wings), Lindbergh, Conrad (on how slowly the earth moves below a high aeroplane), Hemingway, Terence Horsley and Philip Wills (about air). As the author says in his introduction: "Every soaring pilot builds his own treasure-house of memories".

A. E. SLATER

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CORRESPONDENCE

WHO'S AFRAID OF THE BIG BAD SUMMER?

Dear Editor,

As an ordinary "for the fun of it" glider pilot, I have read with great interest Ray Stafford Allen's article "Motor Glider with a Difference" (S&G, April, p94). Like many of us—perhaps in fact most of us—I do not have available infinite time to wait around for good summer days and need to get my gliding when I can and whenever it is reasonably possible. There are limits to the amount of frustration that can be endured in what turns out to be unrewarding rigging and the high probability of inconvenient out-landings. How many of us can have a team ever ready to collect us from some remote rural spot at our convenience!

Enquiry led me to have contact with the K-7 that Ray has flown and, whilst I did not have this pleasure as the weather was just too bad at the time concerned, the potential was clear. A few simple calculations showed that two engine units would readily sustain and lift my Goevier mid-wing 15m two-seater, but the noise problem was a deterrent. However, the bulk of the noise was from the prop and calculation showed that the tip velocity was around 0.75mach 1, so it was hardly surprising; also at this tip speed the propeller efficiency must inevitably be rather low.

There would, it seemed be a better situation all round if the propeller speed was lowered, say by means of reduction drive to a separate propeller shaft. I ultimately brought two of these engine units back from Germany last autumn, where they are already approved in the present simple "prop-on-engine-shaft" form. In the past months a half-speed shaft drive has been developed based on the use of a tooth belt "timing shaft" drive and the parts sent back to Germany for flight testing by the initiator of these engine units, a keen gliding man at Münster. This has meant the making of a new design of propeller which has been dealt with at the German end of this interesting co-design development. Whilst we have not yet any exact figures for the flight performance, it is clear that there is a great reduction in noise with improved thrust; the static ground thrust has increased from 25kg to 34kg now that the full engine potential is possible at around 6,500rpm.

It will probably be the autumn of this year before I finally have my two engine units completely developed with propeller half-speed shafts—but that will just be the time when the English summer fades away—if we have one anyway this year.

It is hoped that these units will become commercially available in this country after the usual period for flight testing and approvals, so please do not enquire for details at present, I will send a further report to S&G in due course.

London. KEN CRACK

ATMOSPHERIC ELECTRICITY

Dear Editor,

Having read the report of the interesting experiments with atmospheric electricity carried out at Vrsac by Mr Goodhart and others (see S&G, December, p467), I feel that a few practical suggestions on electrical safety and comfort might not be amiss.

The earth has a vertical electric field, in fine weather, of roughly 50 to 200 volts per metre, and there is a tiny vertical current due to the movement of electrically charged molecules. As a glider moves vertically it tends to attract that kind of charge which will bring it to the same electrical potential as the surrounding air. But as the available currents are small, this can take many minutes, and so gliders are fitted with a "brush" of fine points which accelerates the process.

The fields are greatly enhanced in some clouds, particularly when icing is present, and the efficiency of the brush may be reduced. The formation of ice can bring electric charge with it until the glider is literally sizzling at the edges! What the pilot experiences depends on the extent to which he is exposed to these fields. If he is inside a metal cockpit with electrically conducting windows, he will be completely screened, but if he is under a nice insulating perspex canopy, in a glass-fibre glider, he will be very exposed.

Another effect that may be experienced is the frictional electric charging of plastics, rubbers and synthetic fabrics, which are at their worst in a cold dry atmosphere. One good wriggle in a nylon anorak can produce literally thousands of volts. Natural materials and fibres are generally much less troublesome.

How can we improve matters? Gliders are supposed to be electrically "bonded", and this should include all metal parts, such as trim levers, the stick and instrument cases etc. I wonder how often bonding is checked thoroughly by even a competition pilot?

To ensure that you don't get electrically out of step as the bonded parts change voltage it is necessary to be in electrical contact with the metal, possibly through an electrically conducting stick grip, if such a thing is available.

A piece of old aero tyre would do as a substitute for a grip and does conduct electricity.

If you do get shocks, grasp a coin or key firmly between your sweaty fingers and manfully touch a bit of bonded metal with the object. This spreads out the spark current and a discharge, which would otherwise sting like a hornet, is reduced to a mild, if unpleasant, twinge—I can vouch for this!

It is possible to greatly improve the electrical screening of the cockpit at no great expense. Anti-static paste for perspex is available, and the inside of the cockpit could be painted with an electrically conducting paint and connected to the bonded metal parts. A coat of decorative paint could be put on top of this conducting layer without changing its efficiency. Short of a lightning strike these measures should give a high degree of protection to both the pilot and his instruments. You would have to place your radio aerial outside the screened volume.

It should be possible to make a quite simple and cheap instrument to warn the pilot of the presence of dangerously high electric fields. This could make cloud flying less risky and might save lives.

Moseley, Birmingham. C. J. S. CHAPMAN



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GLIDER PILOTS TAKING SILK

Dear Editor,

It was good to read Sheila Corbett's ecstatic letter about the delights of parachuting. I am a former free-faller now out of that particular sport, having clobbered my right ankle some years ago falling off a motor scooter. Now I get all my airborne joys from gliding which I find even more satisfying.

But that's not to say that any glider pilot given the opportunity of making two or three jumps should not seize it. P. A. Howell deserves every encouragement in starting special jump courses for gliding pilots and the Essex club—no doubt encouraged by its president/immediate past chairman, with his very relevant background —should be warmly applauded for having tried parachuting on such a mass scale. For among glider pilots one often hears comments and fears expressed about parachuting quite as irrational as the "no fear, you'd never get me airborne without an engine" nonsense spouted by some otherwise intelligent power pilots.

Personally, if I faced the necessity of taking silk while gliding, I'd be grateful for the earlier experience and the knowledge that parachuting, *per se*, holds no terrors.

It is fruitless to speculate on how many pilots in the past may have been encouraged to stay with gliders they should have abandoned, with possibly dire results, because of an irrational fear of jumping. But there surely must have been some and any move to banish such terrors should be supported.

Belfast BOB RODWELL

MORE ABOUT BOUNDARY LAYERS

Dear Editor,

I would like to offer some comments on the article, "Boundary Layers", by James Gray (S&G, April, p97). Mr Gray's suggestion concerning the use of a venturi mounted at the wing tips to provide a source of boundary layer suction is very interesting and, as Frank Irving has commented in the article, "The idea of using a venturi to provide the suction must have occurred to most people familiar with the above principles".

One of the earliest studies we conducted at Mississippi State University did indeed address that very subject. Dr Raspet's report "Mechanism of Automatic Trailing Edge Suction" was published for the US Office of Naval Research on December 31, 1951. The conclusions of this work were much the same as the further remarks made by Mr Irving. The tip mounted suction source can provide the required low pressure to effect the suction but it quickly "fills up" when any appreciable quantity of flow is sucked.

Several suction sources were investigated, such as orifices in the upper surface of the wing near the tips to make use of the low pressure in and near the core of the shed tip vortex, venturis of various configurations, and bodies of revolution suitably vented and mounted at various positions near the tips. None was effective in providing the required quantity flow.

It is my opinion that neither laminar flow control for low drag nor turbulent flow control for high lift will be possible with a system which only utilizes a passive suction source like a venturi or some other orifice mounted in a low pressure region. The drag trade-off will, I think, be unfavourable in the first case due to the very low efficiency of such devices used as suction pumps. In the second case, the flow requirements for the high lift cannot be realistically supplied at the lower speeds.

A device which may be worth further investigation in this regard is the windmill. A study of this type was made by Mr Glenn Bryant of the Aerophysics Department at Mississippi State University and the results, while not conclusive, were more encouraging than the plain venturis or orifices. The windmill can be optimised to give the required suction power, flow, and pressure at a maximum efficiency. Whether that power taken at that efficiency will be greater or less than the power saved by laminarizing the flow remains to be shown.

I should like to make only two more comments and one is in regard to Mr Irving's observation about the difference between the suction boundary layer control used for low drag and that for high lift. In both cases, the surface distribution of

the suction is best applied over the entire upper surface of the wing whether through perforations or through other porous materials. In the high lift case, the suction may be concentrated at or near the leading edge to prevent or delay leading edge stall or it may be more uniformly distributed over the wing to delay turbulent or trailing edge stall. In either case, when one form of separation is delayed, the other looms as the next problem.

Finally, I think that something should be said regarding the clogging of the perforations used for suction. We were, of course, concerned about this possibility but it never seemed to manifest itself as a problem. Tests on a fabric-covered wing left uncleaned by any means other than airflow in flight for a period of over five years showed a deterioration in performance of less than ten per cent. On other aircraft, mud was a problem in wet, rough field landings but even this was readily removed with a stiff brush. We once flew in a driving rain an L-19 Bird-dog aircraft which was equipped with upper surface perforations in its metal wing. The performance was indeed reduced and we had to drain several quarts of water out of the wings upon landing.

It is very gratifying to see that performance improvements by means of suction are still being considered and that your readers are interested.

J. J. CORNISH

Marietta, Georgia. (Director of Engineering, Lockheed-Georgia Co.)

A CASE FOR STANDARDISATION

Dear Editor,

In the June Club News, the Norfolk gliding club called for national standardisation on 50mm trailer couplings. I think a survey would reveal that about 95% of towcars and trailers already comply with the Norfolk club's suggestion, but their commendable appeal for standardisation could perhaps be extended to other aspects of trailer towing.

There is considerable variation in the heights of towing balls on retrieve vehicles, and although many trailers have a telescopic strut to compensate for different heights, may I suggest that owners conform to the general standard ball centre height of 415mm ± 40mm (16¼" ± 1½"), with vehicle and trailer standing fully laden on a level surface?

Furthermore, the recent regulations permitting a 50mph speed limit for trailers give owners the option of marking the towcar kerbside weight and the trailer maximum gross weight in either imperial measure or in kilograms, provided the same system of units is used in each case. In view of the many permutations of towcars and trailers in the gliding world, may I further suggest that we all standardise on the metric system of kilograms (1kg=2.2lb)?

Whilst on the subject of standardisation, I note that no sooner have we become used to saying Hertz (Hz) for cycles per second, than the International Organisation for Standardisation renames the millibar as 100 pascals (Pa). How sweet! But what a pity we ever accepted the absurd use of the knot for rate of climb (even though it is roughly 100ft per minute). Inevitably we shall be forced to conform to the continental metres per second, just as air traffic control authorities will doubtless eventually measure altitude in metres.

Dereham, Norfolk. GORDON CAMP

PRESCRIBED DRUGS AND GLIDING

Dear Editor,

Until last week part of Law G3 of *Laws and Rules for Glider Pilots* meant little to me. It's that part which says "nor wilfully or negligently act in a manner likely to endanger the aircraft, or any person . . ."

As an *ab-initio* of two hours thirty-nine minutes P2 experience I hardly expected to be in a position to do so. But some weeks ago I had a minor nervous breakdown. My doctor told me to take a month away from work and prescribed tranquillisers and mild sleeping tablets.

She warned me that it might be a good idea not to drive or fly for a month and, whilst taking the tablets to avoid alcohol. I obeyed her instructions.

Three days before I was due back at work I went to a training session at my club. My doctor had cleared me to drive and fly and prescribed a further fortnight's supply of tablets. When my turn came to fly I hadn't eaten for seven hours but had managed to gulp down my customary tranquillisers.

Both my instructor and I put my poor performance on the first flight down to nerves and inexperience due to the lay-off. The near disaster as he took control just before (or as) we started to spin-in on the second landing was prevented only by his superb flying. He wrote some pithy comments in my logbook and recommended an aerotow, plenty of practice at straight and level flying and medium turns.

In discussing this incident with my doctor, she admitted that I should have been warned that the tranquilliser tablets should only be taken just after a meal as to do otherwise could cause symptoms of disorientation and disassociation.

If you print this letter, please do so as a warning to all pilots to check carefully with their doctor on the possible side-effects of any tablets that might be prescribed for them.

Back to that law—was I wilful or negligent? I am glad that, thanks to my instructor's ability, it was not a coroner who had to decide.

(*Full name and address has been given*)

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CLUB NEWS



Copy and photographs for the October/November issue should be sent to the Editor, S&G, 281 Queen Edith's Way, Cambridge, telephone Cambridge 47725, to arrive not later than August 15.

Copy and photographs for the December/January issue should be sent to the Editor to arrive not later than October 17.

June 16, 1973

GILLIAN BRYCE-SMITH

AVRO

DUE to the height restriction of 1,000ft because of our location at Woodford within the Manchester Control Zone, soaring has been a great problem in the past. This is well on the way to being solved now that we have been accepted in the Sleap soaring group with our Skylark 3F. There are now 14 members flying at Sleap on a rota basis so we have great hopes for the future.

CFI Gerry Ramsden organised a three week expedition to Compton Abbas in May and we were made very welcome by Rick Knight. We took the Skylark and K-7 with us and six Bronze C and two Silver C legs were gained.

The lecture by Bill Boot on parachutes was appreciated and most valuable. Since we operate on winch launches at Woodford, it was a great opportunity for members to sample the civilised method of launch by aerotow, also to break the 1,000ft barrier. G.C.H.

BLACKPOOL & FYLDE

AFTER a slow start the hangar is now growing rapidly, for it took several weeks to raise the pillars and grout them in, but only four hours of crane hire to lift the roof arches on. We have been toying with a small model and think we will be able to house all our present nine gliders in 60 by 60ft, though the private owners might well prefer to de-rig when they see the packing process!

The clubhouse has been earning cash from the sale of meals to finance the face lift that has been well started and has now got a telephone, Chipping 267.

It was touch and go whether we could find and spend £20,000 in time to claim our full grant of £10,000 before the deadline, but many of our members paid next year's subscriptions four months early, and the soaring fees started to roll in, so we now think that we will just make it. We have resisted the temptation to take on all the new members that would like to join us, because most of them are without experience and we could not give them a fair return. But we would be happy to hear from trained pilots who could join our duty crews, and especially instructors.

Most of our old hands have been cleared to use the hill, and are enjoying their flying immensely, a just reward for all their heavy hard work. We have used the full five miles of our SE face, and flown several five hour legs, although dying wind and dropping cloudbase can make the last hour tricky. We have only contacted mild waves so far, and are not finding it easy to get away across-country when a lot of cloud with a low base covers the hills.

We are now going to concentrate on

the pilots that had just gone solo, or were very near to it, prior to our move and are setting up a group training scheme. Unfortunately, the start of this has been delayed because the Blanik was bent; the only sheep anywhere near the landing run chose to panic towards the glider instead of running away. The argument with the tailplane bent the rear fuselage, which looked like a major rebuild job. Luckily the remains offered for sale in the last issue were exactly what we needed to be grafted on to our front half.

You may hear our radios now in use, or be flying in to us, so you might be amused to know our call signs. Situated at Cock Hill Farm our base just had to be "Rooster" and the club gliders are, of course, "Chickens".

K.E.

BRISTOL & GLOUCESTERSHIRE

SINCE the fire on the morning of May 7, our unofficial motto has been "keep flying". Indeed, the first flight started at 2.30 that same afternoon, when the holiday course began using the syndicate-owned K-2.

The fact that we were able to fly in May is due to the kindness and generosity of the Cotswold club, who lent us a K-7 for a fortnight, and the Oxford club, who lent us a K-13 for the next fortnight. Our thanks also go to the K-2 syndicate and to Tony Gaze for loaning a two-seater for the courses and providing us with aerotowing facilities.

We have since bought a replacement T-21 and a Terrier, and have placed orders for two other two-seaters. The Swallow will not, at present, be replaced. Both replacement machines were brought without C's of A, and some excellent work by Roy Jeffreys on the T-21, and Cyril Pugh and Ron Lewis on the Terrier, meant that these were flying as soon as possible. After Pete Bray and Ron Lewis had delivered the Terrier, we found a blackbird's nest in the wing! It now adorns the bar.

During the Bank Holiday week we held a task week with Aston Down: this started wet, and only the Friday allowed cross-countries. Frank Dent and John Taylor were the only Nympsfield pilots to reach their goal (Lasham), whilst of those attempting 300km, Rob Robertson landed back at Nympsfield on the second leg of his Lasham/Hereford triangle at 5pm., and watched it stay soarable for Dave Greenland to go to Hereford and back to complete the task. The other high spot of the week was the barbecue arranged by Keith and Bridget Knott on the Bank Holiday Saturday—certainly worth repeating!

Other flying news: on April 29 two 500km attempts ended near success, and a great deal of other badge flying was done. Ron Sandford declared Tarrant Rushton and Spitalgate as his turning points, and landed past Stratford on the way home (465km), whilst Derek Vennard declared Compton Abbas and Cranwell, but headed back home from Corby to complete the longest closed circuit from the site, 420km. Wave put in an appearance over the site on Sunday June 10, and four pilots contacted; Mike Harper and "Wee" Scots Robbie from aerotow, and Ron Sandford and your scribe from the winch. Later in the day Tom Bradbury, home on leave from Gan, reached 3,500ft but could not get above the cloud. Best height for the day was Mike Harper's 8,000ft.

M.J.C.

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CORNISH

THE weather started well for us this year and the courses have flown many hours using both ridge and thermal. In anticipation we visited Mike Robertson's private airfield near Bodmin over the Easter holiday, taking two K-13s, the Swallow and various private machines. Easter Monday was a great success, giving us a chance to sample inland thermals. Ernie Hayman, the CFI, flew his Skylark 3 in cloud to 8,000ft.

Our first cross-country flight of the year was by Terry Janson, who claimed the Early Bird Trophy by landing north of St. Austell in the Skylark 4. After many hours spent in the hangar Pete Arthur has given us back our Olympia 463, looking brand new after its C of A.

Brian Bowden is the latest member to convert to the Swallow and Carl Knight has done his duration. The privately owned Blanik has arrived and while we are all looking forward to seeing it in the air, so far, however, the weather has limited it to a 200ft ground hop (a test flight with a difference!).

P.H.

COTSWOLD

THE season has started well and six Silver Cs were completed during May and June, not to mention innumerable Bronze and Silver legs. Unfortunately, the good weather didn't hold for our task week with the nearby Bristol and Gloucester club and members spent most of the time staring out from the Nympsfield clubhouse. (See **Bristol News.**)

A number of Silver distances were completed and although several pilots did the round trip back to Nympsfield from Lasham, only our safety officer, David Greenland, completed the triangle in his Pilatus to become the first club member to get a Diamond.

Congratulations to Malcolm Belcher who has achieved the distinction of getting his Bronze and Silver within a year of starting to glide. The effect of all this precious metal floating around and the efforts of our new CFI, Malcolm Gay, has wrought quite a change in members' attitudes. It is now only necessary for a blue patch to emerge and bodies can be seen rushing around with barographs and maps.

J.D.H.

COVENTRY

THE Spring Bank Holiday at Husbands Bosworth was perhaps the most busy and spectacular we have ever known. Not only was it the start of the Nationals but also the beginning of the first ever International Vintage Glider Meeting and our fourth mammoth traction engine rally.

The good weather attracted over 16,000 people during the two days of the rally, mainly to see the steam engines but as an added attraction we had glider aerobatics and the Blue Eagles helicopter team, who gave a memorable performance of flying. There were some very strange shapes in the sky that week . . . beautiful bird-like shapes from yesteryear. Several cross-countries were made mainly along the milk run to Dunstable and back.

The dreaded T-21 has been "at it again" and has added cross-countries to Lasham and a very long flight to Rayleigh, near Southend, lasting seven hours. The beginning of June started with great promises, appropriately deteriorating during the Nationals and again continued to be good. Mike Costin showed us how easy it was and did a midweek 300km triangle Waddington-Dunstable.

At the AGM it was recorded that we had a very successful year leaving the club with some more capital to expand even further,

Many congratulations to the chief vehicle servicer, Bob Arnold, on his marriage and to his fellow Goevier syndicate partner, Richard Hoskins, on his engagement. A very warm welcome back to our ex-CFI Keith Nurcombe, now resident in South Africa, who came to look us up on a vacation.

V.M.G.

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DEESIDE

BOB KERR'S fatal crash has robbed us of a dear and cheerful friend and the club of one of its most experienced and enterprising pilots. (See also Highland.) But spirits are as buoyant as the wave which brought a crop of good flights this year. Club operations are pressing on and numerous improvements are afoot.

But first those wave flights; the members of the Four Counties expedition (S&G, June/July) gained their four Diamond and eight Gold heights at Deeside. Their haul was part of the six Diamond and 16 Gold height claims filed by visitors alone during the first quarter of 1973. During the same expedition Doc Saundby flew an out-and-return, of about 300km, to Loch Lomond.

Now that CFI Allan Middleton has been joined full time by assistant instructor/tug pilot Jerry Scarsbrook, weekday availability of site checks and instruction has been extended. Flying is available at any time subject only to weather conditions, aircraft serviceability and daylight.

A second runway is under preparation which will relieve congestion and prove a revelation to our many club members who think that cross-wind take-offs and landings are the only kind!

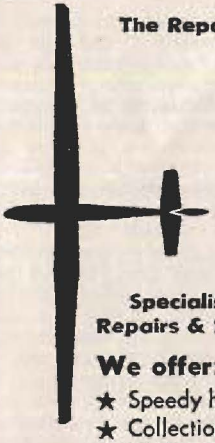
Aberdeen University gliding club is affiliated to Deeside but its committee is showing a welcome streak of independence. Having recently acquired a Bocian, they are driving a hard bargain over its use by Deeside members and the use by university members of Deeside machines. Good luck to them.

Good thermal conditions in April and May prompted a few cross-country flights, good friends Les Joiner and Henry Dyce popping in from their respective home ports of Arbroath and Lossiemouth and Bob Kerr having a large slice of the cross-country fun before his accident.

J.M.S.

DEVON & SOMERSET

SADLY we have to report general difficulties in our task week in June which went well but for the damage to both club two-seaters. The Capstan is an insurance write-off after a tricky downwind field landing and our Bergfalke III was slightly pranged in a long



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grass landing but that is back in service now.

Our mobile control bubble is back in full operation with acknowledgements to Dave Griffin plus helpers for the hard work. It makes life a lot more bearable on windy days. Launch rates in the long summer evenings are well up although the Beagle Husky tug has had engine problems so we were without aerotows for a while.

S.M.C.S.

DORSET

THE AGM was held at the clubhouse on May 4 with few changes in top management, Ray Witheridge staying as chairman, Lawrence Rice as vice-chairman and Dennis Neal remaining as secretary. The retiring treasurer, Peter Moverly, was replaced by Barry Thomas. However only two of the new committee served the previous year.

Lt Cdr Kidston, president, presented the annual awards as follows:— John Garrood cup for the longest flight (Gold distance), Graeme Morris; Alan Johnson cup for the tug pilot with most launches, Jim Tudgey; Schafthausen trophy for greatest gain of height, Joe and Terry Linee; Johnny Hanks cup for best achievement, Michael Belfield; Peter Baxendine trophy for best achievement in club aircraft, Winsor Lewis; Bovington Garrison trophy for the best endeavour on the club's behalf, Peter Moverley and the Val Cockle trophy for the best progress by an *ab initio* in his first year, Ken Pemberton.

M.L.B.

DORSETAIR

THE gliding at Compton Abbas is expanding nicely as more and more people realise that we're still active.

BAC at Hurn have formed a gliding club for their apprentices and are flying our equipment at the moment while they find some machines for themselves.

Ron Homes completed his collection the other day; after flying singles, twins and four engined types he added gliding to his log book. John Collins has returned from New Zealand and was quickly solo again in the Blanik. Both aircraft have been kept busy as members seek and find Bronze and Silver legs. Ron Powell usually comes up and proves that it is still soarable in the evening as he practises in the Skylark for our Comps.

Visitors are coming in thick and fast and it's pleasant to see them all enjoying themselves, the more the merrier so drop in on us some time!

R.L.K.

ESSEX

THE early start to the season gave many of our members an opportunity to chalk up cross-country kilometres and soaring practice for the Easter competitions but alas these were ruined by the usual North Weald Easter clag. So we all looked forward to the Whitsun weekend, a period normally used for an RAFA air display in perfect gliding weather. However, this year, North Weald clag!

In spite of these disappointments, we are up on last year's soaring times, cross-country kilometres, Silver and Bronze legs and have an added bonus of five new instructors, the results of a very hard-working week at the hands of Bill Scull.

We are now the largest non-professional club in the country with an excellent soaring record, operating from what must be the finest flat site of all. Our main runway 02 is 6,000ft long and with regular pulley launches to 1,800ft plus we can assure any visitor a splendid day's sport.

P.F.M.

ESSEX & SUFFOLK

THERE must be a meteorological law the boffins haven't yet discovered which gives beautiful soaring conditions in our area about mid-week in direct contrast to miserable weekend weather. This was basically the situation this spring and summer until a recent improvement brought a crop of Silver and Bronze C legs.

John Barnes did well in April to get his Silver C duration with Roger Davis missing his by only 15 minutes on only his second flight in the K-6CR.

The honour of the first unplanned cross-country goes to our new chairman, Mike Lee, who decided to have a closer than usual look at Colchester from the air. Thank you to our retiring chairman, Eric Richards, for all his past hard work, both on the ground and in the air.

Congratulations to Pete Wilby who passed his assistant instructor's course at

Husbands Bosworth. With our other instructors, he is already kept busy by a healthy number of *ab-initios.*

Our second tug, another Auster, is now fully operational and being worked hard —we fly on Friday evenings with the blessing of Wattisham ATC. We are eagerly awaiting the return of our K-7 with its new bubble canopy, rebuilt fuselage and new tailplane.

Once again three weekly courses are being held at Ipswich this summer and as well as training newcomers, club members look forward to good soaring conditions.

C.C.S.

HEREFORDSHIRE

CLUB membership is now building up at a very encouraging rate. As well as attracting many newcomers to gliding, we are also finding a number of people with previous gliding experience who had given up the sport through lack of a local club. We are also managing to convince a number of power types that flying does not necessarily mean being dragged around on the back end of a Rolls-Royce Continental!

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Our intensive gliding courses, designed mainly with the needs of the busy professional man in mind, are proving very popular. One such visitor, an experienced power pilot, but with negligible previous gliding, managed to get his A and B on the second day, finished his course by the fourth day and very nearly completed his Bronze C by the fifth!

D.L.D.

HIGHLAND

WE are very sorry to have to record the death of Bob Kerr, killed when his Dart 17 spun into the River Dee near Aboyne on May 27. He is sadly missed by his friends and a great loss to the club, where he was instructor, tug pilot and invaluable committee member.

Three of our members have gone solo for the first time recently—Stuart Harris, Alasdair Raffan and Wolf Schneider. Alasdair achieved his first solo on his 16th birthday and Wolf Schneider gained his C certificate by soaring for 20 minutes on his first solo flight.

R.E.T.

LAKES

IT is one of those all action periods!! In the four weeks ending June 2 Harry Conroy, Ray Jackson, Roy Partington, Jill Gillete, Pete Craven and Arthur Alsford all completed their Silver C duration. Arthur also claims Gold height for a flight exceeding 15,000ft and Ray claims Silver height for a flight to over 12,000ft. Three of the Silver durations were flown at the same time, in rather inclement weather, over Black Coombe. During all this activity, one of our young ladies managed both Bronze flights in the same afternoon.

In the same period, but at Bickmarsh, during our annual "jolly", H. Conroy claimed a Silver C distance for a flight just short of Husbands Bosworth, and Pete Redshaw a triangle, Bath racecourse, Market Harborough, Bickmarsh which, if accepted, will net him a Gold distance with a Diamond goal, and the first complete Gold in our club. This epic was performed in eight-and-a-half hours in an Olmpia 2B, which some will remember as a very well behaved, but obsolete, wooden aircraft. Pete considers the price of this particular Oly has doubled overnight.

R.R.H.



Martin Moroney and Maureen Toulson found there was more than one way of eating a kebab
Photo: Roger Barrett

LONDON

THE weather has come, but the completion of a 500km triangle remains to be done from Dunstable. The closest to it so far this year was 430km by Carr Withall in a Kestrel 19, while Frank Pozerskis has been to Shobdon and back trying this elusive task.

Gold C's have been as elusive too, but Frank Woods achieved his Diamond goal from Sutton Bank, while Ray Stafford Allen did his during the Sports Class contest. Congratulations to both.

Four cross-country weeks have led to numerous Silver C's, the club K-13's having done several trips to Lasham and Husbands Bosworth. Of note was a goal flight by Dilys Yates to Bickmarsh, who now has only the five hour hurdle for a complete Silver C.

The cancellation of the Regionals due to lack of support was a great disappointment, but the Kebab party on what was to be the first night of the Comps, attracted almost 200 visitors and was a real success. The weather treated us well, and dancing with coloured illumination and stroboscopic lamps went on until midnight under a clear sky.

Our AGM voted in some new blood on to the committee this year, notably Alan Betts, John Sharp and Phil Wilcockson. Tom Zealley has started his tenth term of office as club chairman, a job which has never been easy. There are new threats with respect to airspace changes in the region of Dunstable, and we are fighting proposals to route Heathrow traffic out over Luton. In addition to this, the proposals include a northward movement of the London TMA to embrace Dunstable. Both of these are very serious, and Tom will yet again be in the forefront in the process of stemming the tide.

M.P.G.

MIDLAND

RECENTLY, there has been excellent soaring, but mostly mid-week. Fine for course members, and for those who can take a day off at short notice. Don Brown, for instance, saw good conditions developing, hastened to the hill, rigged, and although it was now after lunch, declared Great Yarmouth. He fell down in the totally dead air just 8km short—but returned in excellent spirits and said he enjoyed the ride.

After a long run without aircraft problems, we had in the space of a few weeks substantial damage to a K-13 and to the Oly 463. In the case of the two-seater, we were glad to have our "back-up" third K-13, and to keep solo pilots airborne we were able to have the use of the Priest/Scarborough Oly 2B. Not modern perhaps, but a glider that has made some excellent flights in the past. By the time these notes appear we hope the fleet will be back to normal.

W.J.T.

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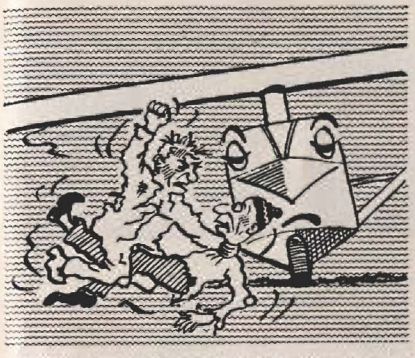
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NORFOLK

IN the last issue it was suggested that we might exchange the T-21 for another single-seater, but to avoid bloodshed between certain members, we have decided to keep "old faithful".



There's nothing quite like a spell of local soaring with that special companionship of a side-by-side two-seater, apart from which there may well be a case for retaining the T-21 for intensive circuit training during the winter months, reverting to autotow launches at 35p.

A new venture for Tibenham was a task week in May. The added spice of competition produced several noteworthy efforts, but all were over-shadowed by Derek Hill's Gold distance to Hawarden via Husbands Bosworth. C.E.H.

NORTHUMBRIA

THE club fleet now consists of a T-21 and T-31 for basic training, a Capstan, Grunau and a recently purchased Swallow. These aircraft, along with the Auster tug, give us a fairly comprehensive range.

New private machines include an Olympia, a K-6CR and a Swallow, making a total of some 20 aircraft on the field.

Earlier in the year Andy Townsend and Ken Holburn flew to Sutton Bank, each gaining Silver distance and duration. Ken wasn't sure of his launch time so added an hour to his flight and was airborne for six hours ten minutes.

The courses are well booked and as Alan Brown, our full-time instructor, has passed out as a tug pilot, course members may now have aerotows.

G.D.R.

OXFORD

WE welcome the Chilterns gliding club to Weston on the Green. During the Parachuting championships at Weston, Chilterns gave us a home at Abingdon.

With the pattern of summer weather established—glorious during the week and poor at weekends, no spectacular long cross-country flights have been flown. John Ellis did an epic scrape in the Skylark 3 round Silverstone and Banbury. Peter Brooks in the K-6E has flown out and return Husbands Bosworth, Abingdon, Odiham.

On June 3 Andrew Henderson flew his Silver C distance from Enstone to Husbands Bosworth in the Skylark 4. Thus returning to the site where he successfully completed his instructor's course a few weeks previously. Bronze C legs are coming thick and fast from the newly converted keen Skylark 2 pilots.

Organised interest in gliding seems to be reawakening with Oxford University. This has resulted in additional keen members; one of whom, Bill Helfrecht, flew his first solo on June 9.

J.R.

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Ouse chairman John Mawsen and Derek Moore preparing for an instructor familiarisation flight in the club's new K-13 Photo: Geoffrey Mitchell

OUSE

FIRST the good news. Our sparkling new K-13 arrived in time for Easter. After a few weeks with instructor familiarisation flights, the members have been giving it some "stick" and John Reid soon used it for his first solo. The bar conversation became a debate on its performance compared with our prototype Capstan. The Capstan seemed to win.

It is with great regret we report the sale of our beloved T-21—to the Cairngorm club. One of its last flights here was with Eric Rogers and his son John —in two hours soaring they reached heights of more than 6,000ft.

We are at present busy with evening flying sessions for private groups. Within weeks of opening the booking list it was full and still requests are coming in. The only trouble is there aren't enough light evenings in a year to cater for the demand.

G.M.

SHROPSHIRE

WE now have eight gliders on site and, with a Kestrel due early in 1974, have reached maximum launching capacity for our Terrier tug.

Since mid-April soaring conditions have been generally good with thermals, waves and a cold front all laid on. May 12 produced strong waves and a 160km triangle was completed with cruising speeds along the wave being 80-90kts at 8,000ft. A greater distance would have been possible had there not been a continuous stratus layer to the south. The evening of June 9 also produced good wave conditions allowing climbs to between 7,000ft and 8,000ft within two miles of the airfield.

Will pilots please note that Sleap airfield is not available for landing Monday to Friday, 8.30am to 5.00pm as it is used for vehicle testing during these times. Landings at other times are PPO (please call on 130.4Mhz or 122.45Mhz, or telephone Wem 32882). I.P.

SOUTH WALES

THE AGM June 5 resulted in a completely new committee — chairman, Norman Evans; secretary, Jill Roberts and treasurer, Andrew David.

John Heath visited us on the weekend of June 2, but he should have come a week later when he could have sampled some Welsh wave—the K-13 was passing through FL80 before 9.30am!

The first 300km closed circuit from Usk was completed by Earl Duffin in his Cirrus on a 500km reconnaissance. The only Gold height recorded so far this year was gained by Peter France in wave to 12,000ft.

Silver heights and distances have been logged by Les Chirnside, Bill Smart and Steve Thomas. Steve took his K-6 to the Long Mynd and on landing was asked if it was soarable!

Site development continues apace with the completion of the bar imminent.

S.P.P.T.

SURREY & HANTS

IT had to be a better season than last year—and it is. We are up to a total of 18.500km in cross-country flights with club gliders contributing 5,500km. There are 21 300km trips in the book with nine flights of more than 400km, including Alan Purnell's record 400km triangle of 80km/h. One result of all this has been a welter of trailer driving.

Social activities have developed beyond our wildest dreams with no excuse needed for at least one party a month. Ray Brigden of Southdown fame has, as chairman of the caravan committee, whipped the caravan site into a veritable Kew Gardens. It hardly leaves us enough time to fly.

C.L.

WOLDS

OUR new K-7, which arrived in April, surprised some of us by having much larger and more effective dive brakes than our old machine. This has provided some quite interesting moments for our instructors—particularly in some of the very strong wind gradients we experienced during the spring!

The spring and early summer have produced a batch of six first solos and several Bronze legs. Our very full programme of evening flying is paying dividends, both in increased revenue and also as a recruiting exercise.

We remind all readers that our airfield is at Pocklington in the East Riding of Yorkshire, adjacent to the A 1079 York-Hull road. All visitors, either by road or by air, will be made most welcome.

R.H.D.

WYCOMBE AIR PARK

THAT fantastic week of sizzling soaring days in June gave Laurie Beer his third Diamond with a 500km triangle, Stowmarket, Frome, Booker. On the same day Rocky Stone declared an out-and-return to Knaresborough to beat the current record, but fell short having completed over 500km.

Still on the same day Graham Saw completed a 300km triangle, Nympsfield, Husbands Bosworth, Booker and Chris Wylam, Ron Howland and Bill Horne all completed their Silver C's.

During that week Richard Aldous, flashing around the countryside in his Kestrel, completed a total of 1,000km cross-country, collecting his Gold distance and Diamond goal along the way with an out-and-return to Bridgnorth.

We are also especially proud of Chris Rollings, our Deputy CFI, who won the Club class Nationals in the K-6E with a 700 point margin!

J.M.C.W.

YORKSHIRE

OUR directors have decided on a major development programme which will double our hangar space and dormitory facilities as well as providing additional workshop facilities.

A limitation on private aircraft seems inevitable within the next two or three years, so any intending private owners would be advised to stake their claim.

The club fleet has recently been updated by the acquisition of two Pirats so there is no need to drag your ship up our 1:4 gradient—just come and fly ours.

Recent notable achievements include a record breaking 100km triangle at 103km/h and a 200km triangle at 83km/h by Barrie Goldsbrough. April 29 was another remarkable soaring day on which a total of 2,000km were flown by club members on cross-countries. This included 300km triangles by Fred Knipe and Nick Gaunt, three Silver distance legs (one by the vintage Kite 2) and six closed circuits between 100 and 220km —all very peaceful for ground crews.

On Monday, June 4, two more Gold flights were added to the list when Frank Woods, on a visit from Dunstable, and Phil Lazenby turned Spitalgate—Frank getting his Diamond goal and Phil just missing out.

D.C. & S.V.G.

ULSTER & SHORTS

EXPEDITIONS are the "in" thing now that we have a tug with enough poke to make them possible.

Our Easter trip to Farranfore, Co Kerry, was a great success and proved it's not all blarney about Killarney. We had splendid thermal soaring over, around and through incomparable scenery and cloudscapes, together with lively evenings wining and dining with friends from the Kerry and Dublin clubs, whose week we shared.

But the wave did not materialise to any great extent. While Alan Sands

achieved a Gold height in cu and a Kestrel, the best height reached in one afternoon of weak wave was about 6,000ft.

A memorable highlight was undoubtedly the biggest gaggle of gliders Irish airspace has ever seen, when everything flyable at Farranfore was sharing one shallow slice of the same thermal over the small town of Castleisland. Rumour has it that a touring circus suddenly lost half its matinée audience when they all trooped outside to watch the show above the tent.

In early June we tried Magilligan beach and Binevenagh ridge — Ben Twitch—again. Professor Stephens completed his Silver C in the Queen's University Skylark 3 by flying much of the way back to Belfast at the end of the second day.

Other expeditions are in view as these notes are written—one to St Angelo in the Fermanagh lakeland and another, a task week, with our southern friends at Kilkenny. An autumn wave week at Farranfore has also been suggested.

But while we are now freed on a weekend expedition basis from the well worn confines of Newtownards, the search continues for a new permanent site less prone to being quenched with sea breezes every time, while inland, it's all going up.

R.R.R.

SERVICE NEWS

ANZUK SINGAPORE (RN)

WE now have extended use of the airfield including all day on Sundays. With two new cables we are operating well. At present the T-21 is off the line for a major, and is to be recovered at the same time.

The membership of the club had a rapid increase at the end of the wet season; however, we miss three of our hard core workers—Gary Colbert, Bob Atkin and Digby Turner. Pete Larsen went solo on May 1, also on that day Smed Armstrong managed to soar for 50 minutes—quite an achievement in the conditions here.

Over the last few months we have been pleased to welcome several members from Kinloss, Four Counties, East Midlands, St Mawgan and Fenlands; our special thanks to the instructors amongst them who helped so tirelessly. At this point I must make it clear that we offer reciprocal membership to members of service gliding clubs and servicemen who are members of civilian clubs.

J.W.

BICESTER (RAF GSA CENTRE)

AS this is our first contribution in 1973 there are a number of changes to the staff and fleet to report.

After many years at Bicester, Alec Chapman has been posted to Henlow; his replacement in the carpenter's shop is Bob Welsh, a newcomer to gliding but fast getting the bug. Another addition to the staff is no stranger to gliding, Chalky White who has recently obtained an inspector's ticket. A Chipmunk has been added to the tug fleet bringing the total of this type up to three. We now have a Pilatus B-4 and Foka 5 in the fleet, and by the end of August a Cirrus and Kestrel 19 will have arrived.

Some of our members have done well in competitions, notably Tony Simms who was placed fifth in the Junior Inter-Services; he followed it up on June 1 with a 300km triangle and completed his Gold badge. Not to be outdone Simon Field took the Dart 17R around the same course on June 5 and also completed his badge.

As many of our pilots have had successful cross-countries and height climbs so far this season it is not possible to mention them all, but two of our young members Carolyn McFarlan and Michael Abbey deserve to be singled out for a pat on the back. Carolyn did her Silver C in eight months after going solo, and Mike with the completion of his Bronze C and one Silver leg has been recommended for a Whitbread Bursary. At the other end of the age scale, John Brown has the distinction of being the oldest pilot to solo with us.

The success of Pete Saundby, Des Holdcroft and Bill Dixon in wave at Aboyne earlier in the year has aroused so much interest that Andy Gough is planning to have a safari there in October/November. It is possible that

some of the Army Gliding Association will be there about the same time so a spot of friendly rivalry could result.

Tommy Thompson, one of our Dart syndicate, is emigrating to Canada and we wish him the best of luck. His share in the Dart is being taken over by Robbie Robertson, an ex-chairman of the centre.

A most enjoyable barbecue was held on June 23 and coupled with a farewell party for two of our American members Doug Parish and Whitson Bush; they have been staunch supporters of the club and we shall miss them.

A.E.B.

CHILTERNS (Weston on the Green)

THE club continues to prosper despite yet another move. We are now at Weston on the Green, sharing the site with the Oxford club and the RAF Sport Parachute Association.

Our president, Air Vice Marshal Stacey, visited us on the last day of operations at Abingdon and was flown to Weston on the Green in the club K-13, this being our first official landing at the new site.

The Junior Inter-Services Competition went quite well for the four club pilots who entered with best performances by CFI Jock Manson in the Sports class and Malcolm Norris in the Club class.

The club held its first official reunion on May 19 at Abingdon when several founder members attended. "Lefty" Kurylowicz, and if it hadn't been for his efforts the Chilterns wouldn't exist today, presented our chairman, Gp Capt Bruce Thompson with a superb scrapbook recording our progress from 1958 to 1970. A letter enclosing a cheque for a round of beers was received from Air Chief Marshal Sir Theodore McEvoy.

G.M.

CRUSADERS (Cyprus)

DURING the winter months in Cyprus we have seen the usual mixture—high spirits when we have 8kt 5,000ft thermals, gloom when the winds have been high or the airfield activated. Fortunately the latter are few with only five non-flying weekends this year.

One boon we have benefited from this year is regular aerotowing. We hire a Piper Cherokee from Nicosia every week-

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end and use our own tug pilots.

This will prove to be even more beneficial as the summer progresses because although the thermals get stronger and higher, they also move further inland. Without the tug this would mean our usual weekend expeditionary visits to the inland flying site about 15 miles from Famagusta.

We are looking forward to the delivery of the new Blanik in October which will bring the club fleet up to seven, including two T-21s, ASK-13, Olympia 2B and a Swallow.

We are sorry two very active members are returning to England—Kevin Allen, who in two-and-half-years progressed from *ab-initio* to Silver C full-cat instructor and Dave Cole, our treasurer for 18 months. He also went from *ab-initio* to two Silver C legs. Best of luck to you both in the UK. J.R.O.

CULDROSE (RNGSA)

THE sad death of Edith Wells on Thursday, April 19 has left a large gap in the club and especially in the life of Peter, to whom we offer our sympathy. Together they were instrumental in founding the club and welding it into its present strength. Edith's constant encouragement to the newer pilots (or stern admonishment when we went astray) and endurance behind the butty-bar will be sorely missed—we owe her a lot.

Our Easter course suffered from damage to a Capstan in an unexpected land out, but repairs are almost complete and in the meantime we have tasted real gliding, in the shape of a T-21 kindly loaned by the Mawganvale club. They have temporarily joined forces with us rather than take off and land on instruments because of waist-high grass at their present site.

S.C.

EAST MIDLANDS (RAF Swinderby)

AFTER a shakey start to the year, things are now looking up. Roger Staines and Don McPhie took part in the Junior Inter-Services competitions, Roger finishing 11 in the Sports class and Don at 13 in the Club class.

The reverse pulley is now our primary method of launching and one hundred plus launches a day are now becoming a common occurrence.

An *ab-initio* course was held in May with five people completing their A and B, including our chairman, Gp Capt J. E. Kilduff.

Two 16 year-olds went solo, David Densham on his birthday and Karen Newman four days after she came of gliding age.

Ian McGregor and Dave Robinson recently completed an instructor's course and are busy learning about flying the K-4 from the back seat.

Roger Staines, our deputy CFI, will be leaving us at the end of June. Roger (and Paul) will be greatly missed and we wish them every success. A.G.F.

FOUR COUNTIES (RAF Spitalgate)

JUST a few days before he became a father, George Lee broke the UK 200km record flying the club Kestrel 19. Congratulations on both counts.

During the Inter-Services Championships the Bocian was flown to Great Yarmouth on a sponsored flight and has raised about £150 for a local charity.

Alan Farmer from our club was third in the Sports class at the Husbands Bosworth Nationals. During the past weeks three of our K-8 pilots have gained their Silver C distance. Colin Pollard flew to Husbands Bosworth (60km) and collected his Silver height on the way. He then had a re-light and flew back to Spitalgate. Joe Keen and Colin Towle have also flown the distance.

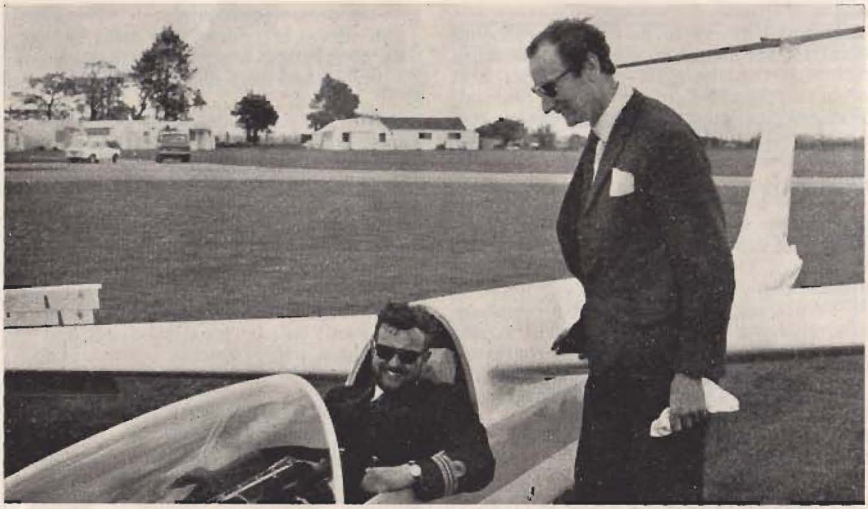
R.T.D.

KESTREL (RAF Odiham)

OUR training programme continues well with the recent solos of two of our female members, Marilyn White, soon to become Mrs Leigh Hood (honeymoon at Lasham!) and Sandra Dare. Several Bronze and Silver legs ensure that our solo machines are well utilised.

We said farewell this month to Howard Jarvis, posted to Germany, and thank him for all his work in the club.

Our latest airfield acquisition is a new caravan. Many envious glances can be seen on the airfield most weekends. John Williamson appears with his Std Libelle and the Army Std Cirrus is with us for Leigh Hood to fly in preparation for the Nationals. A.M.B.



Richard Lovett, secretary of Portsmouth (RNGSA) tries out the club's new Foka 5 watched by John Limb, the treasurer

PORTSMOUTH (RNGSA)

THE good soaring conditions of the spring have continued into the summer and three members, Messrs Lovett, Sims and Turtle, have completed their Silver badges with cross-countries. Mike Berridge also achieved Silver distance in the Kestrel 17 (mutters and cries of shame from the old hands). Unfortunately Lee-on-Solent has disadvantages as a soaring site and cross-country pilots must get away early before the sea-breeze, which usually starts before midday. Nevertheless, Silver duration is possible and has been gained by several members at this site.

We now have another single-seater, the Foka 5. This is proving to be very popular as it has much better handling and performance than the Skylark 4 which was previously our best club aircraft.

Membership again exceeds the 100 mark and with three two-seaters and three single-seaters and a motor glider, we are well on the way to making 1973 our best year ever.

R.F.L.

SOUTH WEST DISTRICT (RAF Upavon)

WEEKDAY weather conditions have inspired early morning starts at Upavon though the weekends haven't been so encouraging. We have, however, had 14 cross-country flights since our last report. A total of 921km have been clocked up. Competition pilots from the club have done extremely well in the Inter-Services and added many more kms to that total.

We are expecting a number of pilots to complete their Bronze C soon and the club keeps on with the programme to maintain a high standard of instructors —John Sprules has his assistant category rating and two more members await to follow suit.

After reading the article on the BG-135 in S&G club members were interested in Eric Robinson's visit to the club in this glider. It's easy ground handling was most impressive and gave food for thought as a future club machine.

We are planning to visit Scotland in October with the hope of some wave soaring, a rather elusive weather formation at Upavon.

J.R.A.

WREKIN (RAF Cosford)

THIS is the time of year one could call "instructor's delight" with Bronze and Silver legs almost daily. To some they come easily, such as to our founder chairman, Sqdn Ldr G. Young, who we are delighted to see has his Bronze C

before leaving in September for Masirah. Ron Curtiss and Colin Moore have also qualified.

With our T-21 awaiting spares, the number of first solos is low but Dave Cottle managed his in the syndicate Skylark 2B.

At the other end of the scale, congratulations to deputy CFI Chris Waller on his third place in the Nationals Club Class and Chris Joslin for his second place in the Junior Inter-services competition.

Our thanks to the Worcester club for putting up with our K-8 twice in one day on Silver duration flights flown by E. (Tug) Wilson and "Polly", who has also successfully completed his instructors' course.

Though Neil East is doing a fine job running the evening flying and piloting the tug, we could accommodate some more experienced pilots from service people in the area.

Keith Horsent still has fingers crossed hoping that a barograph calibration will give him a Gold height after a 40 minute cloud climb to more than 10,000ft.

K.M.R.

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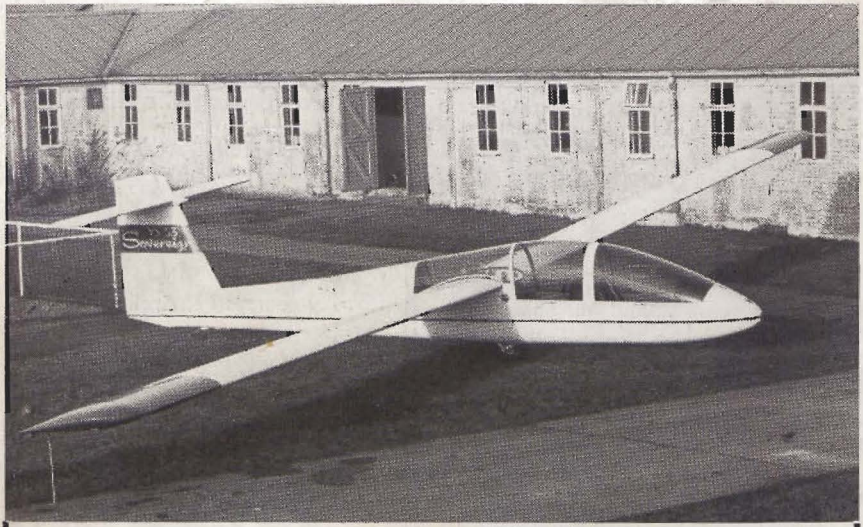
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