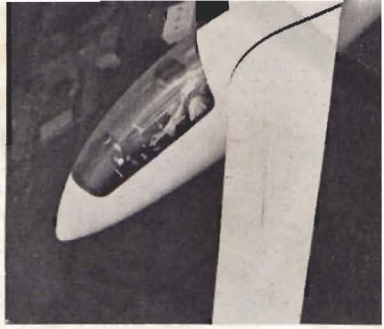
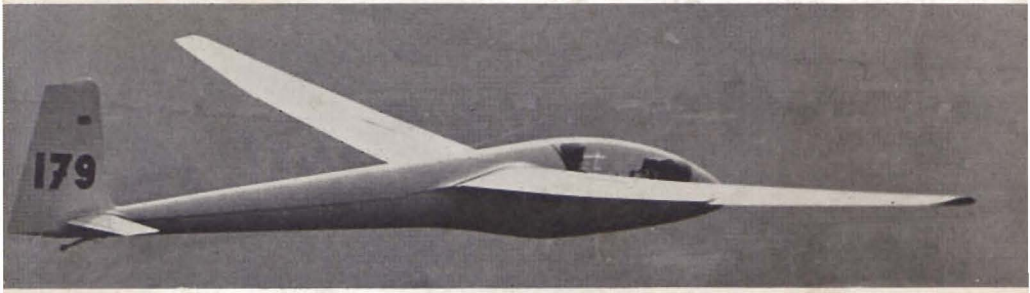
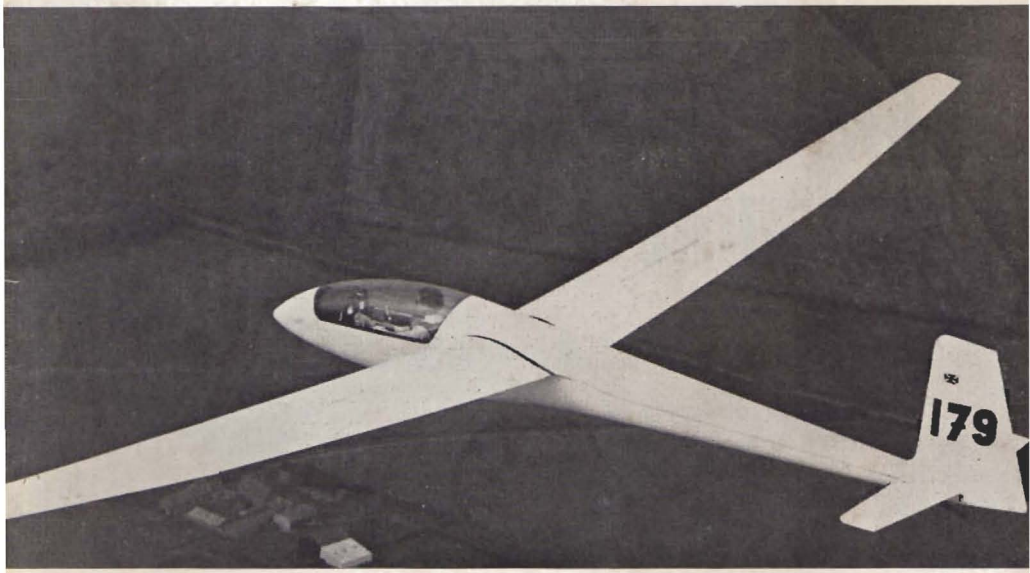
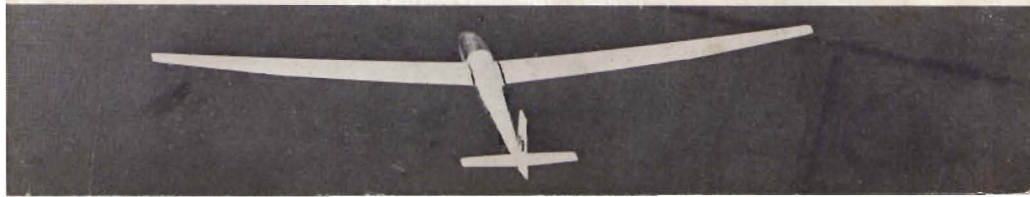
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August — September 1971 30p









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RIKA

LET NO-ONE come up to Rika Harwood (as someone did to the writer the other day) and ask: "How are you enjoying your retirement?" Rika has retired from full-time work—not just work—on S&G. That is all.

To put across to the average reader how hard Rika has worked since she joined the editorial staff in the late fifties, not merely from "nine to five", but often at all hours of the day and sometimes at most hours of the night, one is faced with an almost impossible task. Why? Because the average person seems to think that editorial work consists of taking something out of an envelope and putting it into another one addressed to the printers. (One otherwise intelligent member of our Committee used to call on the publishers, be shown an article just arrived, and order them to send it direct to the printers "to save time"; the result was a colossal bill for proof alterations, and two months' delay in its publication.)

Rika learned gliding the hard way—on open Primaries at an RAF gliding club in Germany soon after the war. She met Godfrey through acting as his Secretary on the Allied Control Commission. On coming to England she progressed quickly at Lasham and was soon flying regularly in Nationals, being nearly hit on one occasion by someone who barged into her thermal without looking.

I first encountered Rika in 1954 at the World Championships at Camphill, where she acted as interpreter. She began working for S&G in 1958 at Londonderry House, where she would turn up early in order to go through the BGA's mail in search of useful news. At Artillery Mansions she arranged her desk seat to give a view all down the corridor so as to nobble any newsworthy visitor calling on the BGA. So it was most useful for the magazine to have someone in the London office—and occasionally exciting, as when one caller, incensed at being asked to pay for a back number, threw it at Rika and strode out, fuming with wrath. It was also useful for someone at Lasham to collect the news there, and importune potential contributors—especially in the days when the leading characters reacted hysterically to the sight of a non-member writing anything down.

Rika at the 1960 World Championships at Cologne was something to watch. Having got the job of covering it for Reuter's, she wheedled out of them a jeep-like vehicle and a caravan. Butzweiler air station had a "classified" area in the middle, so everyone had to drive out from the living quarters along an increasingly churned-up cart track, and then, on re-entering at the airfield end, have their credentials inspected by the staff of a guard room. Of course, Rika would have none of this; a liberal distribution of cigarettes ensured that she could charge at speed past the waiting

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vehicles with just a friendly wave from the credential-examining staff. She was a thorn in the flesh of the Press officer, who normally went home each evening to the other side of Cologne. When Dick Schreder, after getting lost over the Baltic and landing in East Germany, got back two nights later at 3 am, Rika was there; next morning she asked the Press officer if there was any news of Schreder, and of course he didn't know, so to his discomfiture *she* told *him* instead of the other way round. Often, at that Championship meeting, Rika would manage to infiltrate into the holy of holies where the organisers held their confabs, and would relay important information in a subdued voice over the phone to the British team.

At the 1968 Championships in Poland, the official start-line observers were far away at the far end of it, out of reach; so Rika organised an unofficial start-line observing party at the near end, and we soon collected a stream of team leaders, all asking if and when their pilots had crossed the line.

These are a few incidents only from the past, but you haven't seen or heard the last of Rika yet. A magazine like S&G is an unrelenting taskmaster.

A.E.S.

★ ★ ★

BRITISH GLIDING AND THE EEC

By P. A. WILLS

AT THIS time of writing the possibility of our joining the European Economic Community seems fairly high, so what might be the likely effects for the gliding community?

On the matter of trade, probably good. We have in practice suffered discrimination in the import/export field, because it has been fairly easy for UK citizens, as syndicates, to import European gliders duty-free, with no such system working in our favour the other way. A few British gliders were exported to Holland and Italy, some years ago, but none to Germany or France.

On the much more important human relations side, the cost of Channel transport for gliders has proved a major barrier, and will continue to do so, though of course any simplifications of currency, passport and similar tiresomenesses will help us to meet on each other's gliding fields more often than we do now.

But I don't think anyone, in any field, and not only in gliding, has realised the most important point of all. This is in the general field of bureaucracy. We may struggle and complain about our multiplicity of red-tape, but compared to most European countries we are virtually free, and particularly this is the case in gliding. The powers delegated to the BGA are greeted with incredulity everywhere in Europe—and in most other countries in the world. Worse than that, most European Aero Clubs—and even the Fédération Aéronautique Internationale—have come to accept ever-increasing governmental control of all aspects of sporting aviation as inevitable and almost as necessary, in spite of the hard evidence to the contrary provided by the BGA's successful record of self-discipline in our own country.

The opening words of the Dutch Air Navigation Act, followed by ever-growing volumes of restriction, are "Aviation is prohibited except . . . ." It would be hard to better, in so few words, a cast iron formula for a Parkinsonian bureaucracy.

There can be little, if any, risk that, in joining the EEC, we will be offering our gliding selves up to the possibility of similar chains, but if anyone here has the time to fight for more freedom for our European gliding friends, they should be as keen for us to join their community as am I.

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OPEN AND STANDARD CLASS NATIONALS—

RAF Newton May 29 to June 6

By RIKA HARWOOD

I suppose we should have known the weather could not last. After all those fantastic days in May we have had the wettest and coldest June for years and so only five and four contest days resulted for the 17 Open Class and 24 Standard Class pilots taking part.

I am indebted to Sq Ldr Doug Bridson for background information on the RAFGSA's organisation; and to Ron Cashmore for weather details and maps which have been incorporated in this article.

INTRODUCTION

The RAFGSA, the voluntary organiser on behalf of the BGA of the Open and Standard Class Nationals, was unable to use Bicester and so a search had to be made for a suitable airfield.

After many difficulties, RAF Newton (near Nottingham and with no gliding connections whatsoever) was eventually nominated. This involved having to move the East Midlands Universities Air Squadron and No 7 Air Experience Flight (all Chipmunks) to nearby Syerston for the duration of the championships.

Airfield fittings, such as fixed lighting installations, had to be removed and it was a rather denuded station when the RAFGSA descended on it.

The organisation was made even more difficult because of the spread, geographically speaking, of the individuals involved. They came from as far apart as Somerset and Scotland and the bulk of the essential committee work had to be done by telephone beforehand.

Unlike a civilian gliding site with everyone and everything at hand, every bit of equipment needed had to be brought in from RAFGSA clubs all over the country. For example, simple, obvious things, like battery charging and barograph smoking, were major snags because on a Service Station they are regarded as fire hazards. Also the dispersal area is large and it becomes difficult to keep an eye on everything.

The RAFGSA organising committee, with Sq Ldr Doug Bridson as Competition Director, are to be congratulated on the very efficient way this event was run (no fuss or bother ever being apparent). The catering facilities were outstanding and appreciated by everyone who made use of them. The caravan park, which must have been an eyesore to the well-disciplined serviceman, was carefree and a happy atmosphere prevailed throughout the competition.



Doug Bridson (l.) and Jock Wishart

PRACTICE WEEK

The practice week did not produce any flying until Thursday, May 27, when an optional 190 km out-and-return to Cosford was set. Most pilots landed out and only Anne Burns and Mike Garrod completed the task.

On Friday, pilots were talking about 300 and 500 km records, but having had a good look at the sky at 08:15 it showed large cu to the north and south of base, and there was obviously a risk of overdevelopment.

At the 10:00 briefing a 200km triangle was set—to keep it small. Showers were likely to occur after 13:00 but with cloudbase rising to 5,000ft.

Four-knot thermals improving to as much as 16kts in cloud (tops 18-19,000ft) were forecast for later in the day. The wind would be light.

Some pilots opted to have a go at the 300km triangle record. Ron Cashmore, our meteorologist for the championships, set out on a 300km out-and-return for his Gold C badge.

Launching started just before 11:00 and pilots disappeared quickly. The conditions, however, were not as good as they looked and those on the 300km triangle attempts changed back to the set task within an hour of leaving.

There was plenty of cloud flying to be had, and heights of 10,000ft were gained by many. Mike Bird, the only one to reach 12,500ft, had difficulty in locating himself, but he was lucky when he was told by Con Greaves in the BS-1 that he was over Newark. Mike was one of the four pilots who made it back to base, The others were Anne Burns, John Williamson and Gordon Camp.

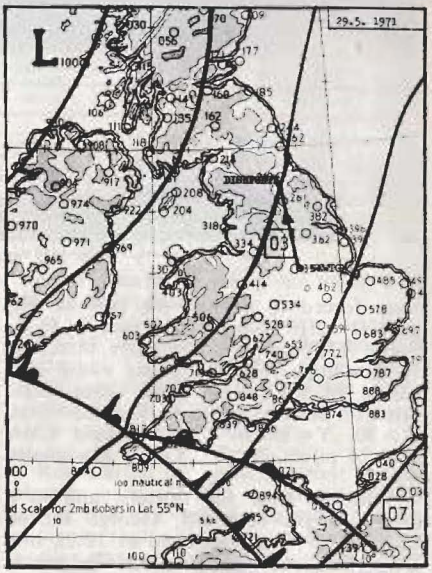
The two-days' flying had turned the rather lazy and relaxed atmosphere into the usual last practice day activity of checking instruments, trailers etc, or just having a rest waiting with anticipation of what tomorrow would bring.

SATURDAY, MAY 29

Looking back through previous reports on British nationals, one will find that more often than not the weather, especially on opening days, left much to be desired. This one ran fairly true to form, although a contest day, alas devalued, resulted.

By 10:00, the time for the opening and briefing, the sky was beginning to get that overdeveloped look—rather like yesterday. This was confirmed by our BGA Chairman, Ken Wilkinson, who had flown in from the south in a Chipmunk with the Earl of Kinnoull, a member of the Aviation Committee of the Conservative Party, who was to open the championships.

Ken introduced his Lordship, who made a short speech concluding with the advice his wife had given him before

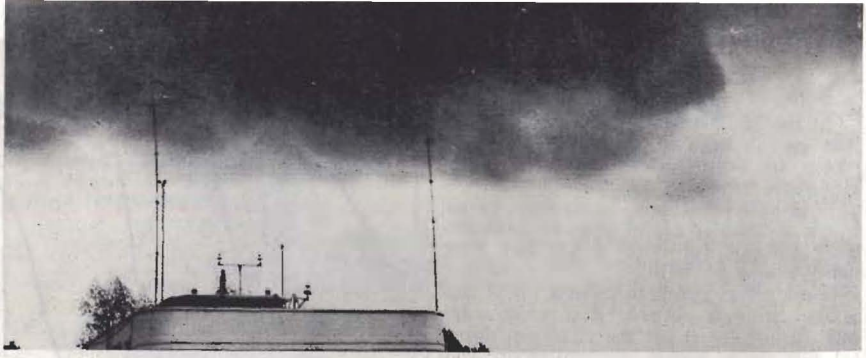


he left: "Whatever the weather, don't be persuaded to take part." He then wished everyone "happy landings" and declared the contest open.

Keeping the "church notices" to an absolute minimum we were quickly given the necessary details by Doug Bridson. He was followed by Ian Strachan (task setter) with information on the tasks displayed on the board: A 200km triangle for the Open Class and a 100km triangle for the Standard. Gliders had to be on the grid as soon as possible after briefing.

Ron explained that there was a weak frontal system near the south coast and this was expected to interfere later in the day. Vigorous convection at first with 6-8kt thermals, up to 12kts in cloud by noon, would decrease with thickening layers of cloud coming in and cutting off convection. Wind 190°, 12kts at 3,000ft. Freezing level 4,000ft. With "lucky if you get back" he concluded the forecast, while pilots hurried out to be greeted by a rapidly changing sky!

Before long it became obvious that the triangles set would not be likely to result in a contest day because the clamp would reach us sooner than the pilots were due back. The task setters were



. . . a very miserable looking sky

thus forced to change the task on the grid at 12:10 to a straight race to Dishforth, 132.5km in a northerly direction, in the hope that the pilots could stay ahead of the clamp. The Open Class with 17 pilots were to be launched first. X=30, Y=80km. The Standard Class had 24 pilots. X=20, Y=60. Designated start.

With no time for snifters, and in a hurry to get them off, George Burton (Kestrel 19) was launched at 12:22 into a very miserable looking sky. The whole of the class, except George and Vic Tull, the latter having pulled out of the grid because of a shower, landed back more or less straight away. George descended to 1,000ft before finding any lift and was already too far downwind to come back.

An hour later, at 13:25, relights started and all no doubt were aware that George had an hour's start on them! This time nearly everyone contacted lift but only those in the vicinity of the startline crossed it. Barry Atkinson (Dart 17R) did so, quite low, blissfully unaware that he still had his wheel down! As soon as the 5km limit for cloud flying was reached everyone dived in (meaning the opposite) and some of these clouds must (according to the radio) have been somewhat crowded.

By now it was pretty clear to the Standard Class pilots that *getting* to Dishforth would be of greater importance than *racing*, and they were anxious to get launched before it was too late.

There were only a few Open Class pilots left when at 15:00 the Standard Class was launched, Nick Goodhart (Std Libelle) being first. Only Tom Zealley (K-6E) needed an immediate relight, but a little while later John Williamson (Std Libelle) came racing back with his brakes open for a quick descent, having suffered instrument failure. This was quickly sorted out and he was off once more. (Vic Tull [Diamant 18] launched on a selected time amongst the Standard Class.)

The Open Class pilots were now in the Worksop area 30kms out, while the Standard Class pilots were more east of track over Winthorpe, 20kms distant. Between 15:35 and 16:00 many messages "may have to land, Winthorpe" were heard, and quite a few did so, coming back for relights somewhat later.

Mike Wilton-Jones (K-6E) got a good climb to 9,000ft near Syerston and reached Worksop at 16:05 15min later. There was by now, however, a large blue gap between Worksop and Doncaster and many were unable to cross it. Thus, a cluster of pins started to appear on the control map.

George Burton, whose early get-away was thought at the time to be very lucky, came unstuck at a second blue gap near Ferrybridge and had to land 30km short of the goal.

Mike Bird (Dart 17R) had to keep his brakes unlocked to keep enough separation between him and Ron Cousins (Dart 17R) while in the same cloud. Some time later he saw John Cardiff (ASW-12) having one of his famous scrapes NW of Doncaster where John sat for 45min over the same field having been down to 400ft. Mike went on only to join Vic Tull near Ferrybridge at . . . 400ft! To his chagrin Mike had to land, while Vic finally scraped away and got to Dishforth.

In the meantime those who had landed out were now appearing back and preparing to go again. One of these was Andy Gough (Std Cirrus), who was re-

launched at 16:32, but he made very poor progress at the beginning and took ages to get from 800 to 4,500ft, still local. So it was well past 17:00 hours before he set off, and alas, when he finally found a good cloud his instruments were full of water! He had to land in the only "15-metre" field near Scunthorpe, the rest being slag heaps and high corn.

It was perhaps Anne Burns (Cirrus) who had the most straightforward flight (the winner normally has). After an initial slow start she climbed to 7,000ft south of Nottingham and decided to stay as high as possible and keep west of track. She managed a fast climb, 8-10kts with comparatively little icing near Sheffield to 11,000ft. more than enough to get to Dishforth, which she reached at 15:28.

Nick Goodhart, who reached his best height of 8,000ft on his first climb SW of base, was on the other hand so heavily iced that his glide angle became "desperate", and he decided not to go so high again. He also kept to a westerly course, but SW of Sheffield spent 25 uncomfortable minutes recovering from 400ft. Nick was the only Standard Class (and last) pilot to reach the goal.

Barry Atkinson (now with his wheel up) was using rather weak lift as far as Gamston. By the time he was abeam Doncaster he realised that if he wanted to stay airborne he would have to divert as those ahead of him were falling out of the sky. He diverted east of track and was near Castle Howard when he managed a final climb to 7,500ft and he knew Dishforth was in the bag.

The best relight effort (17:04) was no doubt Bernard Fitchett's (Cirrus). He was climbing 8kms north of base in a 1kt thermal at 17:15. Eventually this got him to 7,000ft and to Worksop. Very weak wave gave him another climb to 3,600ft but from there it was one glide, and although he could see the runway at Dishforth he could not quite make it and landed 2.5km short.

With only five pilots in the Open and one in the Standard Class completing the task it showed that it certainly had not been plain sailing, and in spite of all the cloud flying done the number past the required Y distance of 80 and 60km was only 10 and 8 respectively.

Leading Results	*Open Class*	*km/h*	*Pts*
Burns	Cirrus	65.7	735
Tull	Diamant 18	53.5	635
James	Diamant 18	51.3	617
Atkinson	Dart 17R	50.6	611
Cardiff	ASW-12	47.2	546
Fitchett	Cirrus	130km	461
Standard Class		*km/h*	*Pts*
Goodhart	Std Libelle	53.5	349
Wheeler	K-6E	119.5km	276
Glossop	ASW-15	103.5km	234
St. Pierre	K-6E	84.5km	181
Williamson	Std Libelle	74.5km	153

WHIT-MONDAY, MAY 31

After delayed briefing no tasks were set on Whit-Sunday.

TASK BOTH CLASSES: 206.5km triangle: M1-M45 Junction, 72km; Peterborough Cathedral, 67.5km; Newton, 67km. Standard Class first, X=15, Y=45km. Open Class, X=20, Y=60. Designated start. Grid as soon as possible.

Ron started off by saying that he had already been advised by amateurs that it was over-convecting. He reminded the audience that at a Lasham Nationals a similar case had occurred when pilots had been waiting on the grid grumbling at the task which they eventually got cancelled, when a girl pilot flew in on a Silver C distance!





John Cardiff

The trough over the country was slowly moving eastwards. Cloudbase was expected to rise to 4-5,000ft later in the day with tops to 9-12,000ft and isolated showers. There might be some strato-cu but the day should be quite good with an abundance of easy, well-formed, juicy 6kt thermals. Wind 260°, 7kts. Light icing only.

When launching commenced at 11:02 cloudbase was around 3,500ft and the startline was in business quickly. Gerry Burgess (Dart 15) had to tell his crew, on being asked where his car key was, that it was in his pocket. This was followed by "where is the spare key?" After a slight pause "also in my pocket". A quick landing followed, and from memory, I think this was the only relight.

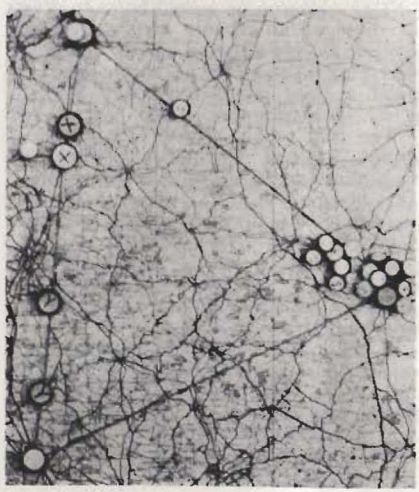
The Open Class launched at 12:15 and by 13:00 all but John Cardiff and Norman Wilkinson (K-6E) had crossed the line and were on their way. The earlier ones were already in the Leicester area about 30km out; a few were in and out of trouble several times, but in general 5,000ft plus was reported.

Steve White was one of the first to be heard going round TP1 about 13:25; he said that conditions ahead did not look good. This was the first indication we had back at base that the weather was changing. On the first leg, however, good climbs were still being made, and in cloud many found the "easy, well-formed, juicy 6kt thermals" promised at briefing. John Cardiff was still local and biding his time for the optimum moment to go which, so he had been told, was at 14:00.

Over Husbands Bosworth near the first TP one pilot was extremely unhappy; he told his crew he had been cut out twice in a thermal, and that he was going to land at HB and go home. He soon recovered his equilibrium, however, and was happy once more to go on. Another, very gentlemanly approach was overheard when a pilot asked "may I come in please?" (meaning the same cloud), to which the answer was "yes, make yourself at home, dear chap"! In fact, there were very few complaints of bad airmanship and the cloud flying discipline seemed to be fairly good with those involved always calling their heights.

At exactly 14:00 John Cardiff came across the startline, Norman Wilkinson having done so at 13:49; but by now pilots were slowing down, and constant reports of stratus near TP2 were heard on the radio.

As Nick said later, the spread out was not more than expected, but rather more than forecast (it was 6/8 and later 8/8 over a 15-mile band). He, John Williamson and Bernard Fitchett reached Peterborough just in time "when it brewed up nicely". The majority, however, lost considerable time waiting to dash in and



out of the TP and several had to land shortly afterwards, Anne Burns being one of them. This was somewhere near 15:00 and the "abundance of easy, well-formed, juicy 6kt thermals" was getting very questionable.

Bernard was the first to get home at 15:20, and by 15:45 another five had arrived. George Burton lost at least 10min when he got low over Woolfox Lodge and several others fell by the wayside on this last stretch. The last ones to get in were Tom Zealley and David Ince (LS-1c). They had been flying from one crisis to the next, barely surviving each time.

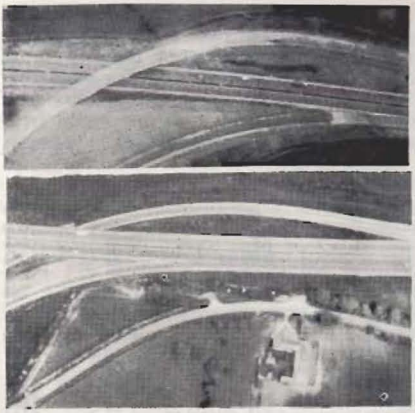
In all there were 16 Standard and 5 Open Class pilots to complete the course. Sam St. Pierre (K-6E) and Brennig James could not quite make the finish line, but both landed within the confines of Newton airfield. John Cardiff had left it too late and on trying to divert he had to land about 30km ENE of the second TP.

The provisional scores on the board showed that in the Open Class Bernard Fitchett was first with 1000 points, Barrie Goldsborough second with 988 and George Burton third with 881 points. In the Standard Class it was John Williamson 1000, Tony Burton (Std Libelle) 901, and Nick Goodhart 883 points.

When, by next morning, the TP photos had been scrutinised it became apparent that one Open and two Standard Class pilots had failed to photograph the first TP. What they had photographed was not the M1-M45 but the M6 junction (about 8km or so away). There were also a further 11 pilots with photographic inaccuracies which had to be sorted out. As one pilot (with the M6 photo) in each class had landed back at Newton the scorers had to re-calculate the whole lot, because the speed points were affected. Instead of 5 Open and 16 Standard finishers there were thus 4 and 15.

The 11 pilots with "problem photos" were docked 50 points off their score and Barrie Goldsborough, Norman Wilkinson and Gerry Burgess (all M6 photos) lost their score for the day.

Gerry had to put up with some leg pulling. His job as a road construction engineer involves him a good deal with motorways and he should have been



The M6 junction (top) and the correct M1/M45

able to differentiate between the two junctions.

In order to keep the record (or rather the scores) straight I now have to jump forward to the briefing of June 3 when the Competition Director announced that a protest had been handed in (by Barrie Goldsborough and Norman Wilkinson) and that the Stewards, after considering the circumstances, had allowed them to be scored as if they had landed at the M6 junction. Hereupon another competitor pointed out that this could well lead to other protests on top of this protest. Still another pilot asked if he was correct in thinking that from now on he could produce a photograph as evidence of landing?

The Director said that the subject was controversial and could not be discussed at briefing; there would, however, be a discussion on various items after briefing. But when the time came for discussion and items on British Team selection, structure of nationals, and scoring had been dealt with, it was announced that an aerobatic display by Chipmunks would take place in two minutes. This concluded the talk immediately, but we never saw the Chipmunks performing aerobatics, and I am still wondering if this is what is called an aerobatic manoeuvre?

And now, jumping even further ahead to the briefing of June 4, we were told that the Stewards had not reversed their decision about the "wrong" TP protest.

It was also stated that this particular protest was regarded as having exceptional circumstances, but that no more cases like this would be considered. Another point referring to a landing had also been queried and this point was clarified.

Back to day two and the leading scores for that day.

Leading Results	*Open Class*	*km/h*	*Pts*
Fitchett	Cirrus	70.1	1000
Greaves	BS-1	54.5	869
Burton	Kestrel 19	58.8	*855
Costin	Cirrus	51.3	842
James	Diamant 18	206km	763
Standard Class		*km/h*	*Pts*
Williamson	Std Libelle	64.0	*950
Burton	Std Libelle	60.2	907
White	Std Cirrus	57.5	841
Goodhart	Std Libelle	59.4	*838
Jones	Std Cirrus	56.3	*762
Gough	Std Cirrus	55.2	*745

*Penalty deducted

Leading Results two days

Fitchett	1461	Goodhart	1187
James	1380	Williamson	1131
Burns	1280	Burton, A.	921
Burton, G.	1189	White	841

TUESDAY, JUNE 1

TASK BOTH CLASSES: 303km triangle. Gransden Lodge airfield, 106km; Barford St John airfield, 87km; Newton, 110km. Open Class first. X=20, Y=60. Grid 10:45. Standard Class X=15, Y=45. Grid 11:45. Designated start.

Before Ron gave the forecast Ian told pilots that this was a possible record day and the task complied with the 28% rule.

High pressure was developing over the UK; it was expected that by 11:00 cloudbase would be 3,000ft and that by noon there would be 6kt thermals up to 8,000ft. He warned pilots, however, that a sea breeze could affect any pilots who might return and need a relight. There would be 1/8 to 3/8 cumulus locally but more likely 4/8 towards the south of the course. Visibility generally good with haze in places. Wind 170°, 5kts. Pilots were advised that they could expect better conditions over the high ground west of track. The outlook for tomorrow was also good although today should be the better of the two. "So get on with it," Ron said, "there are plenty of well-defined, juicy 6kt thermals." (Ian told us that even a 500 km task had been discussed at the task-setting meeting.)

First to take off was Alf Warminger at 11:20. There was rather more cloud than expected over site, and Con Greaves told his crew that it was still rather ragged and he would wait a while. Barry Atkinson and Anne Burns were flying with their wheels down, and as Anne was not listening out at the time, she could not be told.

The Standard Class took off immediately after the Open and for a while the startline observers were hard put to it to acknowledge all the "off tow", "gate" and "observed" calls.

Within 30 min of leaving many were near Melton Mowbray and obviously everyone was doing fairly well towards TP1. Heights recorded at the time were between 2,500 and 5,000ft, and by 13:45 the first glider was sighted at TP1. Crews were being told to go towards TP2. Shortly afterwards, messages came that conditions were changing rapidly. Those who realised this in time slowed down rather quickly and exchanged speed for height. Listening to these conversations we gathered that from Alconbury (well north of the TP) to Bedford (west of it) there was a large clamp.

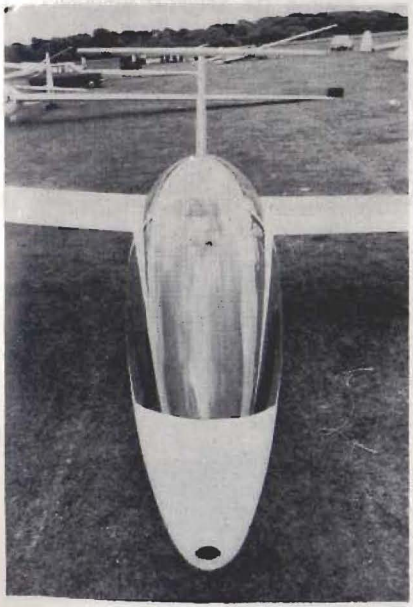
The first shock came when we heard that John Williamson had landed near



Bedford. A number of others were heard having difficulties staying airborne around St Neots—just before the TP. David Ince was one of these, being forced to land. Unfortunately, he groundlooped, and the damage, although not serious, was rather complicated to repair and he had to withdraw from the contest.

After Bedford conditions improved again for a while. Mike Garrod (ASW-15) was heard to enter cloud at 6,000ft at 14:25 and for the next 10min or so reported heights of between 4,000 and 8,700ft were recorded by me. But the shortest second leg claimed many more landing certificates, especially near TP2 and just after it.

Those who had survived the obstacle race so far were rewarded with a cloud street on the last leg home. This was by far the easiest leg and they made good use of it. By 16:00 we knew that several pilots were preparing for their final glides, and at 16:26 John Cardiff streaked across the finish line. Having left too late yesterday, he felt that today an early start might be advantageous. The strong thermals had been few and far between and the wind stronger than forecast and somewhat confusing. He was, however, able to climb from a 500ft low at Biggleswade to 1,200ft, and at 1,500ft now well centred, the lift had increased to 6kts and took him to 8,000ft.



Std Cirrus

Six Open Class pilots completed the task, one of them Brennig James, who crossed the line at 18:31. He had done a series of large zig-zags to and from each TP. It was a considerable surprise to Andy Gough, when on the last leg he saw Brennig flying *towards* the second TP! But clever Brennig was able twice to use the cloudstreet mentioned—on the way there and back. It took him 6hrs 21min to complete the task.

Len Woods (SHK) was delighted to be one of the six finishers, as with this flight he claimed his Diamond goal and completion of his Gold C.

Today only three pilots incurred photographic penalty points.

Leading Results Open Class		*km/h*	*Pts*
Cardiff	ASW-12	70.2	1000
Fitchett	Cirrus	68.1	973
Burton	Kestrel 19	60.7	877
Carrow	Phoebus 17	60.3	873
Woods	SHK	49.0	*676
James	Diamant 18	47.8	*616

*Penalty deducted

Standard Class		*km/h*	*Pts*
White	Std Cirrus	67.8	1000
Goodhart	Std Libelle	65.5	982
Garrod	ASW-15	65.3	981
Burton	Std Libelle	55.2	903
Gough	Std Cirrus	53.0	886

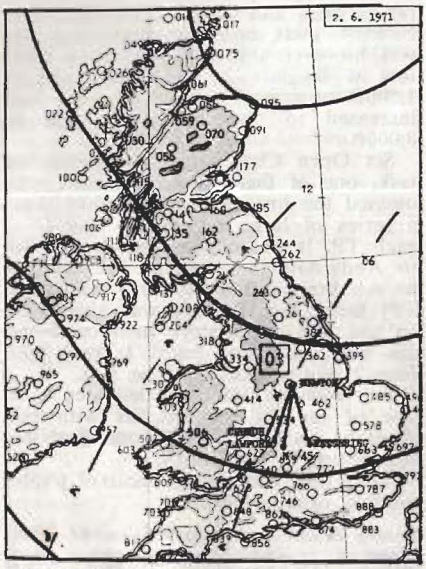
Leading Results three days

Fitchett	2414	Goodhart	2069
Burton, G.	2066	White	1841
James	1996	Burton, A.	1824
Cardiff	1917	Gough	1725

WEDNESDAY, JUNE 2

TASK BOTH CLASSES: Out-and-return to alternative turning points. (A) Kettering, 132km. (B) M1-M45 Junction 144km. (C) Church Lawford, 143km. Standard Class first; X=10, Y=30; grid 11:00. Open Class; X=15, Y=45km; grid 11:30.

Ron referred to yesterday's forecast. "It is like baking a cake, they go wrong sometimes". He also mentioned that John Cardiff's speed was only about 10min outside the UK record, so that the weather must have been good somewhere!



With the high still building there would be less, but more uniform, cloud than yesterday, tops to 9,000ft. Convection was expected to start later and stop earlier but it should be good during the afternoon with 8kt thermals.

As the lift could well be narrow, staying high was advised. Wind 090°, 20kts.

Somehow the sky did not quite look as promising as hoped for when we came out of briefing. In due course a snifter was despatched while competitors settled on the grid to wait. Initially the reports from the snifter were not too encouraging, but by 12:45 occasional lift of 4kts was found. Ian joined the snifter in the SF-27M and as the thermal strength became more reasonable he gave from 3,000ft the order to launch at 13:05. The wind, we gathered, was not as forecast but 060°, 25kts!

Launching got under way at 13:14 and pilots wasted no time in leaving, their crews following hot on their heels. Alf Warminger had a "free shower" when George Burton unknowingly released his waterballast right over him! Also a startline observer was rather startled when suddenly he was soaked by water coming out of the blue sky!

Today flying tactics had to be changed completely. So far competitors had done a lot of cloud flying, but now there was little cloud and most thermals were of the blue variety. Reasonable progress seemed to be made on the downwind component leg and from radio calls it became clear that most pilots had chosen to go to TP (B) or (C). Pilots were high at 3,000ft and so it was important to use many thermals. Tom Zealley, who seems to thrive on struggling, reported at 14:30 "low, but still in business". He was not the only one. George Burton was low near Leicester but as he said later he could see the thermals detach from the ground! Because of the narrow thermals, gaggles were small, two or three gliders in each thermal; but staying airborne was not too difficult, and they were drifting in the right direction.

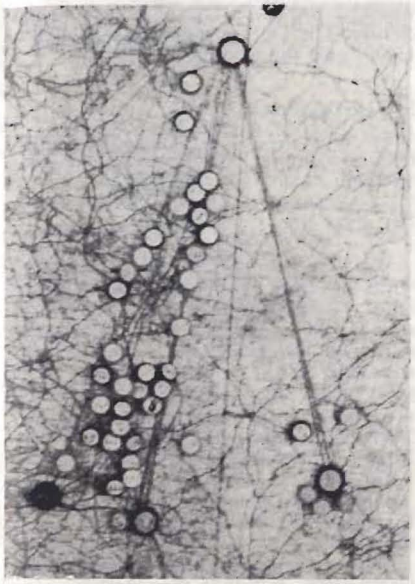
By 15:00 the pilots who had selected to go to TP (A) were in dire trouble. Among these was John Williamson, who landed near the TP. This of course put John right out of the running.

At this time the pilots on the (B) and (C) task were approaching their TPs. Gerry Burgess, determined to show that he *did* know the M1-M45 junction, was among the first to turn there. They soon realised, however, that flying the return leg was a completely different kettle of fish, for it had been relatively easy so far.

To make any headway against the wind they really needed lift in excess of 2kts, but not many such thermals were to be found. There now ensued the most exasperating, frustrating and exhausting



Startline precaution against showers



period. It took many pilots hours and hours (from 15:20 to 18:45) to creep ahead at snail's pace. Over and over again we heard messages "passing (name of location) for the 'third', 'fifth' or 'seventh' time". Most crews were in visual contact with their pilots, admiring their patience and skill.

Brennig, with his typical sense of humour, was heard to say "if we all land here, chaps, they (those in front) won't get so many speed points!".

Slowly, ever so slowly, Leicester was approached once more. It was now around 17:00 and many had to give up the struggle, making those still airborne even more aware that every kilometre would count today. John Cardiff was quite a bit ahead of the rest and at 17:10 was 8kms southwest of Nottingham. George Burton was near Wymeswold and would land there if no further lift was found, while Bernard Fitchett was about to land on the outskirts of Leicester. Apart from John and George there were now (18:00) only a handful of pilots left: Anne Burns, Alf Warminger and Brennig in the Open Class and Ron Sandford, Ralph Jones, Andy Gough and Don Austin in the Standard Class (the last four all flying the Std Cirrus!).

Finally, at 18:45, the battle was over, all had landed and, as I heard later, they were greatly exhausted from the strain of flying in these conditions. Andy, especially, was not at all comfortable, as he had had to sit on a lanced abcess all day! (He has recently been in hospital.)

Leading Results	*Open Class*	*TP/km*	*Pts*
Cardiff	ASW-12	C 135	1000
Burton	Kestrel 19	C 130.5	963
Fitchett	Cirrus	C 122	892
Burns	Cirrus	C 121	884
Warminger	Phoebus 17	B 119	866

Standard Class		*TP/km*	*Pts*
Austin	Std Cirrus	B 122	1000
Gough	Std Cirrus	C 118	964
Sandford	Std Cirrus	B 116	945
Jones	Std Cirrus	C 115	936
White	Std Cirrus	C 110.5	897
Goodhart (10=)	Std Libelle	B 90.5	718

Leading Results four days			
Fitchett	3326	Goodhart	2887
Burton	3029	White	2738
Cardiff	2917	Gough	2689
James	2836	(see final results)	

THURSDAY, JUNE 3

At the 10:00 briefing John Cardiff, describing the previous day, could not resist taking the mickey out of Ron on yesterday's forecast. Accompanied by much laughter, he proceeded to repeat the forecast with its promise of 8kt thermals, etc. This was followed by Don Austin, who could not understand how John had managed this all as in his (Don's) case it had been sheer hard work!



Jack Harrison (in cockpit) and Steve White

Owing to the poor conditions and strong wind the Open Class would not fly today and the only possible task for the Standard Class, a race to Shobdon, would be held over until noon, at which time it was cancelled.

The discussion which followed has been dealt with on page 259.

FRIDAY, JUNE 4

With the wind still being strong and convection unlikely to be much good, if any at all, and then only much later in the day, Ian explained the pro's and con's of the various goal races displayed on the task board. The most suitable task, a free distance, had not been considered as the possibility of damage on landing in the Welsh hills was too great. There would be a further briefing at 12:00.

Ron explained that the weather was not much different from yesterday except that there was a higher moisture content. If pilots could get away from the site, conditions might well be better to the west. Wind 060° at base 090°, 25kts in the west.

At the mid-day briefing the task was still on. Race to Sleap, 120km. Open Class first. Ian had obtained "actual" reports and in fact conditions were improving from the west of Nottingham. Also Sleap was clearing and the wind had dropped to 5kts at the goal. Just after 13:00 the Open Class were told to go out to the grid while the Standard Class was delayed until after lunch. The weather, however, never cleared sufficiently. The Open Class was cancelled at 15:00, and the Standard at 15:40.

SATURDAY, JUNE 5

TASK BOTH CLASSES: Race to Nympsfield, 165km. Open Class first. Pilot-selected take-off from 13:00. X=25, Y=60. Standard Class: X=20, Y=60. No start line.

We were still in the north-easterly flow with the High lying northwest of Scotland. There would be 8/8 cover but it should be quite unstable underneath. Although improvements along the route were expected it would be difficult to get away from Newton. The wind should drop in the west but at base was 303° 20kts. Cloudbase was expected to rise to 2,000ft and there would be lift between 1 and 3kts.

Ian warned that pilots landing in the Birmingham Control Zone would not be scored.

With only four contest days in each class, pilots felt that they perhaps were kept too long on the grid on the off-chance that the weather would improve sufficiently. This was one of the reasons Ian had decided to have pilot-selected take-off, so that the onus would be on the pilot! There were few competitors who believed that today's task was possible. Half-heartedly they put their tags on the take-off board—and left for coffee!

As the morning went by the base of



Vic Tull comfortably ensconced



the overcast slowly rose; there was even a resemblance of shape to the grey-looking clouds beneath it.

Most of the tags had been put after 14:00 but a few pilots, perhaps more adventurous or optimistic, had selected earlier times. And although most of the sailplanes were parked forlornly on the grid, with their reluctant pilots at lunch, there was some activity at the launch point.

John Williamson was first to take-off at 13:40, followed by Gordon Camp, Fred Knipe, Nick Goodhart and Andy Gough—all Standard Class pilots.

Cloudbase, or rather the base of the overcast, was just over 2,000ft and there was some lift. This of course was very weak but surprisingly it was not a case of straight up and straight down; the trouble was that actually they were too low to leave the site, and so, as launching continued, gaggles started to build up locally.

Nick suddenly put the cat among the pigeons when he gave a message to his crew. "This is a coded message. Roll down the A46." Brennig James and John Williamson thought this a good joke and followed suit by prefixing their calls with "This is a coded message . . ."

While all this was going on, with some staying up and others coming down and a few hesitantly drifting away with whatever lift they had, the weather was (relatively speaking) improving slightly. By 14:30 some (including John and Nick) had left and shortly after we could hear their "landing at Wymesfold", or "landing along A46" messages.

By 15:00 these pilots were driving back. Nick was surprised to see on his return that there were still many gliders on the ground whose pilots were in no hurry to go. But he was! He took off again at 15:33 followed by John Williamson at 15:37.

By this time competitors were climbing to 2,300ft and lift of 2kts was mentioned more frequently. There was thus a little more scope to find another thermal. Launching was now on its second round for most, and even on the third and last for some. But by 16:00 we could hear "2,000 over Wymeswold" instead of "landing, Wymeswold", and Nick and John both reported from near there at 2,750 and 2,650ft respectively. Also Bernard Fitchett (first launch) was farther on somewhere near Leicester, while George Burton was heard (16:15) near Coalville, west of track.

All this only goes to show how difficult competition tasks in the British Isles can be, and in many cases it is just a matter of getting or hanging on to every inch of lift, squeezing everything possible out of the existing conditions.

It was, therefore, almost unbelievable to see from the landing reports coming in (for the second time) that several pilots were getting close to the 60km Y position for the Standard Class. Could any of them do it? To get a contest day three Standard Class and two Open Class pilots had to go 60 or 75km respectively, and the time was almost 5 o'clock. Hopes for the Standard Class rapidly diminished when we learnt that Jeremy Wheeler and John Williamson had landed short of Y and most of the others were down . . . and then Nick's pin appeared on the board well past the Open Class Y! How had he done it? Also Ralph Jones raised hopes again by landing past the magic distance. But in the end these were the only two and so it was a No Contest for the Standard Class.

Most of the Open Class had also



Bernard Fitchett, Open Class winner

landed, but the missing ones included George Burton, last heard of at Coalville—ages ago! Brennig James and a few others (having been retrieved) took off again at 17:00 but one could almost cancel those out. Launching in fact continued right up to 18:00

At 17:20 Brennig wanted to know if it was illegal to ask how many pilots had passed Y. He was told it was illegal so he replied "Oh well, I shan't ask you". At last George Burton phoned in from Aston Down, 150.5km away, 15km short of Nympsfield—the only Open pilot to pass Y. Landing pins were checked and rechecked but apart from Brennig and Con Greaves everyone was accounted for. It was 18:05 and I was just about to turn my radio off when I heard Brennig, clever Brennig, announcing to his crew, loud and clear, "SW of Leicester, climbing, to go to Rugby", and he did too, landing 77.5 km away, thus turning, with all the odds against him, a No Contest into a Contest day for the Open Class—just! This meant that 13 out of 17 pilots scored, with points between 123 (for George) to 1 for Len Woods.

Leading Results Open Class		*Km*	*Pts*
Burton	Kestrel 19	154	123
James	Diamant 18	77	50
Cardiff	ASW-12	56.5	30
Tull	Diamant 18	54.5	28
Fitchett	Cirrus	50.5	24

As Doug Bridson said at next morning's briefing on introducing George as today's winner, "It is incredible the trouble some people will go to in order to sell their gliders!"

With so many field landings today it was not surprising that there were tales to be told. Sam St Pierre was asked to pay £1.50 when he landed amid a sheepdog trial—it wasn't a fine but more a sort of entrance fee, he explained.

Mike Bird saved a bit and also lost a bit of money. On his relight he lost the wingroot fairing of his Dart but luckily one of the Chipmunk pilots spotted it and then followed it on its way down and it was duly retrieved. On his last landing, however, Mike was asked for £10 towards alleged damage to the field he had landed in.

Gerry Burgess went to retrieve his team mate John Rouse, but they were told by the landowner that they could not have the key to open the field gate, and that the glider would have to stay there until the harvest was done! He stopped them from driving off, and, without having seen the field or the glider, he demanded £50 damages. Gerry explained that this would be for the insurance company to deal with and left his name and address. Eventually, after collecting more people from Newton, they managed to lift the glider out over the fence!

This account is included as being a most exceptional case, farmers normally being very co-operative and friendly.



Nick Goodhart

SUNDAY, JUNE 6

Although briefing had been delayed to 1 o'clock the weather never cleared for a task to be flown and so we had Prize-giving instead.

Sir Leslie Mavor, the RAFGSA's President, who handed out the awards, said that although our weather has a habit of turning sour, the cream of British gliding still floats to the top.

And so it does, for Bernard Fitchett had flown consistently well and deserved to become our Open Class National Champion. George Burton and John Cardiff had been hot on his heels, flying well up to their usual form.

In the Standard Class Nick was "Top of the Pops". This makes him National Champion for the third time and also the only British pilot who has been Champion of the (world) Two-seater Class, the Open Class (twice), and now the Standard Class—truly an all-round man. Steve White hit the charts with a well-earned second place, closely followed by Andy Gough in third.

Final Results—Open Class

No *Pilot*	*Sailplane*	29.5 735	31.5 1000	1.6 1000	2.6 1000	5.6 123	*Total Points*
1 Fitchett, B.	Cirrus	461(6)	1000(1)	973(2)	892(3)	24(5)	3350
2 Burton, G. E.	Kestrel 19	334(7)	*855(3)	877(3)	963(2)	123(1)	3152
3 Cardiff, J.	ASW-12	546(5)	371(15)	1000(1)	1000(1)	30(3)	2947
4 James, D. B.	Diamant 18	617(3)	763(5)	**616(6)	840(6)	50(2)	2886
5 Burns, Anne	Cirrus	735(1)	545(7=)	*362(11)	884(4)	22(6)	2548
6 Greaves, C. M.	BS-1	265(8)	869(2)	371(8)	807(7)	21(7)	2333
7 Tull, V. F. G.	Diamant 18	635(2)	473(13)	434(7)	486(17)	28(4)	2056
8 Carrow, D. D.	Phoebus 17	46(13)	475(12)	873(4)	649(9=)	4(11)	2047
9 Atkinson, G. B.	Dart 17R	611(4)	502(10)	353(12=)	*533(15)	0(14=)	1919
10 Warminger, A. H.	Phoebus 17	14(14)	680(6)	353(12=)	866(5)	5(10)	1918
11 Haynes, K. W.	SHK	0(15=)	842(4)	371(9)	649(9=)	0(14=)	1861
12 Woods, L.	SHK	0(15=)	477(11)	*676(5)	620(12)	1(13)	1774
13 Costin, M. C.	Cirrus	22(11)	545(7=)	338(14)	628(11)	3(12)	1735
14 Cousins, R.	Dart 17R	210(12)	525(9)	186(16)	587(13)	14(8)	1522
15 Bird, M.	Dart 17R	244(9)	*444(14)	148(17)	575(14)	0(14=)	1411
16 Goldsbrough, J. B.	Diamant 18	233(10)	+177(17)	204(15)	757(8)	12(9)	1383
17 Pozerskis, P.	Cirrus	0(15=)	109(16)	362(10)	520(16)	0(14=)	991

Final Results—Standard Class

No *Pilot(s)*	*Sailplane*	29.5 349	31.5 1000	1.6 1000	2.6 1000	*Total Points*
1 Goodhart, H. C. N.	Std Libelle	349(1)	*838(4)	982(2)	718(10=)	2887
2 White, S. A.	Std Cirrus	0(14=)	841(3)	1000(1)	897(5)	2738
3 Gough, A. W.	Std Cirrus	94(9)	*745(6)	886(5)	964(2)	2689
4 Garrod, M. P.	ASW-15	116(8)	*581(7)	981(3)	861(7)	2539
5 Burton, A. J.	Std Libelle	14(12)	907(2)	903(4)	687(12)	2511
6 Sandford, R. A.	Std Cirrus	0(14=)	543(8)	760(6)	945(3)	2248
7 Austin, D. C.	Std Cirrus	143(6=)	**419(10)	586(10)	1000(1)	2148
8 Jones, R.	Std Cirrus	0(14=)	*762(5)	421(15)	936(4)	2119
9 Glossop, J. D. J.	ASW-15	234(3)	522(9)	689(7)	500(20=)	1945
10 Wheeler, J. H.	K-6E	279(2)	407(12)	619(9)	633(15)	1935
11 Williamson, J. S.	Std Libelle	181(4=)	*950(1)	241(18=)	500(20=)	1872
12 St. Pierre, A. H. G.	K-6E	181(4=)	374(15)	380(17)	892(6)	1827
13 Farmer, A. T.	K-6E	0(14=)	375(14)	499(12)	718(10)	1592
14 Zealley, T. S.	K-6E	10(13)	394(13)	511(11)	660(13)	1575
15 Camp, G. W. G.	K-6E	0(14=)	244(18=)	646(8)	604(17)	1494
16 Lilburn, D. W.	K-6E	0(14=)	244(18=)	442(14)	758(9)	1444
17 Wilton-Jones, M.	K-6E	143(6=)	237(20)	459(13)	575(18)	1414
18 Morrison, S. A. J.	K-6E	0(14=)	*208(21)	241(18=)	839(8)	1288
19 Knipe, F. H.	K-6E	0(14=)	**307(16)	402(16)	464(22)	1173
20 Simms, J. A.	K-6E	0(14=)	263(17)	229(20)	544(19)	1036
21 Wilkinson, N. A.	K-6E	88(10)	+145(22=)	177(24)	611(16)	1021
22 Rouse, J., Burgess, P. G.	Dart 15	0(14=)	— +145(22=)	224(21)	— 651(14)	1070
23 Ince, D. H. G.	LS-1C	26(11)	*413(11)	212(22)	DNF	651
24 Krzystek, T. J.	Std Cirrus	0(14=)	10(24)	191(23)	428(23)	629

Penalties: *=50 points; **=100 points; +=distance to M6.
(A list of handicapped scores for rating purposes will be available from the BGA office.)



SPORT CLUB CLASS 1971

IN THE GRIP OF THE ELEMENTS

By GEORGE LOCKE

The weather held the 1971 National Sport/Club Class Championships firmly in its grip, forcing most competitors to use cloud extensively during the course of the four contest days. The championships were held at Husbands Bosworth, home of the Coventry Gliding Club, from June 12 to 20. There were 14 competitors in the Sport Class and 25 in the Club.

PROLOGUE

ONCE in a while, a Nationals comes along which is more than a simple competition between pilots, gliders and the weather—one which has more to it even than the knowledge that performances will have a direct bearing on the selection of the British team for the next World Championships. One such contest was the 1971 Sport/Club Class Championships. There were two reasons.

The prototype of the glass-fibre Torva, the first all-British high-performance sailplane to emerge from a workshop for several years, was to be flown *hors concours* in the Sport Class by former National Champion John Williamson, and a good performance could well be a boost for Britain's glider industry.

Secondly, an SF-27M would be flown, in a similar capacity in the Club Class, by Ian Strachan, with a view to assessing the motor glider's compatibility with traditional machines in free competition.

Torva—which stands for Technical Organisation for Recreational Vehicles and Aircraft—arrived at Husbands Bosworth in its trailer. That had not been John Williamson's intention, which had been to aerotow it over from Bicester. The weather had been appalling during the practice week, and his total experience of Torva before the contest started was six soggy aerotows, six glides and six landings. In the course of his tow to Husbands Bosworth, the tug went through some cloud and John cast off, landing in a field near Silverstone. It was his third attempt to fly a glider into HB; on the previous two occasions he had also had to land—near Silverstone!

A prototype which had had its maiden flight only a month earlier, Torva was in the middle of its certification programme, and lacked the finish of the other glass-fibre entries. Although it was the 'Sport' variety (with flaps only), air brakes had been added after the maiden flights in order to test the system, making the machine a 'sport' in the biogenetic sense.

Ian Strachan had originally applied to fly the SF-27M in the Nationals, but the BGA Flying Committee had decided that it should fly *hors concours*, experience of which could lead to definitive rules being formulated.

The Committee issued additional contest rules to be applied to the SF-27M during the comps, and these were distributed among competitors for information. The important points are summarised below:

Barographs. A barograph must be provided with a second needle operated by a solenoid which is wired to the ignition circuit of the engine so that a record is provided of times when the ignition is live. Such wiring must not be accessible to the pilot in flight (wire and battery connections were in fact sealed with tape and signed by an observer).

After flights on a contest day, the barograph must only be removed from the machine by a contest official (Chris Duthy-James, in this instance) who shall ascertain that the ignition solenoid is working when he removes the barograph.

Should a trace show that the ignition was switched on for any relevant part of a contest flight (ie, between the dropping zone and landing) then that flight shall count zero marks, as shall any following flights on that day.

Towing. The motor glider will be allowed to self launch. It must be observed at the dropping zone at the correct height with engine stopped before it is allowed to commence a contest flight.

Retrieving. Self retrieving will be allowed. If a further contest launch is intended, a time penalty will be imposed to allow for the simulated time of a road retrieve. This penalty will be added to the time of landing of the motor glider back at base, and a further contest self-launch will not be allowed until the penalty period has expired. A formula for working this out was included.

State of the engine. In order to find out whether or not a different mental attitude to soaring exists, both regarding the pilot of the motor glider and also regarding other competitors, the motor glider will fly on some days with its engine inoperative. These will be contest days 3, 6 and 9, and the engine will be rendered incapable of restarting on contest flights by an approved method. Such methods include:

(a) Removing two plug leads and taking an aerotow launch.

(b) Switching off the ignition at the DZ by a string attached to a pull-operated switch inaccessible to the pilot. The normal ignition switches and fuel cock must be sealed 'on' by an observer.

(c) Arranging a mechanical lock to engage with the engine mechanism when it is retracted at the DZ. A 'late latch' fitted to the engine doors is an example.

In fact, a retract-lock mechanism was installed which, when padlocked on Day 3, prevented the engine from being erected once it had been retracted.

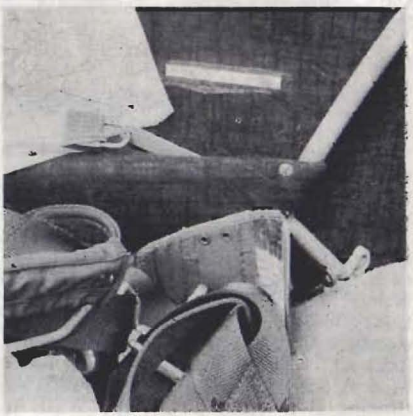
Competitors were also given copies of amended rules regarding turning points, which had arisen from events at Newton two weeks earlier (see p314).

I arrived at the site at 9am on Saturday morning. A few people were unhurriedly rigging their gliders. The air and ground were warm and wet after the previous day's rain, and cloudbase was below 1,000ft. The airfield was a large field adjacent to the trailers and hangar —and filled with sheep! However, a van arrived, and two black-and-white dogs herded the sheep away neatly, leaving a generous supply of natural fertiliser behind—enough to make a K-6 spar sprout leaves and a Libelle grow windowpanes. The punster in me was moved to dub the site Husbands Bogsworth.

I hoped the weather wouldn't continue the wet, changeable pattern of the past few weeks, but an inkling of what was to come was provided by a notice chalked in the briefing tent: "Briefing postponed until 11.00."

It was intended that Air Chief Marshal Sir Harry Broadhurst, managing director of Hawker-Siddeley's, should open the contest, but the organisers did not feel it fair to drag him up for an uncertain start. Ken Wilkinson, BGA chairman, therefore declared the championships open, after which Vic Carr, contest director and tasksetter said, without much hope in his voice, that they would try and run a task.

This, Vic said, was an out-and-return race for both classes with alternative turning points at Newton (117km), Belvoir castle (107km) and the A1 fork south of Grantham (112km).



The SF-27M's engine retract-lock

Mike Batstone, one of the two forecasters, explained that the low which had produced the recent bad weather had moved into Ireland, leaving an easterly airstream in the north and a slack area in SE England. Between these, there was a small hole in the east Midlands, with some thermal activity, but with a tendency to overdevelop. Winds would be light, SE.

The first machine to take off, under a murky sky shortly before 13:00, was Torva on a test flight. It scratched around for half-an-hour before landing. Meanwhile, an official thermal snifter had also been sent up. It subsequently reported that cloudbase was less than 2,000ft, the best rate of climb 1½kts and that Mike's soarable hole seemed to be filling.

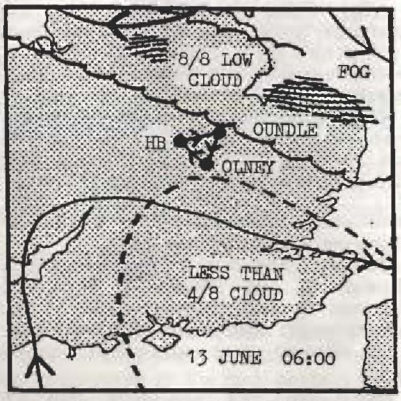
The situation would be reviewed at 14:10 and, if necessary, one class would be stood down. Matters did not improve, however, and the activity faded gently into a few non-contest launches. A small amount of local soaring was possible, but generally conditions were very poor and the only reports of cross-countries to reach my ears were those of two hot-air balloons which took off during the afternoon.

A CASE OF SHEARLINE STOKING

Sunday, June 13, was more promising. Briefing at 9:30 revealed an encouraging weather diagram and a symmetrical 120km triangle with, according to Vic Carr, suitable turning points for a Sunday.

The first leg would take competitors a little north of east to photograph Oundle church, the second west of south to make a similar salutation to Olney church, and the final leg north-west to Husbands Bosworth. The task was the same for both classes (Sport to be launched first); X was 15km and Y 40, and first take-off would not be before 12:30.

It was Alan Diver's turn to provide the weather picture. HB lay in the middle of a col, he said, with high pressure to N and SE, and low pressure to SW. Local features which affected the task setting were a relatively blue area in SE England, with less than 4/8 cloud likely to develop in it, and a band of moist air running E-W from awash the Wash to Liverpool, a little north of HB. This



area would be heavily clouded, with low bases and some fog. Two inversions were also forecast (at 6,000 and 11,000ft) and some over-development was possible. Cloudbase would be between 2,500 and 3,000ft in the afternoon, with most c'ouds going to 6,000ft but an occasional one breaking through to 11,000. Thermals would be mainly 1-3kts with an occasional one to 6kts. Some high cirrus might come in from the west. Winds would be less than 10kts, from a little south of west.

By 11:30, quite marked cumulus had developed, and covered about half the sky at 12:30 with, however, no signs of spreading out. Towards the east, development appeared to be particularly meaty, with some quite high cloud masses on the horizon. The first to cross the line (at 12:46) was cigar magnate Wally Kahn, having a last fling in his Dart 17R before taking delivery of a Kestrel. He headed towards a healthy looking cloud just east of HB, but at none too great a height. He was followed, higher and faster, by Harry Orme in a Std Libelle.

Five minutes later, Wally was returning to HB, and at 12:55, while the tugs were remassing to launch the Club Class, he was scraping low in the circuit. "How long will it take to get a relight?" he asked, hanging on desperately (by his cigar smoke?). The first Club machine was launched at 12:56, and by 13:00 several Sport pilots were speeding across the start line. Wally Kahn was slowly winning his battle to gain height.

At 13:03, Nigel Stevenson (Std Libelle)

announced that he was entering cloud near Desborough, and soon other pilots were announcing their heights and positions in cloud, along the first leg.

John Williamson had had to put Torva at the back of the queue in order to enable repairs to the tail skid and some work on the wheel to be completed. He took off at 13:29, a late start which was to prove beneficial. Three minutes later, I heard a thin whine, and the SF-27M passed over the startline observers at much the same height as the aerotows, but under its own steam. It kept fairly close to the field for the early part of the climb.

At about 13:40, a report was received over the radio that No 29, an ASW-15 flown by Tim Harrington, had crashed in a sports field near Corby—pilot shaken but unhurt. Tim had flown for several miles along the first leg looking for a suitable field. The sports field was the only possibility, but the wind was light and the grass smooth. In spite of a successful groundloop, the glider's momentum carried it tail-first into a hedge. While thanking some people afterwards for their help, the hapless Tim was bitten by a dog.

As the afternoon wore on, two things became apparent. Conditions to the south and west looked very good indeed. On the other hand, they were very bad indeed around Oundle, the first TP, with masses of both high and low cloud. Landing pins began to appear on Control's map in the vicinity of Oundle. However, to indicate that the TP was not in the middle of an ordinary clamp, radio reports were coming in of quite high climbs.

By a quarter to three, the pins for seven or eight pilots, mostly Sport Class, had appeared on the map, including that of poor Wally who, in spite of hauling himself out of a time-consuming relight and crossing the line again, had landed at Grafton Underwood.

Shortly after that, at about 15:00, the first competitors crossed the finish line, Nigel Stevenson and Barrie Dobson (Std Cirrus) having rounded the course in 2:01 and 1:44 respectively. During the next hour or so, many competitors returned, most of them at high speeds, while paradoxically the cluster of pins around TP1 grew thicker and thicker. Not a single pin appeared very far down the second leg, and none at all on the final leg. Several competitors tried to go round a second time; one, Lemmy Tanner, improved his time to 1:42, to make him fastest round the course.

The basic statistics show that only four of the Sport Class completed the course (plus John Williamson), while 18 of the 25 Club Class competitors finished, along with Ian Strachan. In addition, all 17 of the non-finishers were clustered round Oundle, with distances varying from about 25 to 50km.

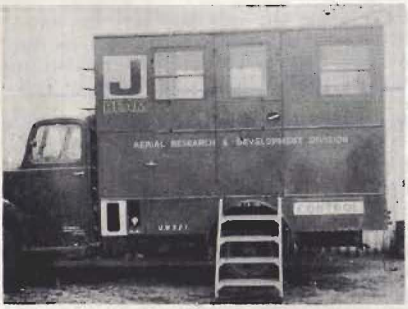
Something very peculiar had evidently happened to the weather in the Oundle area—peculiar and lasting a long time. As the afternoon wore on, the presence of high, black cloud masses in the area became even more evident from HB itself, and they slowly approached the site. Many people remarked that it looked like a seabreeze front, and verbal reports from some of the pilots confirmed this view.

Visibility was poor and cloudbase was low in the Oundle area. Nigel Stevenson, for example, was only out of cloud for 10 per cent of the time during the second half of the first leg and the first half of the second. Finding the TP was not easy, and photographing it more suitable for infra-red cameras than a simple Instamatic.

Pete Saundby just called it grotty. Shortly before approaching Oundle in the K-6E, he flew through strong lift, to which he returned after taking his photographs. It took him off the clock to 10,000ft in very rough conditions and enabled him to reach Olney.



To win a day, fly a well-used sailplane—Pete Saundby



Not the Met office, but Control

'Zot' Zotov (K-6E), on the other hand, made his high climb before the TP, climbing over Kettering to about 12,000ft. He was able to find a hole, took a photograph from 8,000ft, and glided off to Olney.

Ian Strachan and others thought there was definitely a seabreeze front, lying NW-SE, roughly in the Kettering area. Ian soared it to 6,000ft, to come out at Oundle. He subsequently found a strong core to 10,000ft which took him round TP2 to Northampton in a single glide. On his final glide, he saw the "front" again—it looked like an advancing sandstorm.

John Williamson also made use of the front, following it round Kettering. Having thus got well north of Oundle, he found a gap which led him to the TP. After taking his photographs at 3,500ft, he returned to the black mass of the frontal area, and climbed at 10kts to 7,000ft before flying out on to track, and continuing his flight on ordinary thermals.

Meteorologist Alan Diver described the phenomenon as a pseudo-seabreeze front. It was caused by the band of moist air running from the Wash to Liverpool. Because of the heavy bank of cloud it contained, it remained cold, while the clear air to the south became much warmer. This, combined with the NE airflow to the north impinging against the light westerly flow to the south, produced a shearline, with turbulence and strong lift. The shearline gradually moved SW during the day and passed over HB in the evening, the wind swinging round to north-east. Lemmy Tanner, on his second flight, found that although it was "still bad" around Corby, Oundle, further east, was clear. He concluded that having the second go and visiting so many churches in one Sunday was obviously a good thing.

It is reported that near Northampton, on the final leg, John Williamson—who was flying with Paul Grenet at that time—called to him over the radio: "I hate to have to admit it, but I haven't got my calculator with me—am I all right for a final glide from here?"

Ken Wilkinson, who landed his ASW-15 in the playing fields of Oundle, a well-known British public school, found that on his return from the telephone, a schoolboy had retracted his undercarriage. And, to add insult to injury, many of the schoolboys were playing cricket in jeans, as un-British as baseball at Lords.

The Oundle murk created some monumental problems in assessing the TP photographs, Vic Carr said next day, at briefing. Almost without exception, they required decisions to be made by the contest directors, but in the event, only two competitors were penalised, by 2 per cent. Vic added that his troubles were his penance for having made Oundle the first TP.

At the end of the day, Lemmy Tanner was a whisker ahead of Barrie Dobson in the Sport Class, with 806 points against 795. Nigel Stevenson had 710 points and Harry Orme 655, while the rest of the field trailed behind with less than 200 points apiece. John Williamson finished above third.

Pete Saundby in the Club Class scored 1,000 points, well ahead of Paul Grenet (821), Don Hanson (763) and 'Zot' Zotov (653).

THE DOGGED DOG-LEG

On Monday, the weather was wet and the outlook none too hopeful, with the low causing all the trouble likely to move NE from its position in the English Channel to the North Sea. If, however, the low was to move E to the Continent, there was some hope for the future.

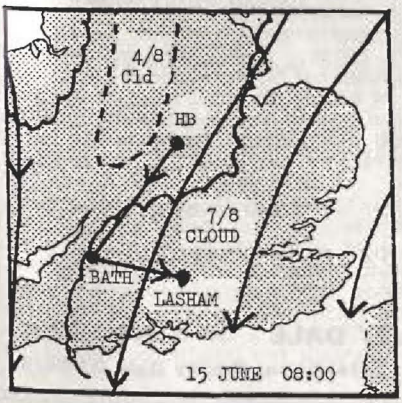
Something like that is what actually happened, and a task was set on Tuesday, June 15. Alan Diver said at briefing that a clearance had started about sunset



The motor glider on tow behind an Auster—a power-assisted aerotow

on Monday, and by the morning there was only rain left in SE England. The cloud associated with the low reached as far north as midway between London and HB, but should clear away. Ground winds would be NNW, 10-15kts, and winds higher up about 20kts from a little east of north. Clear areas were expected to the lee of the Welsh hills and to the north of HB. There was, however, a tongue of strato-cu reaching from the north through the Cheshire gap, and this might go as far south as the river Severn. Thermals would be weak to moderate and moderate to strong in cloud, which would provide the odd top to 10,000ft and the odd shower. "There will be no problems with visibility," Alan added, to the relief of some Instamatics.

As if the complex weather pattern wasn't enough, Vic ran into difficulties over the tasksetting. It was originally intended to set a goal race to Bicester via Nympsfield. However, Bicester declined to allow the competitors to land,



so task briefing was postponed until 10:30 to enable a new task to be woven out of a mess of danger areas and controlled airspace in SW England, the only feasible direction. The task was finally announced as a surprisingly long 248km race to Lasham via Bath Racecourse for both classes, a not inappropriate TP for Ascot week (X, 25km; Y, 60).

A big snag was the military Lyneham control zone, which occupied the bulk of angle at the TP. Although a radio frequency had been alloted to glider pilots to enable them to penetrate the zone, it had been found in practice that Lyneham very rarely listened out. Therefore, it was decided that pilots were to regard the zone as inviolable.

Vic said later that he had made the task a goal race rather than distance along a line so that if pilots were forced to deviate far from track because of the danger areas, etc, their marks would not suffer so heavily.

The Club Class would be launched first, with first take-off at 12:30 using the short, northerly take-off run of the airfield.

At 10:45, there was a lot of cumulus in evidence mixed with some stratus. By 11:40, large patches of clag had appeared, and at 12:20 there was some slight rain. Conditions, however, looked better, and launching started on schedule with Martin Seth-Smith in No 111. At this time, there was a dirty, black cloud in the DZ, which soon grew a gaggle underneath it. The SF-27M had an Auster-assisted take-off with its engine going full blast, as Ian thought the field was too short in this direction. Ian cast off tow after a couple of hundred feet to revert to a pure self-launching.

By the time the Sport Class was due to be launched, the DZ looked relatively dead, and launching was held back. By 13:00, however, eight Club pilots had crossed the start line, and there were large areas of blue with patches of over-development. Conditions looked chancy and difficult, several relights were necessary, and it seemed as though once again cloud flying would be necessary. Unfortunately, only a few miles out on track was a broad strip of an airway, which precluded use of cloud early in the flight. One or two pilots, however, made cloud climbs east of the airway and were able to glide across it in VMC conditions.

The Sport Class was launched at 13:15, at which time the DZ was once more looking reasonably healthy. By this time, however, the weather to the SW, on track, was looking thoroughly over-developed. By 15:00, the weather was pretty well clamped at HB, and eight pins had appeared on Control's map, including that of the Club class leader, Pete Saundby, near Cirencester.

As the afternoon drew on, more and more pins appeared. Two or three of these were near the edge of the Lyneham control zone, including Ron Newall and Martin Seth-Smith, who had both landed there to avoid entering Lyneham's airspace. Most of the competitors were spread in a band lying N to S from Daventry through Oxford, with Pam Shipton and Lemmy Tanner near Thruxton, about halfway between Bath and Lasham. Those pilots had *not*, however, rounded the turning point, and it was evident that a combination of weather and wind had forced the majority of pilots south once they were a few miles out of HB. A report was received, however, that Don Hanson had rounded the TP, but as time passed, nothing further was heard from him, and the remaining pins appeared one by one on the map without their pilots having turned Bath.

Then Barrie Dobson's pin appeared at Devizes, with that of Steve White, who was flying his Std Cirrus *hors concours* for a few days. They were on the second leg, but the TP had not been rounded. They had gone the same southern route as the others but had managed to work their way back to Bath further than Lemmy and Pam.

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At last—17:45—word came from Don Hanson that he had landed the K-6E near Andover, about 25km short of Lasham, leaving just one glider outstanding—David Robertson's Dart 17R. Its true position was not exactly determined until the following morning, when it was discovered that he had landed in the same field as Barrie and Steve near Devizes (without having turned Bath). As a result, the scores had to be recalculated and he became Sport Class winner for the day on handicap.

It had been generally a very frustrating day. Many pilots reported that their best opportunities for cloud climbs occurred while they were in the airway, and thus unable to take advantage of them. When they reached free air west of the airway, similar opportunities were relatively few and far between. Also, conditions further west, on the track of the first leg, looked very poor, with overdevelopment rampant. The only possible way to go to stay up for many pilots was due south, and even there the going was difficult.

One of the few to slog it out on track was winner Don Hanson. After take-off, he used a cloud over Market Harborough (a few miles east of HB) to climb to 7,500ft. This enabled him to cross the airway without too much difficulty, after which he flew south for a while, using a thermal to 5,000ft and encountering areas of rain. He finally arrived within sight of Upper Heyford at 1,500ft. He then managed to scrape up to 4,500ft, and later achieved 7,500ft. (At this stage, Ron Newall was about 10 minutes behind him, having employed similar tactics.) He then worked his way west on to track, and was able to round the turning point. On the way down the second leg, he passed David Robertson, on *his* way to the TP. Ron Newall was rained out of the sky at Fairford, and landed at the edge of the Lyneham zone.

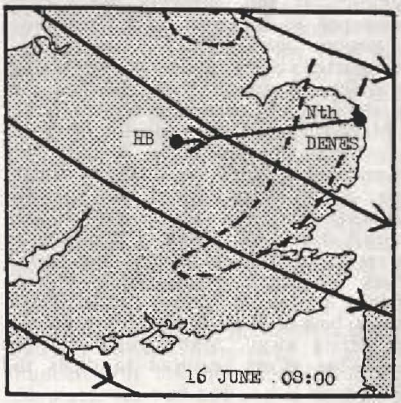
Pete Saundby also elected to go west. He achieved a cloud climb west of the airway, which sustained him as far as Little Rissington. After a further small climb, he was forced to glide it out under 8/8 cover, but with sufficient height to creep past part of the Lyneham zone. He encountered reduced sink during the glide, which was obviously weak wave, and wished he had gone further west. If the wave had coincided with the Cotswolds, he might have been able to sneak down to the TP.

All in all, it was far from being a satisfactory day, and it was obvious that the impenetrable Lyneham zone had virtually eliminated pilots' chances of making the TP. Neither class had a 1,000 point day. The Sport Class was dominated by the efforts of Robertson (770 points), Dobson (749) and Steve White (749), who earned more than 200 points more than Lemmy Tanner (508). As a result, Barrie Dobson took over the Sport leadership, with Lemmy second and Nigel Stevenson third.

Don Hanson's dogged flight earned him 936 points, against 396 for his nearest Club Class rival, Martin Seth-Smith. It gave him a total of 1,699 points, more than 350 ahead of Pete Saundby. Paul Grenet slipped back to third place, with 1,065.

I'LL KILL YOU IF YOU DO

Mike Batstone dumped an unstable, NW airstream into the laps of the competitors at briefing on Wednesday, June 16. It was moist, and would have variable layers of cloud. He hoped there would be some breaks in the cloud, especially late in the morning and early afternoon. Winds would be on the stiff side, 15kts from the west at ground level, and 25 to 30 higher up, with 30 degrees of north added on. With scattered, irregular thermals, cloudbases up to about 3,500ft in the afternoon, some showers, "quite a bit of icing" and all mixed up with



minor troughs crossing the country whose positions were difficult to forecast, it was once again far from being a 500km triangle day.

Vic Carr therefore set a goal race for both classes to North Denes airfield. Great Yarmouth (X, 25km; Y, 60), and placed the launching onus on pilots by making it a pilot-selected take-off. He also suggested that people avoid D208, a danger area overlapping the Honington military done.

"What happens there?" somebody asked.

"People drop bombs and parachutes. And," he added casually, "there are minefields."

The weather at 11:00 looked overcast, but had well-marked cumuli mixed up with it. It looked as though it was going to be yet another cloud-flying day.

There followed some old-style start-time jockeying.

By 12:30, the ragged fringes of showers were nipping across the field, interspersed by tattered fragments of blue sky and brief flickers of sunshine, bright and sparkling in the wind.

The gliders weaving in and out of each other on their way to the launch point appeared, too, as though they were being hustled and bustled by capricious breezes; in contrast to the orderly designated starts of the two previous days, ground movements were in disarray.

The first launch emerged at 12:25—"Monty" Monteith. By this time, there was a big patch of blue to the south-east, where the track lay, sprinkled with cumulus. It was, however, quite over-developed to the west, with clag about to pounce upon the DZ. Once the ball had started rolling, gliders were launched in quick succession, with the last pre-relight take-off occurring about 13:30.

Many competitors managed to get away from HB at reasonable heights, but several who failed to contact straight away found themselves circling in weak lift near the site, and were whipped quickly downwind. Some of these elected to return to the field for another launch (Nick Manley only just made it back after a prolonged scrape) while several others burned their boats in the process of getting away. Many pilots did not make the effort required to cross the line.

As the relights were about to start, Anthony Edwards strolled up to the start-time board.

"Relight, Anthony?"

He shook his head. "I've only just rigged."

"Aren't you a bit late?"

"No. I didn't think it was worth rigging before." He placidly selected a take-off time of 14:20. "Besides, I didn't want to get mixed up with all the rest, so I thought I'd wait for the next hole in the weather to come," he said, with infinite confidence.

He was right about waiting for the next hole. By a quarter-to-two, HB was well-nigh unsoarable. I left Anthony patiently awaiting his hole, and went over



Anthony Edwards awaiting his hole

to Control to see where the pins would appear. Sure enough, a cluster slowly grew, just as it had on the first two days. The important difference was that it was at the finishing point this time. The first arrival was Monteith, at 15:16. By 16:00, 13 had arrived, including John Williamson in Torva, Ian Strachan in what was becoming known as the clockwork mouse and Lemmy Tanner.

At 16:10, Control received a call from an RAF station, requesting information on R. J. Smith for identification purposes.

Oh, no, I thought. Bob has got himself involved again. The girl at Control gave the station the relevant information, and wrote down on her pilot report sheet "RAF Swannington", a disused airfield NW of Norwich. Poor Bob—he'd nearly made it. Later on, his crew called, and were efficiently despatched to Swannington, with instructions to report to the guard room.

Meanwhile, gliders were landing thick and fast at North Denes. One or two pilots who had landed out early, including Martin Seth-Smith and Angela Smith, returned for relights. But it was no use, and they failed to achieve a soaring distance, as did poor Anthony Edwards, whose hole never did arrive.

Bob Smith later telephoned in person for news of his crew. On hearing it, he emitted a depressed "Oh". He had, in fact, landed at Honington. For the record, the retrieve was a 300km triangle.

As expected, it proved to be a cloud-flying day, a tactic necessary to cross wide patches of dead air. The majority of traces showed one or two high peaks.

The early part of the course was generally on the tricky side; it wasn't until the Corby-Desborough area that the high climbs were achieved to boost pilots across the Fens. Jack Harrison's flight typified those of the successful pilots: "Lift off the clock at Oundle to 14,000ft, then straight across the Fens in one glide, arriving at Watton at 2,500ft. Took a cloud there to 7,000ft, making a final glide into North Denes. Icing was very bad on the first climb, and the achieved glide angle after that was only about 1 in 15. Therefore broke off the second climb when ice started to form."



Anthony Edwards filing his number away . . .

Ron Newall, Club Class winner for the day at 78km/h (handicapped), followed an almost identical pattern, climbing to 12,000ft at Oundle, and stoking up with an extra 3,000ft at Watton.

Lemmy Tanner, who won the Sport Class at 83km/h handicapped, regarded the first part of the route as the most important, gliding gently along until he, too, went into cloud at Oundle. From there, his flight was the same as everybody else's.

Ian Strachan, flying the motor glider in its Day 3 non-restartable capacity, made a faster speed than Ron Newall (82km/h), to finish above first in the Club Class. He was launched about the middle of the queue after some boardmanship, and was able to use gliders launched earlier to help him along. He found after crossing the start line that there were weak cloudstreets, so he used a streeting technique to float to Desborough, 12 miles on track. There he climbed to 9,000ft, which enabled him to get through some clag at Peterborough, and reach some developing cumulus. The third he tried took him at 6kts to 3,500ft with Harry Orme. There were rudimentary streets, and he thought there was no point in circling, so waffled along under them. He did not use cloud again until a dying core took him to 7,000ft at Marham, from where he used streeting techniques again in what subsequently proved to be his final glide. "I was a bit surprised to be at Norwich at about 2,000ft. There was no cloud there, and the final glide was marginal. Over the first part, I thought I wouldn't make it. But there were no big bits of sink, nor lift, and made it with 300ft to spare in the end."

One final glide which did not quite make it was Tony Watson's, which landed him one mile short of the goal. Tony Watson had had a very disappointing Nationals so far, after achieving a splendidly flown second placing at the sun-kissed Western Regionals.

And so to Bob Smith. He was doing well until between Downham Market and Feltwell, where there was a gigantic thunderstorm and jet aircraft all over the place. He was not at this time in the



Ken Wilkinson (L) *and Bob Smith*

Honington military zone. It was too dangerous to go into cloud, and he could not stay on track because of the danger area. He therefore went south to Thetford in torrential rain. There was nowhere to land save Honington airfield, so, after inspecting the circuit carefully, he landed there.

"Then all hell let loose," he said. "I took the canopy off. Klaxons were blaring. Tannoys were shouting: 'Intruder has landed! Intruder has landed!' The next thing I knew, I was looking down the barrel of an automatic rifle."

A Squadron Leader informed Bob that the station was on full alert and that he was a suspect person. He was not allowed to use his radio or communicate with aircraft in order to inform his crew. He was immediately "searched with hands".

A corporal was instructed to search the glider. His first shout was: "There's something bloody ticking in the back!" They took the barograph out, and one man said, "Shall I put it into a bucket of water?"

"I'll bloody kill you if you do," cried Bob, who then explained what it was.

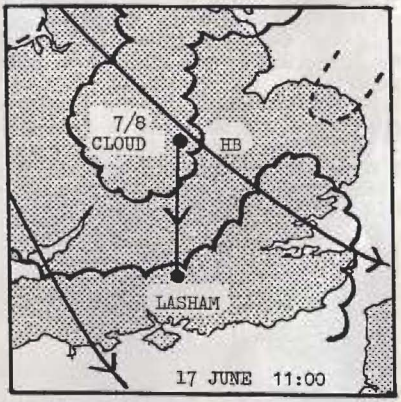
Subsequently, a Wing Commander introduced himself as an "evaluation officer", and expressed delight to see Bob, as they'd been on a full alert exercise for 24 hours and nothing had happened. He was escorted to the guardroom. After identification had been established he was treated royally. The glider was put into a hangar. When Bob's crew arrived, and they derigged it, however, they found that somebody had sprayed the squadron number on the ASW-15's tail: "FLY 237".

As a result of his win, Lemmy Tanner regained his lead over Barrie Dobson in the Sport Class, with 2,314 points against 2,120. Don Hanson maintained a comfortable lead in the Club Class, with 2,556 points, against 2,240 for Pete Saundby and 1,948 for Paul Grenet. Ian Strachan finished above third with 2,100 points.

Although a not unsatisfactory day, with 23 competitors and three *hors concours* pilots completing the course. It was particularly satisfactory for the Sport Class, only two of which failed to finish, and which up to then had been to some extent at the thin edge of the wedge, flying-wise.

THE TURNING POINTS THAT NEVER

Thursday, June 17, turned out to be the last contest day, and like the others was beset by difficulties, not the least of which, inevitably, was the weather. Alan Diver promised an unstable NW airstream, with snappy winds of up to about 25kts. It sounded great, until he produced a fly in the ointment—a "cold pool" of



deep instability around Cheshire. This would move SE over HB and into East Anglia about noon. There would be savage convection associated with this, with cu-nims reaching 25,000ft here and there. Overdevelopment was likely in conjunction with the pool.

Vic set an out-and-return for both classes with alternative turning points at March railway station (155km), Chatteris (148km) and Madingley Hall (155km).

The first take-off would be 11:30 with the Club Class to have first bite at the cherry.

The first trouble occurred when Madingley was forced to be cancelled as a TP because of the location of MATZ's in the area. It was replaced by Lords Bridge station, near Cambridge, kindly suggested by Anthony Edwards, who described a radio telescope installed there.

Before take-off was scheduled to start, a great deal of high cover had arrived, and launching was delayed. By noon, Vic announced that there would be a re-briefing at 12:30 because the weather had turned sour. This was mainly the fault of the cold pool. Convection had been strong and rapid, but an inversion at 6,000ft had caused spread-out and cut off the sun's radiation.

At re-briefing, the Club Class's task was changed to a goal race due south to Lasham, 140km. The earlier task, Vic felt, had been unfair to the lower performance machines because of the strong head-wind on the return trip. The Sport Class task remained unchanged.

When the first launch took place at 13:00, the weather still looked none too promising, but there was a cloud-street upwind of the site, near the DZ. In the event, most pilots set off towards Lasham with this relatively small area of lift to boost them on their way. During their initial climbs, they were quickly carried downwind of HB, and only two bothered to return to cross the line—Tim Oulds and Paul Grenet. They both had long, long glides to regain the gaggles, now well south of the field, but for Grenet it was well worth the effort, as he subsequently won the day.

The Sport Class was held back to 14:00 to review the situation, and its task was ultimately scrubbed. Four pilots (Tanner, Wilkinson, Orme and Steve White) attempted the task, and all rounded one or other of the TPs, landing on the return leg. Vic regretted subsequently that he had not sent the Sport Class off after the Club Class to Lasham.

Meanwhile, the statistics report that all but three Club Class pilots reached Lasham, with Paul Grenet making the fastest time, 58.65km/h handicapped. For the second day running, however, the motor glider made the best time, 63.58km/h.



"Get fell in!" Vic Carr, contest director

Although the statistics indicate otherwise, it was by no means a straightforward day. There was, in particular, a large dead area in Oxfordshire, and many competitors were forced to hang around what bits of lift they could find, thus reducing their speeds considerably. Zot Zotov was down to hill-soaring on Chinnor ridge at 700ft.

While many competitors tried to keep west (and upwind) of track, where free airspace enabled some to make substantial cloud climbs, Paul Grenet made a deliberate decision to follow the Chilterns, further to the east. When near Booker, he ran into a large dead patch reaching to Reading. At Reading, however, there were patches of sun, and though he was down to 800ft by the time he reached them, he was able to gain sufficient height there for his final glide.

Ian Strachan attributed his success to taking several risks. Had he known how many pilots would finish, he said afterwards, he would not have taken them. He found that there was a huge spread-out from Silverstone to south of Benson. There were small patches of sunlight here and there, and he "chased" these—to Oxford (where he was down to 1,000ft), Benson (1,500ft) and Goring (1,000ft). That last patch gave up and took him to a mere 1,500 ft above the hills. Which way could he go from there? He went upwind towards a wisp of cloud, which did not work. There was a large patch

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of sun SW of Reading, which he reached at 800ft. He lost 200ft trying to find some lift, in the meantime drifting over unlandable territory at Aldermaston woods. At last—zero sink, which strengthened to 4/5kts, and took him to a position for a fast and very high final glide.

Several competitors found evidence of wave activity on the way down. During a long glide above cloudbase in the Didcot area, Jack Harrison noted the vario cycling between 4kts down and 1kt up, while Pete Saundby thought that wave activity was organising the convection in the north Oxfordshire area into cross-wind bands. He was able to fly cross-wind from a point east of track to a point west of track in zero sink, and used this phenomenon near Upper Heyford and near Cowley, further south. It was quite a common effect in that area, he said.

Although competitors weren't to know it, Thursday was the last contest day, leaving Don Hanson the Club Class winner with 3,041 points, and Paul Grenet having nearly caught up with him with 2,948. Pete Saundby was third with 2,708. The clockwork mouse, however, finished above first.

FADE-OUT

Very little can be said about the remainder of the Championships, save that my little essay at punstering proved to be an essay in prognostication—it rained, and HB became truly Husbands Bogsworth. On Friday, the Club Class was scrubbed right from the start, but a race to Ipswich via Wymondham (207km) was set for the Sport. Soon afterwards, that was changed to a straight race to Ipswich, but as soon as everybody had rigged, the first drops of rain from an approaching warm front arrived, earlier than expected, and so the task was washed out.

It didn't rain on Saturday, and there was a glimmer of hope. Some convection was expected, but task briefing was postponed to 12:00, when a 116km triangle Olney-Uppingham-HB was set. The Sport Class duly took off—and dourly landed. There were plenty of relights, but only one or two pilots managed to get away, and then it was a matter of a single glide followed by a landing around Northampton.

During the morning, however, Tom Zealley, Chairman of the Flying Committee, led a discussion among pilots on such subjects as team selection, championships structure and the motor glider.

An informal vote on two aspects of motor glider operation in free competition was taken among competition pilots. Pilots were almost unanimously in favour of the motor glider flying in a configuration so that its engine could not be restarted in flight once it had completed its launch. On the subject of self retrieving, however, opinion was evenly divided—19 favouring self retrieving with a suitable time penalty before a relight and 18 against it.

It rained heavily on Saturday night, although that did not dampen the spirits of the competitors and crews who jammed into the Coventry Gliding Club's clubhouse for a Saturday night party.

There was one casualty, however—the telephone lines in the vicinity were down, and HB was incommunicado from the rest of the world. The wind on Sunday morning was SW, fresh. It looked as though a cold front was on the way through. But the Met men had no information later than 2am, and Alan Diver was forced to make a long trip to Birmingham for weather news.

When the forecast arrived later in the morning, a clearance was expected, but winds would be of the order of 25kts (meaning a downwind dash to East Anglia) and the ground was so wet that several hours would be necessary to get the air bubbling. No task was set.

At prizegiving, Adam Hepburn, deputy director, read out a letter which had been received from a farmer. It said that three gliders had landed near Peterborough in a dairy herd, and the farmer was claiming

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Philip Wills, BGA President, presented the prizes: The Furlong Trophy to the Sport Class winner, Lemmy Tanner; the Dart Trophy (highest placed pilot of numerically strongest glider in Sport Class), Lemmy Tanner; Kemsley Trophy to the winner of the Club Class, Don Hanson; Eon Trophy (as Dart Trophy, for Club Class), Don Hanson; Centenary Trophy, to the competitor in either Class under the age of 30 at the start of the championships and who scores most points on any two championship days, Paul Grenet; Interservices trophies, for the best performances by members of the services designated teams, Club Class, Don Hanson, and Sport, Barrie Dobson. Ian Strachan was awarded a special prize for his domination of the Club Class, and consolation prizes (boxes of cigars donated by Wally Kahn) were awarded to those who finished last in their respective classes. A prize was also awarded to Martin Seth-Smith for being the most considerate pilot from the operations point of view.

The organisation of the Championships was excellent throughout, especially when one considers that most of the officials had not been involved in a Nationals before. My fullest sympathy went out to the only seasoned member of the team—Vic Carr. His job as task-setter—never an enviable one—was made practically impossible by the weather, which, although it permitted flying, did so on its own terms.

EPILOGUE

John Williamson, commenting on Torva after the first real thermalling flight he had had in the machine (on the Oundle triangle), found that it climbed as well as the K-6E, and had a better performance in the glide. During that task, he thermalled with three K-6E's and held them nicely, he said. The controls were crisp and the rate of roll almost as good as that of the K-6, while he preferred Torva's more positive stability. He found it quite stable in cloud.

Giving some final thoughts at the end of the contest, in which he had flown the prototype to an unofficial fifth place in the Sport Class, John said that Torva



Lemmy Tanner, Sports Class winner

appeared to have got the glider they were planning—good climbing and handling characteristics, with the potential for good cross-country soaring. He thought, however that the handicap should be 92-94%, not the 90% it had been allotted. Field landing characteristics were excellent, although the present set-up in the prototype (landing flaps *and* brakes) provided a bit too much brake. (See also Sailplane News, p310).

Both Ian Strachan and Chris Duthy-James are preparing reports on the SF-27M for the Flying Committee.

Meanwhile, Ian commented that once the engine was retracted, his mental attitude throughout the flight was that he was flying a normal glider. If he got low and his hand began to quiver, it would be near the airbrake lever, not the ignition. He did not report a different attitude when flying in the restartable capacity against the non-restartable.

He thought that where the technical side of operating was concerned (sealing barographs, locking engines and so on)

there were no insoluble problems. However, in order to protect the motor glider pilot in case, for example, the solenoid failed, Ian thought it would be a good idea to have a second seal somewhere on the machine to prove that the engine had not been switched on.

Also, if a number of motor gliders were flying, there might be some difficulty with observing them at the DZ's.

The most difficult aspect of operating, Ian added, was obtaining two-stroke fuel to return to base.

Chris Duthy-James felt that another year of evaluation was desirable before admitting the motor glider into full competition status; one contest with four contest days could not provide enough data for proper decisions on rules to be made.

Final Results—Sport Class

No	*Pilot*	*H'cap %*	*Sailplane*	13.6 806	15.6 770	16.6 1000	*Total Points*
1	Tanner, L. E. N.	90	Dart 17R	806(1)	508(3)	1000(1)	2314
2	Dobson, B. F.	88	Std Cirrus	795(2)	749(2)	576(8)	2120
3	Stevenson, J. N.	88	Std Libelle	710(3)	449(4)	685(6)	1844
4	Orme, H.	88	Std Libelle	655(4)	273(8)	731(5)	1661
5	Robertson, D. J.	90	Dart 17R	190(6)	770(1)	529(9)	1489
6	Smith, M. J.	90	Dart 17R	134(9)	371(6)	836(3)	1341
7	Morison, S. M.	90	Dart 17R	102(12)	313(7)	786(4)	1201
8	Wilkinson, K. G.	88	ASW-15	129(10)	177(9)	868(2)	1174
9	Simpson, C. R.	90	Dart 17R	197(5)	176(10)	674(7)	1047
10	Monteith, J. R.	90	Dart 17R	41(14)	431(5)	393(10)	867
11	Kahn, W. A. H.	90	Dart 17R	183(7)	60(12)	390(11)	633
12	Watson, A. J.	88	Std Libelle	176(8)	126(11)	148(12)	450
13	Smith, R. J.	88	ASW-15	126(11)	25(13)	82(13)	233
Hors Concours							
(5)	Williamson, J. S.	90	Torva	743(3)	145(11)	737(5)	(1625)
(8)	White, S. A.	88	Std Cirrus	—	749(2)	616(8)	(1365)

Final Results—Club Class

No	*Pilot*	*H'cap %*	*Sailplane*	13.6 1000	15.6 936	16.6 1000	17.6 1000	*Total Points*
1	Hanson, D. F.	96	K-6E	763(3)	936(1)	887(6)	445(14)	3041
2	Grenet, P.	96	K-6E	821(2)	244(11)	883(7)	1000(1)	2948
3	Saundby, R. P.	96	K-6E	1000(1)	323(5)	917(4)	468(12)	2708
4	Newall, R. W. B.	96	K-6E	496(9)	369(3)	1000(1)	592(7)	2457
5	Harrison, K. A.	96	K-6E	309(8)	221(14)	899(5)	546(9)	2175
6	Zotov, D. V.	96	K-6E	653(4)	308(6)	946(3)	134(21)	2041
7	Gaunt, T. R. F.	96	K-6E	293(16=)	93(20)	795(9)	692(3)	1873
8	Shephard, E. G.	96	K-6E	591(5)	30(24)	809(8)	415(16)	1845
9	Hogg, A. J.	96	Olympia 419	569(7)	83(21)	666(12)	461(13)	1779
10	Hale, R. J.	100	Skylark 3F	377(13)	224(13)	317(13)	740(2)	1658
11	Wishart, R.	96	K-6E	373(14)	286(7)	231(14)	640(4)	1532
12	Stanley, J. H.	98	Skylark 4	36(25)	198(16)	953(2)	257(20)	1444
13	Oulds, T.	100	K-6CR	393(12)	277(9)	116(20)	614(6)	1400
14	Gill, C. J.	96	K-6E	322(15)	283(8)	713(11)	44(23)	1362
15	Shipton, Pamela	96	K-6E	293(16=)	335(4)	213(15)	482(11)	1323
16	Paul, I.	98	Skylark 4	68(21)	0(25)	773(10)	497(10)	1338
17	Seth-Smith, M. P.	96	K-6E	590(6)	396(2)	0(22=)	293(19)	1279
18	Smith, Angela	96	K-6E	417(11)	209(15)	0(22=)	549(8)	1175
19	Ellis, C. A. P.	100	Skylark 3	280(18)	36(23)	54(21)	616(5)	896
20	Evans, J. A.	96	Olympia 419	439(10)	256(10)	160(18)	26(25)	880
21	Martin, J. A.	100	K-6CR	60(22)	239(12)	157(19)	346(18)	802
22	Manley, N. K.	98	Skylark 4	116(19)	196(17)	178(16)	120(22)	610
23	Welsh, J. H.	96	K-6E	48(24)	94(19)	0(22=)	428(15)	570
24	Edwards, A. W. F.	102	Olympia 463	72(20)	80(22)	0(22=)	364(17)	516
25	Keogh, B.	96	K-6E	51(23)	188(18)	164(17)	42(24)	445
Hors Concours								
(1)	Strachan, I. W.	96	SF-27M	744(4)	288(7)	1068(1)	1185(1)	(3285)

Tasks: Day 1, 120km triangle, Oundle, Olney, HB. Day 2, 248km race to Lasham via Bath. Day 3, 188km race to North Denes. Day 4, Club Class only, 141km race to Lasham.

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CLOUD NAVIGATION SIMPLIFIED

By BUNNY HALE

PLATYPUS is right! A simple method of navigation in cloud is an excellent idea. When all about you is cold and grey, there is nothing more comforting than to know with confidence where you are, particularly when someone else calls "in cloud" on the radio at your altitude and over your half of the continent. Anything else is guaranteed to send you hurtling earthwards in panic or spin with the loss of perspiration and peace of mind.

Platypus, however, is also wrong. He forgot that no method of navigation is better than its errors. His method is basically right, and can be recommended for "cold and bothered" pilots and those starting to cloud fly. They will be very lucky if they come out of cloud over their Estimated Position (EP), however, even if they use the method correctly, because they are likely to be affected by wind and flying errors which can be quite large. The vital point Platypus missed out was to estimate how large these errors might be and find out how far from his EP he is likely to be.

This error estimation is as important as the simple calculation to find the EP, and can be guessed confidently, as I will show. However, to explain why the expected distance from the EP is so large, it is worth while to look at how the errors can build up, even for a good pilot, before thinking about a practical rule of thumb.

THE METHOD

Platypus's method (S&G April, p106) is to steer a course which is easy to draw by eye on the map and fly at 60kts, noting the gliding time. He used an example of a 90 minute flight in cloud—a rather long time—which included a total of 40min gliding time. To work out his EP, he simply drew two lines on the map, the first to show the effect of the wind for the whole 90mins, and the second the effect of the glide at one mile a minute. It is very simple and can easily be done on the map in the air. But how far away from the EP is Platypus likely to be after all this time? He says it works, but it could be said to work even if he finishes up to 10 miles from the EP, because each part of his calculation has a probable error.

PROBABLE ERRORS

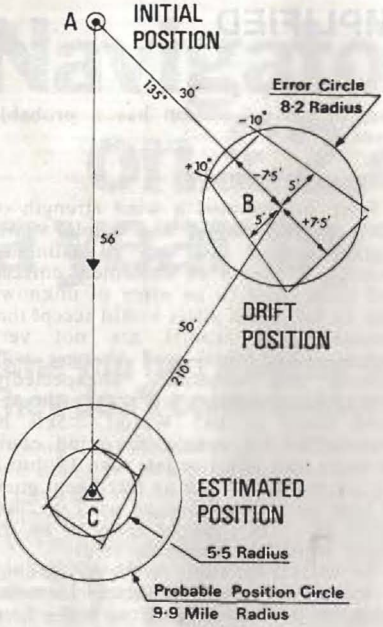
First, he assumed a wind strength of 20kts north-west for the whole 90min flight. Even if this was an estimated average, it cannot be absolutely correct, and there must be an error of unknown size. In fact, most pilots would accept that meteorological reports are not very accurate, and that wind changes with altitude and sometimes, unexpectedly, with time. How inaccurate is the estimated wind likely to be? Would ±5kts be reasonable? Of course, the wind could be more than 25kts or less than 15, but if we are trying to make an intelligent guess at how far out the forecast wind of 20kts might be, ±5kts would seem to be the likely error; the probable error.

So, what is the effect on the navigation? If the start was at a positively identified pinpoint A, then drifting with the forecast wind for 90mins would place the glider at B, 30 miles away to the south-east. The fact that the glider did not actually go there does not matter. If the position of point B was in error, then the final EP will be in error. With the probable error of ±5kts, Platypus is equally likely to have overshot B by 7½ miles if the wind was 25kts as have undershot by 7½ miles if it was only 15kts. He might be further away, but if we accept this probable error in wind strength he is likely to be within 7½ miles of B.

The wind direction is also going to be wrong. If we assume a very reasonable ±10° error in wind direction—and it could be very much more than this—then the one-in-sixty rule gives a probable error of five miles after 30 miles. This error would be either side of the drift line AB.

The effect of the two errors together would be to place the glider not at B but probably somewhere within the trapezium around it. By adding the errors statistically (the root sum of errors squared) a more useful estimate is the error circle of radius 8.2 miles based on B.

So, if the glider had thermalled for



90mins with a wind NW ±10° and 20kts ±5kts, it would probably be within 8.2 miles of B and is just as likely to be 8.2 miles from it. This navigation error may seem surprising, but it would not be the fault of the pilot but of the difference between the actual wind and that which the pilot assumed—on the best possible advice.

If the pilot meanders while circling in cloud, he would introduce another error to make matters worse. However, it should not be large in comparison and a practical guide might be to estimate the probable error in position as being ¼ of the distance drifted with the wind, or 10 miles in this case—placing the glider within 10 miles of B.

ERRORS IN THE GLIDE

So, the effect of the wind has been estimated. What about the gliding errors? If your head is in the clouds you might think there aren't any—but if you watch your compass in cloud you will know there must be. It is difficult to steer a steady course with a Cook or E2 compass and the compass itself might be in error. How often do you have your compass swung, anyway? My biggest compass error with a reportedly non-deviating compass was found to be 35° before correction! This could lead to dangerous flying on a long cloud flight; at the very least get you lost.

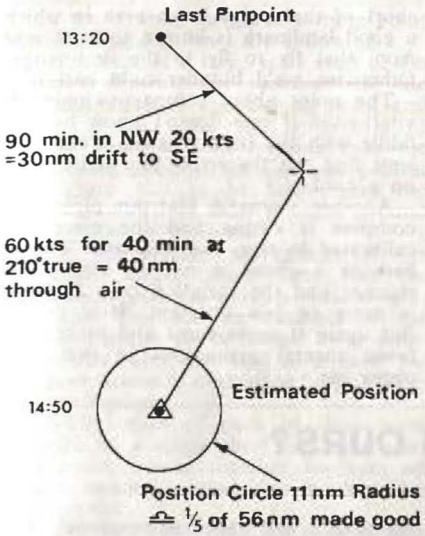
Assuming, however, that the compass is corrected, what are the probable errors during the glide? A course error of ±5° might be a reasonable guess remembering that the pilot tries to steer the course and will make errors in both directions. The distance flown effectively from B to C will have speed and timing errors—stopwatch accuracy depends on when you press the button or forget to press it. For a gliding time of 40mins ±4mins, and an airspeed of 60kts ±2kts, the probable error in distance is 4.2 miles, and the course error 3.5 miles at C. Starting from B, the errors give another trapezium at C and an error circle of 5.5 miles. In rough terms, this error is about ⅛ of the gliding distance of 40 miles.

PROBABLE POSITION CIRCLE

However, this error of 5.5 miles does not allow for the thermalling position error of 8.2 miles calculated for position B. These two figures, added statistically as the root sum of the squares (a standard method since the errors may not be cumulative), give a probable position circle at C with a radius of 9.9 miles. In practical terms, for the distance along track A to C of 56 miles, the error is less than ⅛ of the distance flown. Even if the navigation is done carefully, the glider could finish outside the circle. However, it is likely that the actual position will lie on or within it. The probable distance of about 10 miles from the EP may seem large, but is based on a reasoned guess of the errors in flying and navigation. For a poor forecast or less accurate flying, the probable position circle could be much larger.

RULE OF THUMB

The simple, practical guide to remember is that the probable position error is about ⅛ of the distance along track and that the glider should be within a circle of this radius from the EP. If most of the distance is covered by thermalling, however, the error would be larger; conversely, if most of the flight is in a straight glide, the error would be smaller. In addition



to Platypus's calculations for his flight I would therefore draw a circle round the EP of 11 miles, that being ⅛ of the distance along track, and expect to be within this circle—but not at its centre.

Spending a long time in cloud in this country must be considered dangerous because of restricted airspace, hilly terrain and the sea and also because of the weather. The wind can alter considerably and cloudbase height above ground change dramatically downwards (sorry, Platypus!) so it is probably best to get a visual fix every half-hour at least. Also, anticipating that loud radio announcement, which seems very close when coming from the grey murk, it is probably best to work out your EP fairly often when it is convenient, noting the probable error, so that you are ready for it. Most cloud flights consist of climbs and longish glides, and the best way is probably to calculate your position for the top of the last climb once you are settled in the subsequent glide.

Some pilots may disagree with the magnitude of the errors given, but this is not important. If you know roughly what they might be, the rule of thumb is a useful guide and could be refined with experience or personal preference. Those bar thumpers who decry any method of cloud navigation usually produce a "how I got lost" story with equal aplomb. Using the Platypus method with the error circle, you should know where you are without expecting to be absolutely right—which isn't necessary—so you can leave the navigation to sort itself out safely and concentrate on the other cold and bothering problems of cloud flying and, maybe, even enjoy it!

* * *

PLATYPUS says: I am thankful to Bunny Hale for clarifying the matter of errors which are of course unavoidable, and which for shortage of time and space I only hinted at by the use of the term "Estimated position". Since as much arithmetic can go into the calculation of probable errors as into the navigation itself, another rule of thumb is needed, which I think can crudely be put as one nautical mile for every 10-15 minutes that has elapsed since one's last fix.

Ninety minutes is in fact not an exceptionally long time to fly after getting a fix (we all sound like junkies, but never mind) since one can fly in clear air

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between climbs for long periods without sighting an identifiable landmark. During such periods, by the way, it is possible to steer a fairly accurate course at a steady speed, which helps to reduce errors.

Forecast upper-wind errors are pretty big sometimes, but that problem is with us whatever method of dead-reckoning is used. All we are trying to do is simplify the dead-reckoning sums.

On reflection, the Platypus method is not theoretically ideal for navigating to a specified point like a turning-point or goal, but then only pundits plan to cloudfly to a given point; the rest of us should (where we have the choice) aim to arrive in clear air a few miles short of that point in an area in which a good landmark is known to exist, and from that fix to fly to the destination. Otherwise, we'd blunder right past it.

The point about compass-swinging is vital; even if one doesn't know how to fiddle with the little magnets we can at least find out the errors and write them on a card.

Another shameful Platypus ploy: The compass is swung and the error-card calibrated to *true*, not magnetic. This is because a glider is not an airliner or steamer and the variation over England is more or less constant. How crude! But again it saves sums and makes for fewer mental gymnastics in that thin upper air.

IS THIS BETTER THAN OURS?

NAOMI CHRISTY

DURING a recent visit to America I was able to spend three days at the Mid Atlantic Soaring Contest. This took place at Blairstown, New Jersey, an airfield situated in wooded, undulating country, large areas of which to my mind looked very inhospitable from low altitudes.

The welcome I received was in keeping with traditional American hospitality plus the bonus of being another glider pilot, and from the BGA at that! Chris, Karl, Rusty, John and all the rest, I thank you.

As far as the weather was concerned I might just as well have been in England —the last two days being rained off, and the three contest days only moderate, although some six knot thermals were reported from time to time.

Of the 20 gliders flying all but two were of European manufacture. Take-off times were pilot selected, and the tasks were cats cradle, a 250km triangle, and a 146km out-and-return, the latter being a short task to ensure that everyone was home in time for a splendid banquet to which I was kindly invited.

The result of the contest was a win for Karl Striedeck in an ASW-12, with John Hearn, late of Lasham, coming fifth in his Phoebus 17.

The organisation and briefing for this competition was similar to a British regionals, and the atmosphere was familiar and friendly.

Unlike British competitions there was no task board to photograph. Instead, an official on the take-off line placed a random unique chinagraph pencil mark on the canopy in front of each camera lens. Then, with the canopy in place, the pilot took a photograph with each camera of the start line board held by an official (always a pretty girl!) which showed the competition number of the glider and the date. Two fixed cameras had to be used for all turning points, and both films handed in.

However, the main difference, and a significant one, was the method of designating turning points and identifying turning point photographs.

Selection of each turning point required locating two prominent geographical features (bridges, motorway intersections, hangar areas, runway intersections) approximately three quarters of a mile apart. The westernmost feature (southernmost if aligned exactly north and south) was used as the turning point over which the glider must be flown as a photograph is taken of the second feature which is used as the photo target. These features were so selected that it was possible to obtain a good picture, easy to identify, showing that it was taken from over the turning point.

In the briefing hangar a turning point display board showed the following:

(a) A section of a large scale map of the area showing the location and the orientation of the turning point and photo target, the required position of the glider and its heading over the turning point at the time the contest picture was to be taken, and the relationship of these to other ground features in the area.

(b) An 8in x 10in photograph of the photo target taken from over the turning point at a representative altitude. This was an example of the photograph to be taken by a competitor, and was used as a basis for comparison in evaluating turning point photographs.

Small copies of each of these were printed on a single sheet for each turning point, bound together to form an easily opened pocket size booklet for every pilot.

Satisfactory identification of a turning point required one contest photograph showing the photo target, the port wing tip of the glider and the canopy chinagraph mark in a picture taken from over the turning point. Photographs which showed that the glider was not over the turning point ($\frac{1}{4}$ mile radius maximum permitted deviation) at the time the photograph was taken were unacceptable. This was a "go—no go" decision and there was no provision for a lesser penalty. No other means of identification was acceptable as evidence of reaching a turning point.



"It's all right for you Open Class boys!"

I gather that no difficulty was experienced in taking acceptable photographs, even from quite low altitudes, and I heard no appeals against a decision when one was not accepted.

In conclusion I would say that the contest was well run and enjoyed by all—certainly by me.

ON YOUR OWN HEAD

By ANN WELCH

SOMEONE once said that rules were made to be broken. It was a voice from back in time when people reckoned that they were still wholly responsible for their own actions and their own destiny. This is far from today's world where, because there are so many people living so close together, we are bound by countless regulations. Many of these, like the licensing of cars, are sensible and we have conditioned ourselves to live with them, but many others we do not even know about.

Although in gliding we have managed to maintain considerable freedom to look after ourselves, sporting motor-aviation is generally confined within quite a forest of rules. The cry from above is that the innocent member of the public has to be protected whether he likes it or not.

But people who are involved in the so-called dangerous sports know that regulations do not of themselves always make for safety. In some cases they can be more dangerous than common sense. One instance is the pilot who lands his aeroplane in a field rather than on an airfield which has closed for the day. Obviously some rules are necessary but Authority needs to consider their overall effect on people.

Too many rules reduce the essential responsibility of an individual for himself and for those dependent upon him. Thus, in the long run, they may not achieve what was originally intended.

We hear a lot about the increased amount of leisure that everyone is supposed to have. Some people have this leisure and do nothing with it, and others take up gliding, flying, sailing, diving, etc., ending up with no leisure!

Of these 'dangerous sports,' which all use sophisticated equipment needing good maintenance and which demand an understanding of wind and weather, flying is the only one which is controlled by state regulation. Gliding and diving are looked after by self-help national associations with no legal power, and sailing by various associations and clubs or not at all.

In all these sports people get killed each year. They are not killed primarily through disobeying regulations, but by our old enemy 'error of judgment' or by doing something for which they are not trained or experienced in. These are basic human failings which all of us have, and no one involved for any length of time in any of these sports has not had to say to himself "there but for the grace of God go I."

If we look at some approximate figures we can probably get a better idea of what is happening than glancing at a Monday newspaper after a fine leisure weekend.

In gliding in Britain, with 7,100 participants, there are two deaths per year, or 28 for every 100,000 participants. Diving, with 15,000 participants, has five deaths a year (33 per 100,000); light aeroplane flying (including passengers), with 25,000 participants, has 10 deaths per year (40 per 100,000) and sailing (excluding li-los floating out to sea), with 1,250,000 participants, has 25 deaths (two per 100,000).

Obviously it is not possible to compare directly the risks of each of these sports. It depends what you do with your boat or your aeroplane, but assuming equal skill on straight-forward weekend activities the chances of something going disastrously wrong in diving, light aeroplane flying and gliding are about equal, and in sailing considerably less. But in all cases the risks are entirely reasonable.

In our technological world, competence is an essential quality, but it is in short supply. Competence is not something which can be easily taught because some degree of motivation is necessary, and some people are just not motivated. This is why sports such as gliding and sailing are so important. They are good because they give a great deal of pleasure but they are vital because they teach competence. If you fly a glider, race a dinghy or go ocean cruising, dive on a wreck, or enter an aerobatic competition you get forced to do things properly—something not even schools can always get across. This lesson comes home early and it stays late. It does not require a regulation to tell you not to leave harbour in a force 9 wind, or to return to the surface with some air still in your bottle, or to do your DI properly. If you are silly enough, no regulations will help.

Authority, continually worried about the innocent public, often does not realise how much technology has rubbed off on people now coming into sports like gliding. They have been brought up on a diet of transistors and tape recorders, and have probably spent some 600 hours or so by their early teens listening, in the family car, to their parents accusing other road users of incompetence. The new club member thus has much less of a problem dealing with hand/head co-ordination, or understanding theory or instrumentation than even 10-15 years ago. He is easy to teach to fly, and instructional emphasis can be given much earlier to airmanship and to using the aircraft as a tool. Unfortunately in this country the minimum age for solo gliding is quite high (16) but if you want to see examples of real competence and sense in the young go to any junior sailing championship.

It is easy to say that pilots, divers and sailors are only a very small proportion of the total population. It is true, but highlights the need for encouraging such pockets of competence in every possible way because once developed, competence does not remain confined to the special sport.

In gliding there is more of a problem than in any of the other sports in that the fundamental area of operations—the sky—is being relentlessly reduced. Some controlled airspace is essential but Authority will have to balance, for example, the long-term value of military flying with the long-term satisfaction and the development of competence in quite a lot of citizens.

Wherever possible, sporting activities should be allowed to look after themselves, and be responsible for their own people and the new people they attract. It really makes no difference to the innocent person that he paid for a flight

or not if he is killed. Since the thirties, successive ministries and departments of aviation have failed to separate clearly sporting flying from commercial operations. As a result, Authority is still unable to distinguish really sensibly between a motor glider and an executive jet. With a world-wide tendency to add to regulations it is vital that the technological sports fight against legislative control over their own activities, and above all against rules which cannot be proved to be in the genuine public interest.

Excessive or unnecessary regulations do not increase safety, but frustration. They weaken respect for the law generally and they divert useful constructive energy into destructive (beat the rule) activities.

Sports like gliding are important—and the more that commonsense and decision are demanded from their members the more valuable they become.

HOW THE SORE PEOPLE SAVED THE WORLD

By MICHAEL BIRD

This story claims to be true, but is no more reliable than a long-range weather forecast

THE DESPOT of Jupiter, known to his subjects as the Frekon, sat enthroned in his palace, plotting his impending invasion of Earth. He summoned his chief intelligence agent, Pewkon. "O Pewkon, how fare your enquiries into the mindways of the earthlings, that we may know how best to subjugate these creatures?"

Pewkon delivered a snappy triple-clawed salute. "Well, Frekon, the boys in Socio-Psychological Intelligence (known to the monster in the street as SPI) have come up with something pretty weird just when we guessed we had the guys on Earth figured out OK."

"Pray illuminate the Frekon's mind. Our invasion cannot commence until all the earthlings' ways are known to us."

"Well, a couple of days back we put Burpon to work on the In-depth Videoscanner but with a difference; instead of sweeping the whole Earth continously we focussed on one spot for 48 hours. And boy! I tell you what Burpon saw was real spooky!" Pewkon whistled through his mandibles.

The Frekon's claw impatiently waved, bidding Pewkon to continue.

"As I said, little old B was zeroed in on Lat 53°N Long 1°W; he reports he saw a hundred-and-fifty earthlings converge on a morning-prayer meeting, after which they rushed out and opened 40 long boxes on wheels (about 20 cubits, give or take a claw). They began to assemble enormous white birds, about 40 cubits in spread. Some used little trolleys, trestles and very few earthlings, and were quickly assembled. Others used many earthlings and no scientific equipment and were only assembled after much blaspheming, cries for help and even the loss of blood."



"Such urgency and suffering means one thing," observed the Frekon. "The birds are machines of war and must be prevented from taking the air against us."

"Well, hold on there," squeaked Pewkon, "these guys are proud of the total

uselessness of their birds from any military standpoint."

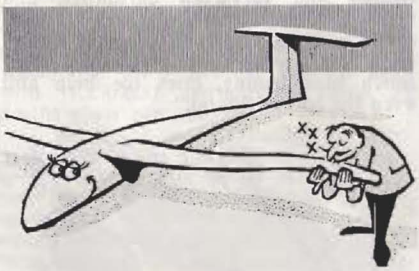
"Then surely they must be essential to the support of their homes, the nurturing of their young or the prosperity of the coming harvest?"

"Well, not even that," said Pewkon, "the boys in Economic Warfare said that the great white birds are a drain on the earthlings' pockets, they don't see their kids for most of the summer and the effect on the harvest is chiefly to reap a lot of it before the farmers are ready."

Pewkon scratched his carapace thoughtfully and went on, "Psychological Warfare said the suffering and expense would only be justified if the whole exercise was essential to—er—the reproduction of the species."

The Frekon's eye lit up. "You mean sex?"

"Well yes, kinda. That was the idea anyway. But they found that the birds hampered rather than helped the mating process and many of the great-white-bird-fanciers are quite celibate, all capacity for love, devotion and sacrifice being dedicated to 40 cubits of glass-fibre."



The Frekon interrupted the meeting briefly to instruct his Air-Marshals to hold up mobilisation for the invasion.

"To get back to Burpon's report," continued Pewkon, "The 40 birds were towed to the middle of a vast field and set out in rows pointed towards the East." He paused to let the significance of this sink in.

"Then what did the earthlings do?" demanded the Frekon.

"Nothing. Absolutely not a thing," wailed Pewkon. "They just sat there all day. Then at the end of the day they took the birds back, dismantled them and put them back in their boxes."

"And the next day?"

"Exactly the same. The whole rigmarole repeated from start to finish. Burpon said he'd have a nervous breakdown if we made him watch for a third day so we switched him to the World Series Baseball for a rest."

At this point Burpon entered, apparently fully recovered, waving excited tentacles. "I've just been re-running those tapes. I've got it!

"The earthlings are the unhappy slaves of two priests, Strorn and Ronmet, generally known as the Taskmasters. Those two control the weather."



"Even we on Jupiter cannot achieve that," gravely intoned the Frekon. "How can you be sure?"

"By the abuse that the earthlings (who because the word 'Sore' is one they use with most frequency and reverence, I call the Sore People) heap on the Taskmasters when the weather is bad. No intelligent life-form would so blame their priests unless they controlled the elements."

"Very true," murmured the Frekon, "but why do they tolerate such abuse from their slaves if they are omnipotent?"

"It is a harmless safety-valve for the frustrations of the Sore People. Besides Taskmasters need not worry about popularity when they have the satisfaction of knowing that they can make the sun shine at will."

"If they can do that, why do they not make the sun shine?"

"Because they know what the Sore People do not, namely that it is impossible to fly without propulsive power. Fine weather would simply tempt the Sore People to throw their great white birds into the air and destroy them. You see, the birds are made of glass!"

Even the Frekon could barely resist a smile at the folly of the Sore People and the cunning of their Taskmasters.

"The Sore People," continued Burpon, "vainly hope that they might one day, like angels, defy gravity and fly without power. This manifest delusion is perpetuated by superstitious ceremonies designed to placate the God of Gravity, *the field being named after Isaac Newton himself.*"

"These Taskmasters, do they share the Sore People's delusions?"

"They certainly do not! Strorn has been observed flying around in a white bird but with a little engine. Thus while



the great white glass birds lie stranded on the ground, he can humble the slaves with his mastery of the heavens."

'Perhaps we should follow their example to keep our own subjects under control," said the Frekon. "Pewkon, I appoint you CFI and Archtaskmaster. Forget about the Earth Invasion and set up a Jupiter Nationals immediately."

"Gee, boss, that's just great!" exclaimed Pewkon.

"Oh, and one other thing. I would be grateful if you would stop watching all those old American movies on the Videoscanner. Peace be with you."

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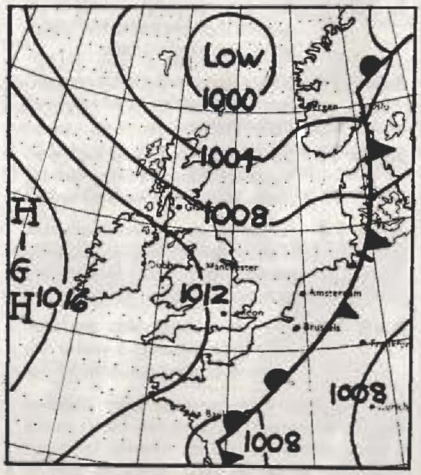
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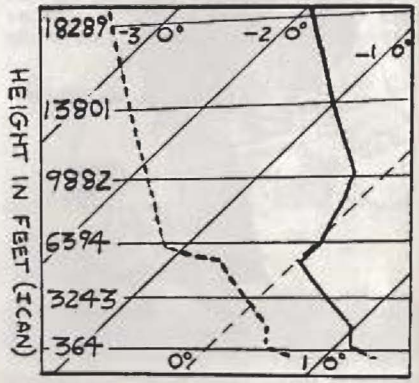
THE magnificent flying weather recorded for April (see S&G, June, p171) continued into May, and the elements only restored the balance by producing a miserable four weeks for late May and early June, timed perfectly to coincide with the two Nationals and their practice weeks.

The Western Regionals, held from May 15 to 23, produced some excellent flying, with six consecutive contest days. On one of these (May 18), which featured a 235km out-and-return, Alf Warminger finally succeeded in completing the first 500km out-and-return flight, from Swanton Morley to Dursley and return. On the same day, Hugh Hilditch (SHK) flew a 500km triangle from Lasham.

Meanwhile, Mike Garrod provides the following meteorological notes:

"The weekend of May 15-16 featured showery weather over the UK with rain at first in the south. A general pressure rise took place during the subsequent 48 hours, leading to stabilisation aloft. The air, being of polar origin, was favourable for ideal soaring weather—well-broken cumulus with a high base. On the 18th, there were very light winds over southern England, combined with dry, unstable air to 6,000ft. The situation was not dissimilar from that experienced on April 28, when several 500km triangles were done."





DAY RETURN DURSLEY STATION

By ALF WARMINGER

Date: Tuesday, May 18
Task: 500km out-and-return, Dursley station, Swanton Morley

WALKING the short distance from home to business at 7.30am on Tuesday, May 18, I had a few moments to dwell on the flying possibilities for the day. It looked as though the forecast of the previous evening would be right. The air was crisp, skies clear, visibility good and the wind light, from the west.

An hour later, I was playing truant and setting off for Swanton Morley, having had an encouraging report from the Colchester Met man. It looked as if I could make a serious, fifth, attempt at the Dursley 500km out-and-return. Previous attempts had got me round the turning point and back to Bicester twice, and in

1969 I had twice reached Feltwell, 24 miles short of the goal.

At 10:32, Wilf Reynolds, the CFI of the Norfolk and Norwich Aero Club, released me on the north side of the field at 2,500ft, and I went over the flying control to take a starting photograph. Although there were official observers on the ground, it doesn't do any harm to double up whenever possible.

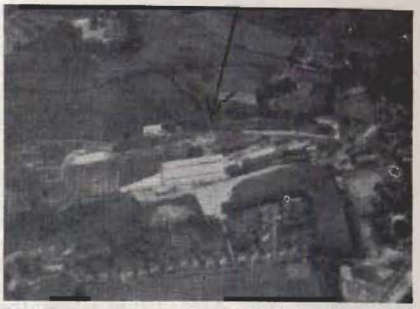
I aimed to travel carefully until the sun got down to serious work. Thermals were weak at first. There were, however, bits of cloud at around 3,500ft—a good omen for such a time so near the east coast. An hour out, I had made 50km; fair enough, all things considered. Once clear of the Fens, thermals and cloud base progressively improved and a check near Grafham Water gave me a time of 105km in 1:45.

The headwind of 10kts or so had slackened and was now barely 5kts and tending to veer north.

Clouds now appeared to be clustering in lumps three or four miles across with much bigger areas of seemingly lifeless blue sky in between. A timely warning from Ray Stafford Allen, flying in his Capstan, confirmed this, so I thus aimed for the useful looking cloud formations, often diverting 20° or so from either side of track. The thermals now averaged out at 4kts and this is what I set my speed-to-fly ring at, giving the Phoebus an inter-thermal speed of 70-80kts. Visibility was excellent—about 10 miles—and so it was no sweat to fly on the half-million map. The airfields of Silverstone, Hinton-in-the-Hedges and Barford St John passed underneath and now, at 14:00, it looked as if I would make the turning point on schedule at 15:00. Cloudbase had risen to more than 5,000ft and tops looked as though they were reaching 7-8,000ft.

I purposely kept out of cloud in order to preserve the artificial horizon battery for possible use on the homeward run. In the Aston Down area I contacted Nympsfield control and arranged for a visual sighting by an observer. (Dursley is a few miles beyond Nympsfield.)

Arriving at Dursley, I twice circled the turning point at the rail head and took four photographs from 3,000ft before turning back to head for Nympsfield. I called control when about half-way between the turning point and the Bristol



Dursley *Photo: Alf Warminger*

Gliding Club site, receiving an acknowledgement of being officially observed and information on other gliders circling in the area.

I joined No 78 at about 1,200ft above the ridge and began to breathe easier as the altimeter started to wind up. At 4,000ft I said cheerio and thank you to Tom Bradbury on the site below.

After using a dying cloud formation just beyond Stroud, I headed for a promising looking cumulus near Chedworth airfield, contacted it, and climbed to 7,000ft in it. Now I could afford at last to relax, and headed for the next likely looking area in the sky, near Enstone, diverting some 20° or so to the south of track. After this the sky turned rather sour and I could only glide on and hope. Down to about 1,500ft in the Wolverton area, none of the scraggy clouds above seemed to be working, and after about 10 minutes of milling around I decided to try the big corrugated iron roofs of the large printing works and railway sheds. A couple of circuits of the area, and suddenly I felt the surge of a snappy thermal. Soon I was away again, leaving the lift to a Swallow that had just found it, and headed for the Bedford area where things were obviously picking up. It was 17:30, with still a good possibility of getting back to Swanton Morley. The wind was now about 5kts, northerly, and I was concerned about the possibility of sea air over Norfolk. However, the sky ahead looked really good, and so it proved, with several excellent climbs of 4-6kts to 5,500ft.

I saw Ely a few miles to starboard from 4,000ft. Another climb of 2,000ft would do the trick, I thought. Using a decaying

cloud cluster, I diverted a little towards the higher ground beyond the Fens proper, by Methwold, where I was received by some nice developing cumulus. Climbing from 3,000ft to 5,500ft, I reckoned that it was in the bag provided I didn't fall through the undercarriage doors of the Phoebus.

Passing the news to the boys at Swanton, they organised the beer while I used the airbrakes so as not to arrive too disgracefully high.

Touching down at 19:18, I staggered off to the bar and the more mundane facilities of the Aero Club while the reception committee stabled a worthy steed.

OBSERVATIONS

Decaying cloud structures were generally speaking giving lift long after one would expect; this was particularly true during the second half of the flight. Apart from the Wolverton episode, I hardly looked down at the ground for thermal sources, always using clouds and looking up when underneath them for positioning.

There were big areas of cloud within bigger areas of blue, but no streeting as such.

WESTERN REGIONALS, 1971

By MIKE CLEAVER

THIS year's competitions season got off to an excellent start with the Western Regionals, held at Nympsfield a month earlier than usual, from May 15 to 23. Nineteen pilots took part, and enjoyed six magnificent days of contest flying over courses which totalled about 1,250km.

Although Saturday, May 15, dawned bright and clear, meteorologist Tom Bradbury warned that an approaching frontal system would probably not permit a task to be flown. Some competitors did an hour or so's local soaring before the rain began.

The first of the six consecutive contest days was Sunday, May 16. A forecast of good visibility and 4kt thermals allowed the task setter to set a 225km triangle via Gaydon airfield and Leominster railway station. Five pilots completed the task, and three more landed at the bottom of Nympsfield's ridge. Tony Watson, last year's winner, landed at Gaydon in his Std Libelle, took a winch launch, and soared back. Ralph Jones (Std Cirrus) made the fastest time, 58.13km/h.

On Monday, May 17, the probability of turning point clamp induced the setting of an out-and-return race with alternative TPs at Shobdon (144km), Tenbury Wells bridge (140km) or the Bromsgrove M5/A38 junction (131km). Four pilots completed the task, with Tony Watson making the fastest time at 49.13km/h and Ralph Jones second at 42.67km/h.

A cracking day in an area lying NE/SW across Nympsfield was forecast for May 18. This gave the competitors a chance to try a 235km out-and-return race to Husbands Bosworth, which 13 pilots finished. Once again, Tony Watson made the fastest time (67.98km/h) with Ralph Jones about 3km/h slower.

The next day, Wednesday, May 19, gave the promise of being similar to Tuesday, and this resulted in a 318.5km triangle being set. The area of good weather and the Birmingham control zone dictated that it would, however, not be a 28 percenter: Blenheim Palace, Shrewsbury. Nympsfield. One pilot radioed in from Blenheim Palace: "This place would make a *Pygmalion* good clubhouse."

Four gliders returned to Nympsfield, although one pilot unfortunately photographed a wrong first turning point and scored zero. Tony Watson, although making again the fastest time (57.38 km/h), lost 50 points because of a bad photograph. Peter James (Std Libelle) was less than 1km/h slower. This placed him in second place overall to Ralph Jones, with 3,154 points against 3,811, with Tony Watson in third place with 3,113.

The fifth contest day, May 20, provided a more limited area with good soaring conditions, and a short 142km out-and-return to Wellesbourne Mountford was set as a consequence. Once again, Tony Watson made the fastest time (70.07km/h) with Ralph Jones

Final Results—Western Regional Championships, Nympsfield. May 15 to 23

No	Pilot(s)	H'cap %	Sailplane	16.5 1000	17.5 1000	18.5 1000	19.5 1000	20.5 1000	21.5 1000	Total Points
1	Jones, R.	88	Std Cirrus	1000	931	914	966	881	944	5636
2	Watson, A. J.	88	Std Libelle	163	1000	1000	950*	1000	1000	5113
3	James, P. W.	88	Std Libelle	659	803	700	993	416	547	4118
4	Vennard, D. A.	96	K-6E	856	216	755	695	792	556	3870
5	Aldridge, K. R.	88	Std Cirrus	854	930	101	745	411	552	3593
6	McGee, T. N.	90	Dart 17R	805	264	672	721	357	639	3458
7	Smoker, J. L.	98	Skylark 4	740	693	533	603	393	227	3189
8	Gaunt, N.	100	K-6 (MD1)	259	734	749	842	403	201	3188
9	Throssell, M. G., Southwood, A. M.	98	Skylark 4	555 —	— 354	616 —	— 792	457 —	— 319	3093
10	Elliott, E.G., Johns, H.	98	Skylark 4	— 740	304 —	— 674	467 —	— 360	1 —	2546
11	Crawshaw, G. H.	102	Olympia 463	444	388	499	537	316	235	2419
12	Terrett, R. A. F.	96	K-6E	681	0	531	0	316	336	1864
13	Davis, D. W.	84	Cirrus	801	204	354	317	70	0	1746
14	Roberts, D. W. N., Gibbons, M. J.	106	Olympia 460	437 —	— 345	531 —	— 321	— 86	0 —	1720
15	Bowden, D., Stockham, E. B. W.	96	K-6E	— 67	145 —	— 144	793 —	— 0	507 —	1656
16	Wales, C. D., Saint, A. W. G.	98	Skylark 4	407 —	— 360	177 —	— 566	67 —	— 0	1577
17	Millett, D. H.	100	Skylark 3	481	237	252	394	70	9	1443
18	Pope, M. H. B.	90	Dart 17R	311	197	177	433	316	5	1439
19	Duke, A. D., Upson, G. H.	100	K-6CR	422 —	— 103	267 —	— 371	0 —	— 93	1256

*Penalty of 50 points

second (65.21km/h). Peter James only scored 416 points for the day.

The last contest day was on Friday, May 21. The soarable gap in the weather was closing in, but allowed a 198.5km triangle to be set within its confines. By this time, all the pilots were in good practice and, despite some difficulties on the first leg, all 19 competitors, plus Tug Willson flying a Skylark 4 *hors concours*, completed the task. Tony Watson was the fastest for the fifth day in succession (62.95km/h), with Ralph Jones close on his heels (61.55km/h). Several pilots took no chances on the final glide, and crossed the finishing line at the maximum permitted 1,000ft. Number 46 was reminded that Nympsfield approach was a different shape from Heathrow, and 460 was asked to hold while we cleared the field of other gliders.

This task set some problems for the scorers. If all pilots complete a task, there are no distance points, and pilots achieving less than 60% of the winner's speed get no speed points. In this case, the slowest six pilots scored 0, 0, 0, 1, 5 and 9 points, though had they all landed at the bottom of the ridge they would all have scored 315 points, before handicapping.

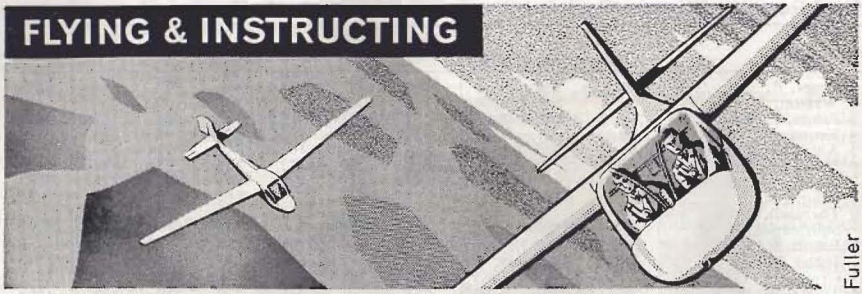
If a place-scoring system had been used instead of the standard system, some of the anomaly would have been removed, as only one pilot of the three would have scored zero for completing a 200km triangle.

On Saturday, the pilots with these zeros (Tony Saint, Dave Roberts and Bill Davis) and Ted Elliott, who scored one, were presented with consolation bottles at briefing. A 140km triangle was set and the competitors launched, but the task was cancelled by radio when cloudbase dropped to 1,000ft over Cheltenham. Pilots returned, and some flew a fun task to Bath Racecourse and back for a bottle of gin, which was won by Ralph Jones, the only one to complete it.

By Sunday, the soarable gap of the week had closed in completely, so prize-giving was brought forward to noon. Peter Scott presented the Sir Egbert Cadbury Trophy to the winner, Ralph Jones, and other prizes went to Tony Watson (second), Peter James (third) and Mike Throssell and Martin Southwood (team prize). The competitors made a presentation to Mrs Smith for all her hard work catering for 60 hungry pilots and crews.

PIGGOTT WINS AT LASHAM

Derek Piggott (Phoebus C) won the Lasham Regionals, held from June 26 to July 4.



SO THEY'VE ASKED YOU TO BE CFI

YOU might have known it was coming. Committee members had been eyeing you speculatively. The CFI had asked you to give the chairman a quick circuit ("Nothing serious, old boy, just a bit out of practice") and was seen lurking in the background the last time you chewed someone out for a low final turn. On his last visit, you had just happened to find yourself alone with Bill Scull with a bottle of Scotch between you: "No more for me, thanks, but you go ahead. Now, what are your views on supervising early solo pilots?"

Then it happened. "The committee has asked me to sound you out to see if you'd like to be CFI." Oh, the sweet smell of success. And they've got you weighed up: "I don't think I could cope with it," you protest half-heartedly, knowing you'd really be darn good at it. They're up to this one: "Of course you can do it—standing on your head; and anyway, we've had good reports etc, etc, etc."

So there you are, six months later, night approaching fast and still two people on the list. The tractor is out of fuel and the log keeper says she thinks she ought to go home because little Willie's getting restless and he's torn up all the indemnity forms. The bar is certain to be shut before you get this lot sorted out and just wait 'til you get hold of the goon who went home with the hangar keys. . . . Drawing on hitherto undreamed-of reserves of fortitude (the committee was right) you pack it all away, stagger into the bar, grab a pint and breathe a sigh of relief. At this point you become aware of a figure like Hamlet's father's ghost shimmering at your elbow. "I don't want to be niggly," he says. But you know he's going to be: "I put my name on the list as early as half past three this afternoon and I didn't fly!" We will mercifully draw a veil over the next ten minutes.

If you are a CFI, you've probably seen it all. If you're a potential one, cheer up. It isn't all bad and if you read on you might get some ideas on how to smooth your path to stardom.

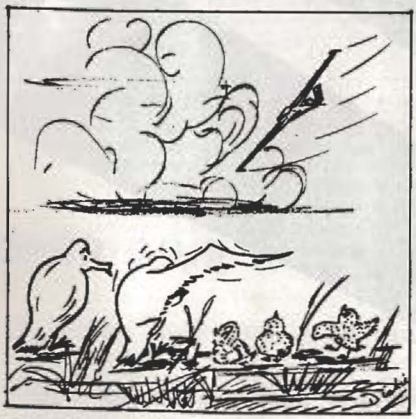
What should being CFI really mean? To start with we can remove some of the things it doesn't mean. Just because you have been elected by a committee doesn't mean you're God. Only a temporary one. Remember, the people you are beastly to on the way up will still be around to grease the slippery pole on your way back again. And another thing—election as CFI doesn't mean you have the right to alter the principles of flight or the laws of gravity. Keep your high flown theories to yourself until you have had a chance to pick the brains of older and wiser heads. Most of what you will have to do has been done before. Most of the mistakes have been made. Ask and find out. You will not lower yourself or appear weak by approaching people with a good deal more experience than you. They will be only too glad to pass on their hard earned store of knowledge. After all, you're all in the same business.

The next bit of advice is to put on your office wall a large sign saying, "WHY NOT LEAVE IT AS IT IS?" If you go around changing everything as soon as you get into power you will achieve a confusion such as has not been seen since the Tower of Babel. Confusion is dan-

gerous and if you don't know what you're doing you'll have someone killed. Breaking the news to a new widow is not the way to spend a Sunday evening.

Your job as CFI is to provide maximum member enjoyment, which means a lot of lovely safe flying in a controlled but relaxed atmosphere. Remember, people are doing it for fun but at the same time you are responsible for seeing that they have their fun safely. The title Chief Instructor means exactly what it says: You run the instructors and through them all, repeat *all*, the flying in the club. The committee, directors, call them what you will, look after club management and administration and the purpose of that is to provide you with the environment in which to get on with your job. And you really are responsible. It's not the committee who have to get up in the coroner's court, it's *you*. Innocent members of the public join to learn to fly. They pay. They deserve the best in the way of instruction and supervision that you can offer. And where human lives are at stake the best is nothing short of perfection.

Having agreed that safe flying is the name of the game how can you, as CFI, aim for the degree of perfection required? You supervise. You supervise the instructors. You supervise them supervising pilots. You select for yourself the best instructors available. You select potential instructors and train them or have them trained. In the latter case, you prepare them for their course so that they can get the maximum benefit from it. You fly with your instructors and fly with their pupils to check their results. Above all you cut out the dead wood, the fine weather boys, the 10 launches a month types, the show-offs and the braggarts. The reason for instructing is that one genuinely wants to pass on one's own enjoyment of the sport to others. It is not an excuse to show off to the dolly birds or to prop up the bar surrounded by admirers.



"How do I teach the kids safe flying when those fools circle downwind at 300ft?

When you think you are beginning to get the organisation the way you want it you start delegating authority. This will be an eye opener, but don't interfere with the others unless safety is jeopardised. Keep quiet and calmly make your judgments about who will be reliable and loyal to you and who won't. Don't worry about losing instructors. If they take offence they're not much use to you anyway. It's surprising what can be done with a good pilot and a Bill Scull course. Once you can delegate, get in as much solo flying as you can. Keep up the badge hunt. A CFI with a Silver is at somewhat of a disadvantage in a club full of Diamonds. Do enough pure instructing to keep current and to check the way instruction is being given. Do a bit of tugging, but don't hog it. If you can keep flexible in your flying activities you won't fall into the trap of becoming that worst of all types of CFI, the circuit basher.

To be a really effective CFI you must communicate. Some things, syllabuses, flying rules, etc, must be written down in such a way that there can be no argument. In addition you should write newsletters, reminding the older hands of things they may have forgotten and giving the newer chaps food for thought. Have instructors' meetings fairly regularly. They provide an opportunity for instructors to let their hair down and talk shop in an uninhibited atmosphere. You will also find out more about them, not all of it good. Your main aim is standardisation. Pupils must perforce fly with many different instructors. You owe it to them to see that they get taught in substantially the same way. Find out who is teaching them that the elevator and rudder change functions in a steep turn!

I know that there are things I have not covered here, but I've tried to get at

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the basics. I hope I've made at least one CFI have one thought, even if it's anti.

To sum up, try these hints for success:—

Don't think you're God's gift to aviation.
Don't indulge in flashy flying (they know you're good).
Don't think only you can teach people to fly. You mustn't start a hero worship cult in the pupils.
Don't hesitate to jettison sub-standard instructors.
Do do enough instructing to keep your hand in and check your instructors' results.
Do fly with your instructors as often as possible.
Listen to pupils' whinges and don't let them know you've heard it all before.

COMMUNICATE.

SUPERVISE.

ROGER A. NEAVES

SILVER DISTANCE—Both Ways

By I. STRICKLAND

THE great day was to be Saturday, 1st August, I had decided. The forecast was good—endorsed by a very understanding met. man at the London Weather Centre. He assured me of thermals to 5,000 ft., which would be blue, or nearly so in the afternoon.

I hardly slept a wink on Friday night, and neither did Helen, my long suffering wife, who was temporarily grounded owing to the imminent arrival of another glider pilot! She had seen to the inner man and had prepared a marvellous lunch box.

At last Saturday dawned, at 07:00 hrs. I was up, and down to Booker by 08:30, where all was a hive of activity.

First job—name on list—swearwords! I am third.

Next job—find CFI, for permission to go cross-country for the first time. Yes I can go, but . . . only one of the two Skylarks available is allowed to go, as two of the others are u/s and the third is away on holiday! It always happens on the best days, doesn't it? The pilot on the list before me also wants his distance. That was it. The final blow to my chances of a cross-country attempt today; by the time Pip Whiteman and 139 get back the best of the day will be over. There might just be a chance if I offer to retrieve and follow him all the way. He gladly accepts and comes up with a brilliant idea. I will follow with the trailer in case he makes a field landing, but if he gets to his goal at Enstone, I can fly back to Booker. Great! My Silver distance is on again—but wait, how do I get launched? Pip thought there was a chap at Enstone with a tug. "Let's give it a try," I said, with all fingers and toes crossed.

By 09:00 hrs. everything is arranged and we sit back and wait. By 09:30 the first puffs of cu appear but caution warns. Wait till it gets going a bit. So we release 139 to the second chap on the list to see if it is stay-upable. It is, and he lands at noon as arranged.

At 12:30 hrs. Pip is launched and on his way soon after. I set off with Ed to retrieve. We press on to Enstone, up the A40 most of the way, and arrive there at about 14:00 hrs. No sign of Pip or 139. We wait a bit then unhitch the trailer and go to look for a phone box. I phone Booker, but there is no word. I leave our number, and Ed and I have lunch and settle down for a long wait.

At 15:00 hrs. with hopes of my Silver distance now gone, I bid Ed mount up to collect the trailer at Enstone, phoning in periodically in case Pip has reported in.

Pip, however, had landed at Enstone just after we left in search of a telephone. The sky is almost 8/8. I am all but ordered by Pip and Ed to go. So in I get with map, sweets, bent sunglasses (I trod on them in my panic), and with no confidence that I will be able to stay up, let alone get away from a 1,500 ft. aerotow (1% height rule).

The tug pilot—who got his tug out especially for me—points out "Smoky Jo" as the landmark to head for, and with that he winds up and off we go. I

pull off in very weak lift, but I cannot find the core, so I turn back, then whoomp—up we go to 3,000 ft., but where is "Smoky Jo"? Nowhere to be seen! Now what was the compass course? Ah! yes, about southeast, but what is that in degrees? East is 90°, so add 45°, that makes 135°, which equals halfway between 12 and 14 on the compass. All very confusing for us beginners. Anyway with that bit of aerial arithmetic done, I set off into the seemingly great unknown. The countryside looks featureless—hope I don't get lost—good, there's "Smoky Jo".

After that (from Oxford) it's the A40 to the GPO tower at Stokenchurch, then M40 to Booker. All goes well, till I get to Watlington, 7 miles from Booker, and I am floundering in zero sink and weak lift alternately. After what seems an age the altimeter creeps up to 2,000 ft. Can I get to Booker in a straight glide from this height? Panic—calm down Strickland—here is a calculator. How does it work? Fumble, fumble—well it seems to be OK, so off I go, heart in mouth—it seems awfully low for such a distance to go. Remember, I say to myself, best glide angle 43 knots, speed up through down, and slow up through lift. All the things that instructors have said flash to mind in a jumble—stay calm, above all else! All ought to be well, and it was. Booker appeared 1,450 ft. below me—calculators work!

No time was lost in dawdling into the circuit, so out with the brakes followed by a spot landing (for once). No sooner had I stopped when up walked the CFI, Norman Smith, to see if Pip's idea had worked. It had!

ANATOMY OF AN ACCIDENT

or HOW TO REDUCE YOURSELF TO A STATISTIC

By ROY CROSS

ON MAY 8 I had a cable-break in the SHK fairly low down. All I had to do was stuff the nose down and land straight ahead. Instead, I stuffed the nose down and commenced an S-turn, spun in and rolled it and me into a ball.

Now the only reason for this sackcloth and ashes business is that accidents of this sort are so unnecessary that, with the benefit of hindsight, it is worth looking into one a little deeper.

We then find that this accident probably started before I even took the aircraft out of the hangar.

I had woken early that Saturday morning, saw that the weather didn't look too promising, decided that I might as well go to work, and went back to sleep. I needed the sleep anyway as I had had a pretty tiring week.

By the time I got to work it was 10 o'clock and the sky was looking better, so I revised my plans, drove to Lasham, declared the 300km Chedworth-Sywell triangle and towed out.

There was a long queue on the aerotow point so I carried on out to the autotow launch point. Incidentally, I had only wire-launched the SHK once this year since, like many private owners at Lasham, I'm usually too idle to tow any further than the aero-tow point.

During the 150 hours or so that I'd had in the SHK it has been a delightfully easy aircraft to fly, without apparent vices other than a tendency to land with the wheel up.

The launch started off quite nicely, at a steep attitude and 55kts. But as the altitude was coming up to 300ft, the launch ran out of urge due, it seems, to the cable becoming detached at the car end. I stuffed the nose down and released the cable, and then, instead of taking my time and considering the situation, I went into what was intended to be an S-turn. The left wing immediately dropped and the aircraft fell out of my hands. I kicked on full right rudder and shoved the stick forward in the manner approved for V-tails and the controls started to bite again. I was in a steep attitude, the horizon had disappeared and I was becoming somewhat disorientated in a spiral dive. By this time the ground was looking uncomfortably close and getting quickly closer, so I heaved back on the pole to try and reduce the angle of impact a little and did my



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best to place my feet in my trouser pockets.

The behaviour of the aircraft during the next few moments is not entirely clear in my mind, but I think it struck left wing first, removing the outer wing section. It then cartwheeled across the airfield removing, in turn, the nose, the other wing and the tail.

When I came to rest I was still strapped to what was left but with nothing in front of me at all—not even the stick.

There were lots of anxious faces all around me and I think they were nearly as surprised to find me alive as I was. If I hurt anyone's feelings at that time I hope that they'll accept my apologies because I seem to remember yelling at them not to touch me until I'd done a bit of a survey. I had a mental picture of all those willing hands dragging me from the wreckage a piece at a time.

Soon I came to the conclusion that my only injuries were a strained back and a broken left leg. In fact the ankle was dislocated also.

The ambulance seemed to arrive with commendable promptness and I was removed from the piece of SHK which was strapped to my back and off we went to Basingstoke hospital and into Casualty. There they made me comfortable and said, "Dr Kahn will be down shortly." Instant vision of Wally! However, I needn't have worried; he was small, quiet and very gentle. After looking at the X-rays we discussed what repairs should be effected and they duly presented the forms for my signature, authorising them to proceed. I was reminded of Stan Javett's pet phrase and I said "If it doesn't work do you want the organs for transplant?" The blasted man didn't even smile, all he said was, "Thank you, but no, we prefer our donors to be a little younger."

They stuck an injection into me and the last thing I heard before I drifted off was someone saying, "Shall we shave him down here or will you do it in the theatre?" However, I needn't have worried; it seems they were talking about my leg.

Incidentally, on Sunday morning following my arrival, and while waiting for the Sunday papers, I picked up the previous day's issue of the *Daily Express*. Look what my horoscope said:

"GEMINI (May 21-June 21): Leave sport alone this weekend; stay put rather than get out and about on Sunday, it is not a day which favours travel."

Now, taking myself as an example, I wonder how many more people there are like me—an accident waiting to happen. To start with I was tired, but not to the point where I would have been unsafe if I had observed a few of the rules. When I was an early solo pilot I always expected every wire launch to produce a cable break and therefore I always mentally briefed myself beforehand in respect of where the crosswind was and which way to go. I don't remember when I stopped doing it, because on aero-tow I still pick fields all the way to 1,000ft.

No matter how docile an aircraft is in the air, its behaviour near the ground in a wind gradient is likely to be something entirely different. Also, in that same wind gradient, putting the nose down is not enough even in an aircraft as clean as the SHK. You've got to keep it there until you are sure you've got sufficient airspeed by which time you'll have been able to take a fairly leisurely decision about where to go.

If you are one of the people who usually aero-tow, how about a few wire launches to keep your hand in? Getting away off the wire is always good training if you get low on a cross-country.

When I was originally fitting out the SHK, Hugh Hilditch said to me, "You would be well advised to arrange the instrument panel with a little more room for the knees than the standard panel allows. I find it a little inconvenient to have to remove my boots before I can remove myself from the aircraft." Those few words of wisdom probably saved me from losing both my legs, because following his advice I constructed a panel from 16-gauge aluminium with a full two inch wide flange around the bottom of the panel and plenty of leg room. This allowed me to draw my legs up into the cockpit before the impact so that my injuries were comparatively minor.

Anyway, there it is. Accidents shouldn't happen and are invariably avoidable, since they are usually a series of events, not an isolated thing. All you have to do is be prepared to stop the train of events before it becomes potentially dangerous, so have a think about your own flying.

INVICTA—a broad-based American development project

A MILLION-DOLLAR glass-fibre sailplane and motor glider development project is under way in the USA, according to a report in *Soaring*, April 1971. Its objective is to design the ultimate combination of performance as a sailplane and as a powered aircraft together with maximum convenience in rigging and an absolute minimum of dependence on other people or auxiliary equipment.

Called Invicta, the project aims to produce a range of four machines, all two-seaters, to satisfy a variety of needs in gliding and flying: Glider training; high performance cross-country soaring; personal business executive jet flying; and jet training for general and military aviation. Two of the machines are gliders and one a self-launching motor-glider powered by a turbo-jet. The fourth, which also has a turbo-jet, has a much shorter wingspan and "can only be termed a power plane", Dick Tobey, Invicta's designer, says.

Tobey, an American businessman, is making a major investment in the project, and is prepared to lose a quarter-of-a-million dollars himself in order to build two prototypes and a test-destruct airframe. It is this kind of investment that has prevented or inhibited the development and marketing of American high performance sailplanes, Tobey says, and he feels that possibly the only way to break the impasse is to link a sailplane project with one for a personal, two-seater jet aircraft. The lowest prices for business jet aircraft are around $300,000, and Tobey plans to produce his powered models for $21,000 to $22,500 and the gliders for about half that.

The motor glider TJ2-63 features a 19m four-piece wing and a calculated glide angle of 40:1 at about 65kts when loaded to 1,370lb (with 20 gallons of fuel). The unpowered version (2-63), with the same 19m wing and a gross weight of 1,200lb, has the same glide angle, but at the lower speed of about 58kts. The minimum sinking speeds will occur at 54 and 43kts respectively.

The second glider, 2-48, has a 14.6m wing, and is expected to have a glide angle of 30:1 at about 61kts, minimum sinking speed occurring at 46kts. Its gross weight is 1,125lb, and it is intended for training purposes.

The basic wing for the Invicta series was designed around the concept of a variety of spans operating in a wide spectrum of flight regimes. The cruising and top speeds employ negative flap deflections. "This doesn't seem to offend anyone in high-speed motorless flight", Tobey says. "I can only presume that it won't in high speed powered flight."

Design features include a tricycle undercarriage (for ground stability) and a system for folding the wings for stowing in a trailer which enables it to be rigged by one man. Both systems incur a weight penalty: 45lb for the landing gear and a total of 40lb for the hinge-spar locking mechanisms for the four joints. To make the foldable four-piece wing a workable engineering proposition, a proprietary method of bonding skins to load-bearing members has been developed and a patent prepared. Patents are also pending on Truss-Core, a new glass-fibre/foam/laminate which, Tobey says, "is 40% stronger than anything coming out of Europe that we know of".

Tobey has chosen to use glass-fibre reinforced plastics, although in southern California there is a wealth of technological experience and an aerospace labour force skilled in the use of metal fabrication. The high airspeeds involved with the machines (the maximum sea-level speed for the TJ2-63 is about 178kts) indicate load factors that would require an extremely sophisticated structural design, meaning production techniques too costly to meet Invicta's economic objectives. The Truss-Core system was developed as a consequence. Although its strength/weight characteristics were very important, they were secondary to the "ease with which Truss-Core lends itself to economical mass production".

The wingtips of the TJ2-63 can be removed and replaced by tip sections 21in in length to obtain an aircraft of entirely different performance capability with a span of 42ft. Tobey is not sure as yet whether these will be supplied as part of the basic aircraft or will be made available as optional extras. The aileron for the short-span configuration is made by disconnecting a 6ft out-board section of the flap from the flap control system and connecting it to the aileron control system.

Invicta's target is to have the prototype TJ2-63 and TJ2-42 flying by the end of 1971 and production towards the end of 1972, with an initial production goal of 50 aircraft per year, increasing to 100.

GLASFLÜGEL EXPANSION

A HIGH performance side-by-side two-seater, a Standard Class sailplane incorporating flaps and water ballast and extension of the firm's manufacturing facilities are among Glasflügel's plans for the future, reports *Aerokurier*, May 1971.

GLASFLÜGEL 701 TWO-SEATER

The decision to develop a high-performance side-by-side two-seater followed requests from many people for such a machine. The many tasks involved in high-performance flying are more easily divided and the two pilots can work more closely together in a side-by-side cockpit layout. It should therefore appeal to those who are interested in high performances and record flying.

The performance, it is hoped, will be similar to that of the Kestrel, and emphasis will be given to good flying characteristics, handling and visibility, as well as excellent landing characteristics.

Two versions are planned, one with 19m and the other with 22m span. The 19m model, however, will be built first. Prices and delivery dates have not yet been settled.

TECHNICAL DATA

Span (m)	19
Wing area (m²)	18.76
Aspect ratio	19.25
Max Wing loading (2-up) (kg/m²)	37.3
Empty weight (kg)	420
Pay load (kg) (2-up)	160
Ballast (kg)	120
All up weight (kg) (2-up)	700
Glide ratio at 112 km/h (2-up)	44:1
Min sink at 80 km/h (2-up) (m/sec)	0.57
Min speed (km/h) (2-up)	68
Max speed (km/h)	250

NEW STANDARD CLASS SAILPLANE

The development of a new single-seater, based on the Std Libelle, has been brought about by the new CIVV Standard Class rules permitting landing flaps and water ballast, both of which will be incorporated. The cockpit will also be roomier than that of the Std Libelle. The price is not yet known, but could be appreciably higher than that of the current product.

KESTREL 604

The 22m version of the Kestrel was flown with great success by Walter Neubert at Marfa last year. On this sailplane he also holds the current 100km triangle world record at 155 km/h.

With this outstanding performance to its credit, Glasflügel had many enquiries for the Kestrel 604. A production type could not, however, be manufactured until the capacity of the works had been sorted out. This has now been done and series production is commencing. No modifications are envisaged as the original Kestrel 604 complied with all the requirements expected of it.

Since the fuselage and centre-section are rather heavy for rigging and transport, Glasflügel is designing aids to overcome this. With their help, it should be easy and straightforward to rig and derig the 22m sailplane with three people.

200 STD LIBELLES

Std Libelle number 200 was completed in March, a fact of which Eugen Hänle is justly proud. So far, 150 have been exported, mostly to the USA, where it is very popular owing to its nice flying characteristics, as well as its easy rigging and derigging qualities, with only two people necessary. Production rate has now increased to eight gliders per month.

Technical improvements include rigid PVC foam (instead of balsa wood) for all sandwich parts. Thus, even in damp climates, the wing surface and profile contours should not be affected. A new

tail end has improved its flying at slow speeds and its ability to climb. Airbrakes are fitted to the top surface of the wing only.

The firm is trying to maintain the old price of DM19,800 (excluding value added tax) at least until the autumn.

GENERAL EXPANSION

The Glasflügel works are to be extended. A new workshop is to be erected at Saulgau with its own flying site alongside. The Hütter 101 Salto (S & G, June, p202) will be built there. Also, general repairs, maintenance and test flying.

The firm is also thinking of providing workshop facilities in the form of cubicles at Saulgau, complete with necessary tools, etc, so that owners of Glasflügel sailplanes can do most of their own overhaul and maintenance work. In case of difficult work or fitting spare parts, the firm's experts will help. In this way, owners will be able to save a good deal of the expensive labour costs.

D-37—MOTOR GLIDER BASED ON D-36

THE D-37 Artemis motor glider is based on the aerodynamic concept of the famous D-36, fore-runner of the ASW-12. The qualities of the Artemis as a sailplane were first tested in August, 1969, reports Wilhelm Dirks in *Aerokurier*, February 1971. During the 1970 soaring season, the tests were carried out again, this time in its motorised configuration. The motor is an 18hp Wankel KM914, made by Fichtel & Sachs.

The idea was to fit the motor as a useful tool to widen the D-37's scope so that more distant thermal sources could be reached and to enable one to return from cross-country flying when thermal activity had ceased.

The engine had to be of the retractable type so as not to reduce the sailplane performance. Because of the little space available, there was, therefore, a difficult problem to be solved. Also, for this reason, the propeller had to be of a relatively small diameter (90cm). Even so, it has proved to have adequate motor glider performance, with a rate of climb of about 0.9m/sec at 80km/h and a cruising speed of 100km/h.

Self-launching has been successfully carried out on a concrete runway. On grass strips, however, this has not been possible because the take-off friction and the weight of the machine were too great.

Performance with the motor retracted has not changed from that of the pure sailplane. Even with the higher wing loading (between a minimum of 30.5kg/m^2 without fuel and a maximum of 35.4kg/m^2 with 40 litres of fuel in the wing), the D-37 climbed as well as the K-6E provided that the thermals were not too narrow.

With the engine erected, however, the performance dropped back to that of an L-Spatz, showing clearly the importance of a retractable engine.

Starting the Wankel motor was found to be satisfactory, but as the suction provided by the Tillotson membrane carburettor was not sufficient on its own, a VDO diaphragm pump had to be added. This was only used before starting, however. The motor itself ran very quietly. With an ordinary piston engine it would not have been possible to mount the unit on the very light shaft used.

Bringing the motor into use is not altogether simple; there are nine levers to be handled, as well as fingertip control, to retract or erect the engine and start it. These problems are, however, being worked on at present. An electric starter is also to be fitted.

TECHNICAL DATA

Span (m)	18
Wing section, FX66-S196 inner wing FX66-S160 outer wing	
Wing area (m^2)	13
Aspect ratio	24.8
Empty weight incl engine (kg)	320
Pay load (kg)	140
All up weight (kg)	460
Glide ratio at 85km/h	40.3 : 1
Min sink at 71km/h (m/sec)	0.52
Min speed (km/h)	60

CIRRUS: YUGOSLAV MANUFACTURE AND PRICE REDUCTION

PRODUCTION of the Cirrus, of which 110 have been built and sold (over 60% for export), was threatened owing to lack of space at the Kirchheim works, which could not be enlarged. Steps were therefore taken to find a foreign partner to build it under licence, according to a report in *Aerokurier*, May 1971. An opportunity arose at Vrsac, Yugoslavia, venue of the next World Gliding Cham-

pionships, and production of the Cirrus will commence shortly.

The works at Vrsac is run by Centre Technique Vazduhoplovno. One of its technical leaders is Vasilije Stepanovic, a well-known world championships pilot. Production includes the Delfin and Cirrus two-seaters and the Trener, a wooden Standard Class glider of K-6CR performance.

For over six months, Vrsac workers have been working alongside Schempp-Hirth staff at Kirchheim to learn all about the production technique of the Cirrus; this also guarantees that the quality of production will be the same as hitherto.

Schempp-Hirth estimates that with this arrangement, the price of the Cirrus can be reduced by about 15%; for the time being, the price has been set at DM26,000 including value added tax. Delivery time is expected to be around 7-8 months.

The Std Cirrus, like its Open Class predecessor, has been very successful. The same number, 110, have been built to date with the production for another year completely sold out. The export figure lies around 50%.

Within Germany, Schempp-Hirth has been able to increase its share of the market. Std Cirrus too will shortly be built under licence, by Gross of München. Production at Kirchheim, however, will continue. In future, water-ballast tanks will be incorporated in the Std Cirrus, but landing flaps will not be fitted.

MOSE 2 DEVELOPMENTS

SINCE our last report (S & G, December 1969, p491), work on the Hi-26 Mose 2 motor glider has steadily progressed, and Wolf Hirth GmbH hopes that it will be ready for flight tests during 1971.

A 60hp air-cooled NSU Automotor has been chosen for the power unit and this has already been tested extensively. A newly designed retractable pylon carries the propeller, and its cowling forms the silencer. The tests showed that the Mose 2 will have rapid acceleration, a short take-off run, good climb rate and a low level of noise, says *Aerokurier*, May 1971.

The fuselage has been built in two parts. The rear portion, made of steel tube, houses the engine compartment. The retractable undercarriage (all three wheels) was extremely difficult to incorporate but the problems were solved and it has been completed. The wings have also been constructed and stressed and the tail unit is at an advanced stage.

Development costs so far have been estimated at DM150,000, which is a lot of money for a small firm which cannot dip into government coffers for help. However, designer Leo Meeder feels that Mose 2 will be a good two-seater motor glider with a sailplane performance equal to that of a K-6. Its rate of climb will be 3.5 to 4m/sec and its cruising speed 140km/h. If a variable-pitch propeller is used, this could be increased to 18km/h, with a correspondingly shorter take-off run. It will therefore perform equally well as either a sailplane or a simple aeroplane.

AK-1 — MOTOR GLIDER FROM AKAFLIEG KARLSRUHE

THE AK-1, an all-metal single-seater motor glider, has been built by Akafielg Karlsruhe from a design by Otto Funk. It is intended to be completely self-launching, and its performance with engine retracted should cover the middle bracket, according to a report in *Aerokurier*, May 1971.

The machine was completed last December, and though the flying tests have not yet been completed, it looks as though it will fulfill its expectations. Some minor modifications will, however, be necessary.

A 26hp Hirth F 10A retractable engine supplies the power, and folds into the rear fuselage in a similar manner to that of the D-37. The fuselage is narrow-waisted, and a great deal of technical know-how and construction expertise was required to fit the engine compartment.

The starter is operated by both feet as there was not sufficient room in the cockpit for a hand-pull starter. So far, the kick starter has stood up to the tests well.

TECHNICAL DATA

Span (m)	15
Wing section, FX61-163	
Wing area (m^2)	14.36
Aspect ratio	15.7
Wing loading (kg/m^2)	27.2
Empty weight (kg)	280
Fuel (kg)	28
Pay load (kg)	82
All up weight (kg)	390
Glide ratio at 80 km/h	30:1
Min sink at 70 km/h (m/sec)	0.68

SCHEIBE/SCHEMPP-HIRTH MOTOR GLIDER PROJECT

SCHEMPP-HIRTH and Scheibe have joined forces to make a prototype motor glider which combines the Scheibe SF-27M steel-tube fuselage with retractable engine and the 17.4m wing of the Cirrus. Test flying was expected to have started in May, according to *Aerokurier*, May 1971. If the results live up to expectations, the machine will go into production. The glide angle is calculated to be 39:1, representing a definite step forward in the direction of a high performance motor glider (see p319).

Klaus Holighaus of Schempp-Hirth is working on motor glider designs, but believes that the time is not quite ripe for a really high performance motor glider. One difficulty is that there are no power units yet available which fulfil all the requirements to permit a profitable project to be undertaken.

Scheibe earlier participated in a joint effort with Pützer to produce the SFS-31 Milan (S & G, December 1969, p493). One of these was recently imported into Britain.

TECHNICAL DATA

	SF-Cirrus
Span (m)	17.74
Wing area (m²)	12.6
Aspect ratio	25
Wing loading (kg/m²)	33.3
Empty weight (kg)	300
Pay load (kg)	120
All up weight (kg)	420
Glide ratio	37/38:1
Minimum sink (m/sec)	0.65
Power unit: Solo Hirth F-10	
Power (hp)	26
Power loading (kg/hp)	16.1
Rate of climb, power on (m/sec)	2.0

NEW VERSION OF FALKE BEING DEVELOPED

AT LEAST 200 SF-25B Falkes have so far been built and Scheibe is now working on an improved version, the SF-25C, which will have a Sportavia-Limbach 55hp VW engine and an electric starter. This will give it a better rate of climb and take-off run, as well as a higher cruising speed. The seating has also been improved.

Delivery is not expected to begin before 1972 and the estimated cost will be around DM2,000 more than the current price of DM35,000 (including value added tax) for the SF-25B.

The electric starter can be fitted to the existing SF-25B machines and will cost about DM950—*Aerokurier*, June 1971.

Slingsby Sailplanes (as well as Scheibe) are experimenting with an American Franklin engine for possible use in the Falke.

TECHNICAL DATA

	SF-25B	SF-25C
Span (m)	15.3	15.3
Wing area (m²)	17.5	17.5
Aspect ratio	13.4	13.4
Wing loading (kg/m²)	30.85	32.5
Empty weight (kg)	340	375
Pay load (kg)	200	205
All up weight (kg)	540	580
Glide ratio	22:1	21:1
Minimum sink, two-up (m/sec) at (km/h)	65/70	65/70
Power unit: SF-25B, Stamo MS1500; SF-25C, Sportavia Limbach		
Power (hp)	45	55
Power loading (kg/hp)	12	10.35
Rate of climb, power on (m/sec)	2.0	2.0

17m VERSION OF RF-5

THE NEW RF-5B Sperber, which won the two-seater motor glider class at Burg Feuerstein (see p319), is a developed version of the RF-5. The wing has been extended to 17m (at both the root and the tip) and the rear fuselage redesigned to reduce weight and drag. The engine, with an electric starter, is the same as for the RF-5, and it is planned to fit a feathering propeller. The fuel tank is smaller than the RF-5's, and will hold eight gallons.

The best glide angle will be 26:1, Sportavia claims, and the minimum sinking speed between 2.5 and 3.1fps. The price is expected to be approximately £5,300 plus duty, says the agent, Sportair Aviation Ltd, Biggin Hill Airfield, Biggin Hill, Kent.

TORVA TO PRODUCE THREE MODELS

PRODUCTION of the Torva range of glass-fibre sailplanes is likely to start by early 1972, if the test programme is cleared by early autumn. It is now intended to produce three versions: The Sport, with flaps and retractable wheel, and two varieties of the Standard, with fixed or retractable wheel. Provisional

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prices are expected to range from £2,200 to £2,500.

Speaking about its prospects, Chris Riddell said recently that he hoped that Torva would replace the K-8 and K-6. Although both were well-developed products, he pointed out that bending of the K-8 tube fuselage was a snag with that machine, and that the K-6 was very light on the controls. The Torva range has been designed so that the stability may be varied from one variety to another. The present Standard version was likely to have a higher stick force per G than the Sport, making it more suitable for club use.

Torva Sailplanes recently moved into a new factory.

NEWS FROM SCHLEICHER

DURING 1970 no less than 238 sailplanes were sold (53% for export). They are: 33 K-6Es, 30 K-8Bs, 80 K-13s, and 70 ASW-15s as well as 25 ASK-14 motor gliders. In all cases more orders are in hand and in several instances production is fully booked until April 1972. The firm employs 150 men at present.

Owing to these high production figures (to which 138 repairs as well as C of A work should be added) the delivery for the ASW-17 is only expected to begin towards the end of 1972. The ASW-15 is the most popular machine and the price of DM23,500 seems to be within the range of clubs and private owners.

The new CIVV rules for the Standard Class are not seen as an improvement for the gliding movement by the firm, according to Winfried Schleicher in *Aerokurier*. "Pilots demand a great deal, but the glider is not allowed to cost anything. Because of waterballast tanks and landing flaps, the Standard Class sailplane will be more expensive. The opposite was to be attained at one time. Whether the movement is served by this is questionable, and this only the future will show." Klaus Holighaus and Schneider also expressed doubts as to the value of the new rules for the gliding movement *(Aerokurier,* June 1971).

TECHNICAL DATA

	ASK-16	ASK-14
Span (m)	16.0	14.3
Wing area (m²)	19.0	12.63
Aspect ratio	13.5	16.2
Wing loading (kg/m²)	36.8	28.5
Empty weight (kg)	460	230
Pilot weight (kg)	160	
Total payload (kg)	240	130
All up weight (kg)	700	360
Glide ratio	25:1	28:1
Minimum sink (m/sec)	1.0	0.75
Power unit:	ASK-16, VW Limbach: ASK-14, Solo Hirth F-10A	1A
Power (hp)	68	26
Power loading (kg/hp)	10.3	13.8
Rate of climb, power on (m/sec)	2.5	2.5

CZECHOSLOVAKIAN STANDARD CLASS SAILPLANE

DESIGNERS T. Wala and A. Kralovic have produced a new Standard Class sailplane known as the WK-1. It is of conventional wooden construction fitted with a T-tail and retractable undercarriage.

The wing section is a Wortmann FX61-126 for the laminar portion of the wing, and this has been covered in GRP (glass-reinforced plastic) to keep the profile accurate *(Der Flieger,* June 1971).

TECHNICAL DATA

	WK-1
Span (m)	15
Wing area (m²)	10.8
Aspect ratio	20.7
Wing loading (kg/m²)	33.3
Empty weight (kg)	250
All up weight (kg)	360
Glide ratio at 103km/h	37:1
Minimum sink at 85km/h (m/sec)	0.68

STANDARD CLASS PROJECT FROM AKAFLIEG DARMSTADT

OPTIMUM performance and flying characteristics with minimum building costs are the objectives of the Standard class D-38, Akaflieg Darmstadt's latest

project, reports Wilhelm Dirks, *Aerokurier*, May 1971. Experience with modern "synthetic" sailplanes, as well as the results of the most up-to-date research in aerodynamics, were taken into account while designing it.

The best glide angle at the most advantageous C of G configuration is calculated to be 39:1, and its flying characteristics should make it possible for the D-38 to replace the K-6 for club use. Special attention has been paid to the flying mechanics of the all-moving tail. A great emphasis is also being placed on good visibility for safety reasons, as has been done with previous Darmstadt designs.

The fuselage moulds and most of the fuselage fittings have been completed.

FRENCH CAP-1 PROJECT

A PROJECT for a 20m sailplane is in hand under the leadership of French designer M. Mudry.

A prototype could be built for participation in the 1972 World Championships, if the decision to go ahead and build is taken soon.

The design (on a comparable scale to the Nimbus 2, ASW-17, Kestrel 604, etc) incorporates a four-piece wing and camber changing flaps (in three sections on each wing) over 9/10 of the trailing edge.

The flaps can be operated over three different settings—circling, cruising and high speed.

The glass-fibre Conticell foam sandwich wing can carry 125litres water-ballast and has a Schempp-Hirth type airbrake on the top surface only. A tail-parachute, retractable undercarriage and T-tail have all been incorporated (*Aviasport*, May 1971).

TECHNICAL DATA

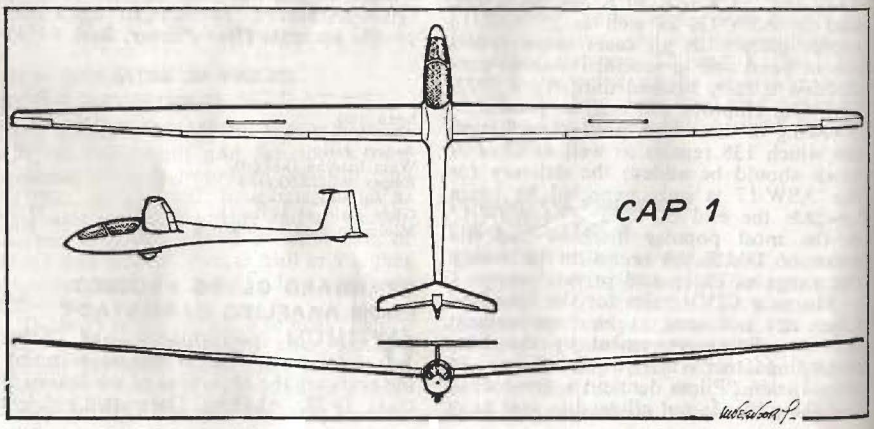
	CAP-1
Span (m)	20
Wing area (m^2)	13.33
Aspect ratio	30
Wing loading (kg/m^2) min.	30
max.	40
Empty weight (kg)	300
All up weight (no ballast) (kg)	415
(with ballast) (kg)	540
Glide ratio at 95km/h	49:1
Minimum sink at 70km/h (m/sec)	0.48

METAL RUMANIAN STANDARD CLASS GLIDER

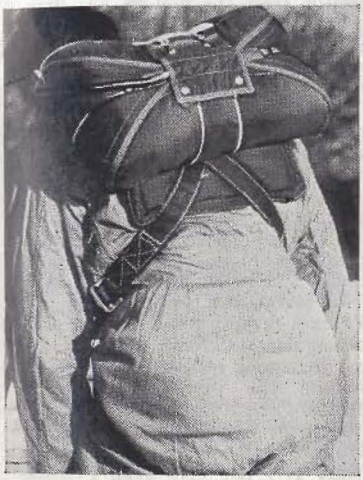
FROM the Rumanian stable comes an all-metal Standard Class sailplane which has been designed by I. Silimona. Incorporated are landing flaps, retractable undercarriage and a T-tail (*Aviasport*, May 1971).

TECHNICAL DATA

	IS-29D
Span (m)	15
Wing section, Wortmann	
Wing area (m^2)	10.4
Aspect ratio	21.5
Wing loading (kg/m^2)	36.5
Empty weight (kg)	290
All up weight (kg)	380
Glide ratio at 90km/h	37:1
Minimum sink at 78km/h (m/sec)	0.58



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COMPETITIONS: BRITISH TP RULES AMENDED

RULE 18 of the BGA contest regulations, concerning turning points, was amended from June 7, coming into force for the Sport/Club Class Nationals and subsequent regional contests. Some of the amendments arose as a result of complaints by participants at the Open/Standard Class Championships at RAF Newton as to rules interpretation, and were made at a meeting of BGA Flying Committee members at Newton on June 6 (see p254).

Tom Zealley, chairman of the committee, states that the reason for making the amendments is to clarify the intentions and spirit of the old rules.

The amended Rule 18 states that photographic evidence will be used for TP control unless specified otherwise by the organisers. Rule 18.1 has been amended so that the TP will be considered to have been correctly rounded if a photograph, *or a series of photographs*, is taken from the glider while airborne which shows that the glider passed vertically above any point in a newly defined observation zone. At least one of the photographs must show the TP itself, or clearly identifiable features close to the TP.

A non-mandatory rule is added to the effect that organisers should select photographic TP's which include readily identifiable vertical features so that the position of the glider when taking the photograph can readily be determined. This arose from a case at Newton when an airfield was selected as a TP which, although supposed to have crossed runways, turned out to lack such a feature. The rule adds that it is desirable the TP's should not be in the centre of large towns, as landing areas close to the point of turn are desirable.

The observation zone had, in British contests prior to 1971, been a 90° sector orientated symmetrically about the bisector of the angle between the two legs. It was changed, in the 1971 rules, to a 90° sector orientated symmetrically to and remote from the leg flown in approaching the TP concerned. This was done in order to bring the rule in line with the new CIVV regulations.

If, however, the second leg changes direction from the first by less than 45°, it is possible for a pilot to photograph the TP from the quadrant without having flown round or over the TP itself, so long as the radius was infinite.

The appropriate rule now reads: "The observation zone is a quadrant (ie, 90° sector) on the ground of 10km radius with its apex at the turning point, extending to an infinite height. Such a quadrant is orientated symmetrically to and remote from the leg flown in approaching the turning point concerned unless specified otherwise at briefing (NM 18.1.2)."

Non-mandatory rule 18.1.2 states: "Where a turning point is used such that the angular difference between its two legs is small, the organisers should orientate the observation zone symmetrically about the bisector of the angle between the two legs, and declare this at briefing."

Rule 18.3 has also been extended, to read: "If there is no satisfactory evidence that a glider went to the correct turning point, eg, if the glider for any reason went to an incorrect point, the glider will be scored as if it had not been controlled at the relevant point. However, if there is evidence that the glider went to the correct point but failed by a small margin to comply fully with R.18.1 or R.18.2 as appropriate, then it may be scored as if properly controlled at the point, but with a penalty deduction of marks which shall depend on all the circumstances of the case, but shall always exceed those that could conceivably be gained from the infringement. Penalty points for bad turning point photographs should not, however, exceed those resulting from a strict decision of 'no control at the turning point'."

In addition, the rule relating to the make of camera has been extended to include non-Kodak makes: "A simple camera with minimal manual adjustments and taking Instamatic cartridge-type film, such as the Kodak 25, 33 or 333, should be used. The organisers may also specify the type of film to be used."

RECORDS HOMOLOGATED BY EXECUTIVE COMMITTEE

THE FOLLOWING records were homologated by the BGA Executive Committee at its meeting on June 23:
British National single seat goal-and-return distance, E. Pearson, 4.1.71, Std Cirrus, 620.66km (in South Africa).
United Kingdom single seat goal-and-return distance, A. H. Warminger, 18.5.71, Phoebus C, 509.2km.
United Kingdom single seat feminine goal-and-return distance, Angela M. Smith, 14.8.70, K-6E, 303km.

Other subjects discussed by the Committee at its June meeting included the continuance of the Whitbread and Alex Orde Bursaries. A paper presented by Chris Simpson listed the anomalies in the Air Navigation Order.

NEW BGA MEMBER CLUBS

THE FOLLOWING have been accepted as full member clubs of the BGA: Angus Gliding Club (operating from RNAS Arbroath); Thunderer Sailplane and Soaring Club (RNGSA, Burnford Common, nr Tavistock); Vale of Neath Gliding Club (Tonyfeldre Farm, Brecon) and Deeside Gliding Club (Aboyne, Aberdeenshire).

The University of Birmingham in Aston Gliding Club, which will fly at Halfpenny Green and Edgehill, has been accepted as an associate member.

"C" AIR LAW WRITTEN EXAM DISCONTINUED

THE C AIR LAW written examination has been abolished, and the A & B application forms will be amended to include provision for the signature of an instructor certifying that the candidate is thoroughly aware of the Rules of the Air. Meanwhile, the BGA states that authorising instructors and official observers should be most conscientious about ensuring that their pupils are well versed in those rules before signing the application forms. The full paper on Air Law would be taken at the Bronze C stage.

RAF BENSON WARNING

THE CHILTERNS Gliding Club, now moved to RAF Abingdon, warns pilots that since the beginning of 1971, RAF Benson has become the home of a unit among whose duties is the erection of a large number of aerials which are a very obvious hazard to gliders as they cannot, for the most part, be seen until it is too late. Landing at Benson is very dangerous, the club says; the whole airfield could be obstructed.

1971 AWARDS

THE Whitbread Bursary (a £10 grant towards flying fees awarded to those completing Bronze C before their 19th birthday) and the Alex Orde Award (£10 presented to ladies who complete all three legs of their Silver C between January 1, 1971, and December 31, 1971) are available to be claimed during 1971.

AERONAUTICAL INFORMATION

CFI's ARE reminded that up to date aeronautical information, issued as "Aeronautical Information Circulars", may be obtained free from the Aeronautical Information Service (AISI), Tolcarne Drive, Pinner, Middlesex.

FIRST WOMAN "A" HOLDER DIES

MRS JOAN BRADBROOKE, MBE, former editor of *The Aeronautical Journal*, and the first woman in England to receive an "A" gliding certificate, died on April 22.

RAFGSA REPRESENTATIVE ON EXECUTIVE COMMITTEE

WING CMDR Donald F. Hanson has been co-opted on to the BGA Executive Committee until the next annual general meeting as an RAFGSA representative.

BRITISH TEAM FOR YUGOSLAVIA

TWO newcomers and two old hands were chosen by vote recently as the provisional British team for the World Gliding Championships to be held in Yugoslavia in 1972. The newcomers are Bernard Fitchett and John Cardiff and the old hands George Burton and Nick Goodhart.

The selection is subject to ratification by the BGA Executive Committee, and was the outcome of the postal voting procedure outlined in S&G June, 1971, p207. Thirty-four out of a possible 35 pilots voted.

Gerry Burgess was chosen as team manager at a meeting of the four pilots on July 11.

Steve White and John Delafield were voted first and second reserves respectively.

NEW EDITION OF NOTES FOR OFFICIAL OBSERVERS

A REVIED edition of the BGA "Notes for official observers", embodying recent changes in the regulations, is now available from the BGA, Artillery Mansions, 75 Victoria Street, Lonlon, SW1, price 25p plus 5p postage.

FORTHCOMING EVENT

Junior Interservices Competition, RAFGSA Centre, Bicester, August 7 to 15.

GLIDING CERTIFICATES

DIAMOND HEIGHT

No	*Name*	*Club*	*Date*
3/131	A. Smith	Clevelands	18.4.71
3/132	D. G. Gray	Colcondors (USA)	9.4.71

DIAMOND GOAL

2/364	M. G. Hutchinson	Airways	28.4.71
2/365	Vera Wates	Airways	28.4.71
2/366	J. R. Monteith	Bicester	1.5.71
2/367	W. D. Medcalfe	Essex	2.5.71
2/368	A. F. Gough	Bicester	2.5.71
2/369	R. Barnes	Waikerie	18.4.71
2/370	M. Armstrong	Derby & Lancs	2.5.71
2/371	R. E. Cross	Surrey & Hants	28.4.71
2/372	A. A. Vincent	Essex	8.5.71
2/373	S. J. Easton	Norwich	28.5.71
2/374	C. F. Whitbread	Kent	8.5.71
2/375	B. D. Holloway	London	20.4.71
2/376	L. Woods	London	1.6.71
2/377	J. H. Bryson	Ulster & Shorts	5.3.71
2/378	K. W. Haynes	Coventry	2.5.71
2/379	D. M. J. Wood	Thames Valley	21.5.71
2/380	I. A. Ronald	Lakes	1.6.71

GOLD C COMPLETE

288	C. J. Woodier	Four Counties	1.5.71
289	M. G. Hutchinson	Airways	28.4.71
290	E. Richards	Essex & Suffolk	1.5.71
291	Vera Wates	Airways	28.4.71
292	A. F. Gough	Bicester	2.5.71
293	M. Armstrong	Derby & Lancs	2.5.71
294	R. E. Cross	Surrey & Hants	28.4 71
295	D. M. Toulson	London	1.5 71
296	L. Woods	London	1.6 71
297	J. H. Bryson	Ulster & Shorts	5.3.71

GOLD C HEIGHT

R. Brown	Cambridge	26.5.71
K. V. Payne	Midland	18.4.71
F. W. Hinchley	Clevelands	18.4.71
J. A. Melville	Derby & Lancs	20.7 70
D. G. Gray	Colcondors (USA)	9.4.71
J. J. Earnshaw	Hambletons	18.4.71
P. G. King	London	18.10.70

GOLD C DISTANCE

C. J. Woodier	Four Counties	1.5.71
M. G. Hutchinson	Airways	28.4.71
E. Richards	Essex & Suffolk	1.5.71
Vera Wates	Airways	28.4.71
J. R. Monteith	Bicester	1.5 71
W. D. Medcalfe	Essex	2.5.71
A. F. Gough	Bicester	2.5.71
M. Armstrong	Derby & Lancs	2.5.71
R. E. Cross	Surrey & Hants	28.4.71
A. A. Vincent	Essex	8.5.71
C. F. Whitbread	Kent	8.5.71
A. W. F. Edwards	Cambridge	1.5.71
D. M. Toulson	London	1.5.71
B. D. Holloway	London	20.4.71
L. Woods	London	1.6.71
J. H. Bryson	Ulster & Shorts	5.3.71
K. W. Haynes	Coventry	2.5.71
D. M. J. Wood	Thames Valley	21.5.71
I. A. Ronald	Lakes	1.6.71

CORRECTION: Diamond goal No 3/329 for J. B. Hearn (S&G, Dec 70, p 493) should read 2/329.

SILVER C

No	*Name*	*Club*	*Date*
2815	G. E. Gillard	London	17.4.71
2816	C. J. Nisbet	Heron	19.4.71
2817	M. Henderson	Four Counties	17.4.71
2818	F. P. Holden	Surrey & Hants	20.4.71
2819	I. T. Barr	Scottish GU	20.4.71
2820	Y. Salem	Imperial College	20.4.71
2821	J. A. Atkinson	Airways	20.4.71
2822	M. Lee	Essex/Suffolk	12.4.71
2823	J. A. D. Ford	Heron	20.4.71
2824	D. S. Moore	Ouse	25.4.71
2825	M. J. Laundy	Mendips	17.4.71
2826	Pauline Kingsford	Kent	28.4 71
2827	A. E. Briant	Portsmouth	20.4 71
2828	R. Boyd	Leicester	1.5.71
2829	R. R. Corker	Northumbria	25.4.71
2830	A. A. F. Webb	Thames Valley	2.5 71
2831	R. J. Steward	Burton/Derby	1.5.71



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2832	J. Remington	Bicester	20 4.71
2833	E. J. L. Berry	Essex	2.5.71
2834	G. M. Matcham	Fenland	25.4.71
2835	A. J. Reeve	London	1.5.71
2836	P. D. Curtis	Oxford	1.5.71
2837	J. Grehan	Surrey & Hants	1.5.71
2838	T. J. Oates	Eagle	1.5.71
2839	B. Sowerby	Bannerdown	3.5.71
2840	M. Hardy	Eagle	1.5.71
2841	D. Andrews	Airways	28.4.71
2842	A. Breen	Bicester	2.5.71
2843	F. A. Newton	Bicester	17.4.71
2844	T. J. Webster	Dorset	2.5.71
2845	J. B. Longworth	Surrey & Hants	3.5.71
2846	P. I. Newbery	Airways	4.5.71
2847	V. Minot	Thames Valley	2.5.71
2848	P. Whatford	London	20.4.71
2849	T. W. Evans	East Midlands	1.5.71
2850	J. D. Thompson	Coventry	2.5.71
2851	R. E. Spokes	Bicester	2.5.71
2852	C. R. Buxton	Derby & Lancs	4.5.71
2853	P. Hardie	Bicester	9.5.71
2854	D. Trenchard	Swindon	2.5.71
2855	J. E. Kent	Portsmouth	2.5.71
2856	M. Lassan	London	2.5.71
2857	E. Petruschke	Surrey & Hants	8.5.71
2858	C. Leo	Airways	28.4.71
2859	H. Hooper	Cornish	3.5.71
2860	P. Murtagh	Kent	11.5.71
2861	T. McFadyean	Leicester	2.5.71
2862	W. Checketts	Norwich	18.5.71
2863	C. Cogger	Chilterns	1.5.71
2864	V. J. Fitzgerald	Devon & Somerset	16.5.71
2865	C. Jennings	Lincs	16.5.71
2866	R. Harlow	Wrekin	2.5.71
2867	A. Hodges	Devon & Somerset	16.5.71
2868	R. Davidson	Coventry	2.5.71
2869	D. Harris	Thames Valley	17.5.71
2870	P. Wells	Culdrose	16.5.71
2871	C. Bradley	London	2.5.71
2872	T. F. Hill	Surrey & Hants	3.5.71
2873	J. G. Scott	Ulster	15.5.71
2874	A. Manwaring	Essex	2.5.71
2875	R. Jennings	Surrey & Hants	18.5.71
2876	K. McCullough	Fenland	1.5.71
2877	D. Grant	SGU	16.5.71
2878	J. C. Taylor	Bicester	2.5.71
2879	E. Wilks	Derby & Lancs	19.5.71
2880	F. Galt	Bicester	1.5.71
2881	R. Harvey	Upward Bound	16.5.71
2882	A. David	South Wales	1.6.71
2883	J. Sharples	Doncaster	1.6.71
2884	D. Dripps	Surrey & Hants	1.6.71
2885	G. Fryer	Surrey & Hants	3.5.71
2886	P. Balmforth	Fenlands	2.5.71
2887	J. Janzso	Kent	28.5.71
2888	R. E. Cross	Surrey & Hants	28.4.71

WAVE FLIGHTS

Date	*Name of pilot(s)*	*Height wave contacted (ft)*	*Absolute height (ft)*
Aboyne (Deeside)			
1-3	A. Middleton & passenger	2,000	3,000
2-3	A. Middleton & passenger	2,000	6,200
3-3	A. Middleton & passenger	1,600	5,000
8-3	C. Timothy & W. Medcalfe	—	11,000
12-3	C. Timothy & W. Medcalfe	—	10,000
13-3	C. Timothy & B. Scott	—	17,000
28-3	R. Kerr, I. Jamieson et al	—	15,000
10-4	A. Black & L. Joiner	—	5,000
17-4	A. Middleton	3,700	15,500
	I. Lovie	3,000	14,000
	R. Kerr	2,800	16,500
5-5	I. Lovie and pupil	2,700	4,600
	I. Lovie	2,600	4,000
Biggin Hill			
13-5	S. Cervantes	1,500	2,800
Dishforth (Clevelands)			
18-4	P. Young	2,000	19,100
Feshie (Kingussie)			
28-3	W. Longstaff	1,500	1,900
22-5	W. Longstaff	1,700	5,400
19-6	W. Longstaff	3,800	6,600
Hedley (Northumbria)			
17-4	W. Haley	4,000	4,500
	R. Robson	2,800	5,300
	J. Greenwell	5,200	18,800
	A. Brown	3,300	4,800
8-5	R. Robson	3,300	4,500
9-5	W. Haley	3,400	5,000
	D. Driver & J. Head	2,800	7,300
	D. Wilson & D. Pattinson	3,000	6,300
	A. Brown	3,800	4,800
16-5	R. Robson	3,300	4,000
	W. Haley	3,300	5,000
RAF Hemswell (Lincs)			
18-4	N. Dean	5,500	8,100
Milltown (Lossiemouth)			
9-5	R. Kerr	1,100	10,000
Long Mynd (Midland)			
17-4	M. Costin	4,500	8,000
18-4	T. Corbett	1,800	13,300
	M. Costin	3,000	10,000
Portmoak (SGU)			
6-5	N. Dean	1,900	5,000
4-6	J. Hempseed & K. Jamieson	2,500	4,000
	J. Hempseed & D. Cook	1,500	4,000
6-6	I. Dunn	1,600	2,200
	J. Robertson	1,100	2,300
	M. Roberts	1,500	3,150
Sutton Bank (Yorkshire)			
13-3	R. Tindall	2,500	9,200
19-4	R. Tindall	4,000	12,000
Usk (South Wales)			
30-5	I. Shattock & W. Watkins	3,000	5,900
1-6	I. Shattock	5,500	5,800
West Malling (ATC school, Kent)			
13-5	B. Connell & I. Napier	1,200	3,600
	R. Buckels & R. Griffin	1,100	3,300
	R. Travers & W. Ramsey	1,500	3,500

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OVERSEAS NEWS



Please send news and exchange copies of journals to the Overseas News Editor's new address: A. E. SLATER, 7 Highworth Avenue, Cambridge CB4 2BQ, England.

SECOND MOTOR GLIDER CONTEST

By PETER ROSS

BURG FEUERSTEIN, June 6 - 13, 1971

HELD ONCE again in the Fränkische Schweitz, NE of Nürenburg, the second formal motor glider contest brought two entirely new designs, two important developments of existing motor gliders, two ex-world champions as participants and a formidable new formula for scoring.

Last year the points were based on 1000, less one point per minute flown, less ten points for every minute of engine-on time. This worked well when the weather allowed the task to be completed by some pilots without using the motor, but in marginal conditions the faster and more powerful two-seaters were flying round with short bursts of engine to climb followed by engine-off glides, and were beating the less powerful two-seaters who were using thermals.

The formula this year was based on 1000 points if one or more pilots completed the task without motor or 800 points if all had used motor. The points subtracted were adjusted in relation to the average speed of the five fastest pilots (Tav).

$$\text{Basic points} = 1000 \text{ (or } 800) - (Tpil - Tav) - Te \times 15$$

where $Tpil$ = flight time of pilot in minutes

Te = engine running time in minutes

$$\text{Scoring points} = \frac{\text{Basic points}}{\text{Basic pts best pilot}} \times 1000 \text{ (or } 800)$$

A contest day required at least one competitor to score 500 or more basic points.

Considerable discussion of these rules took place after the first day, when visibility was so bad that only four single-seaters completed the task. This was lower than the five needed to provide a figure for Tav, and by unanimous agreement the rule was changed so that: (a) at least 50% of competitors who crossed the start line must complete the task for it to be counted as a competition day and (b) the average speed shall be calculated from the speed of the fastest competitors up to a maximum of five.

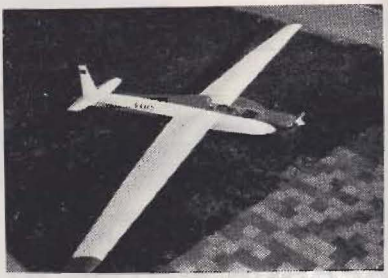
It was also realised that the rules made cheating too much of a temptation. Pilots could take off and fly to both turning points and return with photographs before crossing the start line. This would be amended by insisting on crossing the start line within 30 minutes of take-off (three starts allowed),

Turning to the motor gliders themselves, it was interesting to see a definite swing towards electric starters for both the Hirth two-stroke engines and the VW-based engines.

The two newcomers, the Scheibe Tandem and the ASK-16, represented both ends of the two-seater spectrum. The Scheibe Tandem is based as closely as possible on the well-tried Bergfalke two-

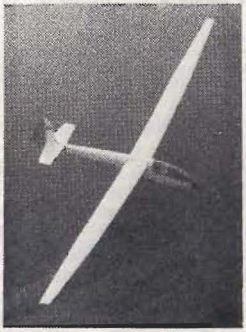
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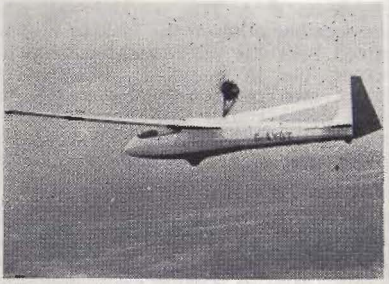
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PETER JEFFERS BERT PAGE PETER ROSS



The ASK-16 at Burg Feuerstein

seater sailplane. A closely cowled 45hp Stamo engine, as fitted to the Falke, but with feathering propeller and an engine cowling duct flap which may be closed, together with 16.5m wings, result in a claimed 1 in 26/27 glide angle, and flight improvements confirm considerable improvement on the Falke. This looks more like a sailplane than any other production two-seater motor glider, and it is comparatively light.

It was exciting to see the ASK-16 and the standard of workmanship and finish was everything one has come to expect from Schleicher. This is a big aircraft which gives more the impression of an aeroplane than a glider, but it handles beautifully. Unfortunately it did not take part in the competition so comparative performance is still lacking.

The RF-5B, named the Sperber, was much more of a sailplane than anything we have seen from Sportavia before (p310).

But perhaps the most exciting development for the soaring pilot was the SF-27M Cirrus which resulted from fitting a 17.74m Schempp-Hirth Cirrus wing to an SF-27M fuselage. At the moment, the normal 26hp Hirth 4 cylinder two-stroke engine is fitted; but if trials are successful this will be replaced in production by a 28hp single cylinder Hirth engine, with cogged belt reduction to the propeller. The claimed glide angle is 1 in 38 and when the performance of the standard 15 metre 27M is taken into account, this is likely to be exceeded when flight measurement and development has taken place.

The organisers were encouraged to have entries from two former world champions. Ernst Günter Haase, better known for his flights in the HKS-1, was again flying an ASK-14; and he was joined this year by Heinz Huth, whose recent exploits in the Standard Class in the K6 secured him a special place in gliding history. He was flying an SFS-31 which had a specially modified seat to accept his enormous length. They came 6th and 3rd respectively in the single seater class.

Other single-seaters included last year's winner Günter Broderson in an SF-27M, and the K-8B with two small engines in the trailing edge of the wing which was illustrated last year.

Two-seater entries included Motorfalkes, Falkes and an RF-5 in addition to the new ones already mentioned.

The weather this year was not so kind and the first day gave poor visibility and elusive thermals. Most of the single-seaters abandoned their 130km out-and-return to Amberg, and two of the two-seaters (including your writer, flying *hors concours* in a Falke 25C) got completely lost on their 84km out-and-return to Bayreuth and had to land and ask the way! (I blame the navigator, of course!)

The next day it rained. Just like Lasham. I felt quite at home. We had endless discussions about new formulae, the future of motor glider competitions, and reports from the designers of motor gliders, including the FK-3 Sirius which was seen at the Hanover Show last year and whose duct fan was driven by a Nelson two-stroke engine. Since then two Yamaha motorcycle engines have been used and two Wankel engines; installation is evidently quite a problem.

Only two further competition days were possible, and on one Günter Brodersen completed the task without using his engine to win the only 1000 points in the contest.

FINAL RESULTS

Single seaters (two contest days)		*Engine time (min)*	*Points*
1 Günter Broderson	SF-27M	11.2	1607.0
2 Werner Hoffman	SF-27M	15.8	1516.5
3 Heinz Huth	SFS-31	31.7	1261.0
Two seaters (three contest days)			
1 Pater Hugo Jännichen	RF-5B	34.2	1804.5
2 Manfred Schliewa	RF-5B	37.1	1863.0
3 Christian Gad	Tandem	44.9	1589.9

REICHMANN TELLS AUSTRALIA

HELMUT REICHMANN, World Champion in the Standard Class in 1970, took part in a question-and-answer meeting during the last Australian Championships at Benalla, in which he flew *hors concours*. Here are some of his answers to some of the questions.

Training for cross-country flying in Germany There is no place in Germany where a pilot can go to learn cross-country flying in the best way. We have no such school yet, though we should have one and we are trying to get it. . . . We get together with other pilots and ask one another how things go, and the more pilots who get together the better it is. In recent years we have had the great good fortune to have Heinz Huth (twice World Champion, Standard Class). . . . He has never had any secrets.

How does Huth pass on his knowledge? Did he write a book? He didn't write a book. . . . He comes every two years to the German "Under-25-years-old" Competitions at the Wasserkuppe. He flies the tasks with the young pilots, and in the evenings he discusses the flying and explains to everyone what he thought went wrong and what pilots should or shouldn't have done, and what in general he thinks the correct tactics were. . . . The first time I had any pre-competition training was in the few days before the Internationals at Marfa with all the other pilots. If you are alone it is much more difficult to prepare for a contest than if there is someone else to compare yourself against. If you have to land on a task, you don't know if it was your own fault or not. That's why competition flying is so much better than any other sort of flying as a means of learning what you do right or wrong.

Do you place more emphasis on the assessment of weather conditions than on the actual handling of the aircraft? Both are necessary . . . the speed ring only makes sense in connection with the weather conditions . . . you should only put your speed ring on the rate of climb you expect and that means you should look away ahead to the weather that lies in front of you. The future is what matters; if you look to the past it is always wrong.

Many pilots carry stop-watches and time their mean achieved rate of climb in the thermals and then set their MacCready Ring to the rate of climb. It appears that this is not what you recommend. If you do this in every climb it is totally wrong . . . You should include also the time needed for centring and so on. If you stop flying straight, your climbing time begins even if you don't find anything, and that must be counted. . . . For example, yesterday I had my speed ring normally on 600fpm, not more. Only two or three times when I saw a good cloud directly ahead I put it on more.

Are we to understand that the diaphragm type of (total energy) compensation commonly in use is adequate? That is right. All other types of TE compensation are, in my opinion, insufficient and I wouldn't use them.

If you are flying along and you have your MacCready Ring on 600fpm, and you come to a long cloud street, do you leave your MacCready Ring on 600fpm or do you change it? This was a problem I set myself a few years ago and I made a calculation which proved that if you have a thermal of 600fpm, and don't circle in it but fly straight with a climb of 400fpm, then it is about the same as if you did circle in the strongest lift. However, I think it is necessary to try to work things out so that you leave the cloud street as high as possible, because after a cloud street there is usually a long interval with nothing.

Could you say something about what is called "dolphin soaring", or soaring for long distances without circling? Yes, if there is a chance of doing this it is, in general, much better . . . but it is usually

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only possible for distances of a few miles, 10 or 12. But if you have the chance it is worth . . . departing from track (by an angle which depends on how far you are from the finish line or next turnpoint).

What do you think of Australian conditions as you have seen them so far? I think you have here in Australia weather like it was at Marfa. . . . Besides that, one has good fields to land out and that is excellent.

How would you like to see competitive flying develop in the future? I wouldn't like to see any change in the Standard Class. . . . The difficulty is in the Open Class. There are new developments and these should be encouraged because the developments in the Open Class have always brought the whole gliding movement forward. . . . But . . . the best comparison of pilots is in the Standard Class, and in my personal opinion we should have the World Champion in the Standard Class, whereas in the Open Class there should be two Champions, the pilot and the designer, because it isn't the pilot alone who wins this class (*Australian Gliding*).

RIDING AN ATLANTIC HURRICANE

A NOVEL method of soaring across the Atlantic Ocean is proposed in *Aviasport* by M. Villevieille, chief engineer at the French Météorologie Nationale. He has written to Raymond Siretta, former Editor of *Aviasport*, who read a long paper to the 1965 OSTIV Congress at South Cerney on soaring across the oceans. Hitherto the most plausible proposals for a crossing have assumed the use of long lines of small cumulus that form in the trade winds—those cool winds from higher latitudes that blow over warmer seas to feed the huge upcurrents of the Inter-tropical Front, and are deflected westwards by the Earth's rotation. Since the sea hardly changes its temperature between day and night, any upcurrents should continue throughout the 24 hours.

M. Villevieille claims that satellite pictures show large gaps in the trade-wind cloud distribution, that the day-night contrast is strong, that the organisation of the winds in the convective layer is very irregular, and that some method of constant surveillance of the cloud distribution would have to be contrived. It would be better to use some reliable individual phenomenon which can be accompanied on its journey.

Such a phenomenon exists, he points out, in the form of tropical cyclones (also called hurricanes) which are semi-regular during the period June to October, form in or near West Africa, and travel to the Antilles and the American continent. True, cyclones are violent near their cores and near the Earth's surface. But elsewhere there are powerful cumuliform masses, as well as wave phenomena, which, he says, should provide "*confortables*" flying conditions (his word and his quotes).

Such a cyclone moves westwards at about a dozen knots, often less; so the duration of its trajectory is more than one week but less than two. However, in order to keep a continuous watch on the cloud distribution, which M. Villevieille says a satellite cannot do, he proposes (not for this purpose alone but for general meteorological use) a "*plate-forme*" in the shape of something be-

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tween an airship and a kite balloon, flying at 20km (65,000ft), which he illustrates.

M. Siretta, in the course of a long comment, produces a map showing that, whereas trade-wind cumulus should lead the pilot to the nearest land on the NE coast of South America, tropical cyclones curve northwards from this route and, if they last long enough, finally travel up the east coast of North America.

AUSTRALIAN 300KM RECORD

THE NATIONAL 300km triangle record was broken on two successive days by the same pilot. John Rowe set out on January 23 from Waikerie with his FK-3 loaded with 200lb of water and "as much lead as possible". Launched at 13.35, he released into an 8kt thermal; but the next reasonable one was 10 miles further on: "I feel I wasted 5 minutes looking for the centres of thermals before I found this one, which seems to emphasise the importance of having a venturi for good compensation." All thermals on the first leg (65 miles in 50 minutes) were "blue". The second leg, 68 miles in 59 minutes, was into wind (east, 3kts) under a scattered cumulus sky. He would have had to do the last leg of 55 miles in 28 minutes to break the world record, but the cumulus were decayed and washed out and their centres hard to find; however, with a final glide of 40 miles from 8,000ft, he lowered the Australian record by 22 minutes, having averaged 109km/h.

Next day, January 24, the weather looked much better. In a 5kt west wind, cumulus formed over the hills at 10am but did not appear over the field till 1pm, when their height was 12,000ft. This time he had the company of Martin Simons in a Kestrel and Sue Martin in a Libelle, while Malcolm Jinks in a Diamant flew the course the other way round (turning points were Karoonda and Nadda). All four had trouble finding the thermal centres on the Waikerie-Karoonda leg, which was the last leg for Malcolm but the first for the other three. John Rowe started the second leg with a climb from below 2,000ft in an 8kt thermal to 11,000ft and then flew along a cloud street. There was some over-development on the third leg.

He bettered his time of the previous day by 12 minutes, taking 2:36 at an average speed of 116.5km/h; Martin took 1 minute more and Malcolm 2¾ minutes more, while Sue set up an Australian women's record with 3:16, getting below 1,000ft on the over-developed third leg. Homologation shows that the speeds given above were slightly over-estimated. John Rowe's record is officially 115.07km/h. The World record time for the 300km triangle is (or was then) 2:10 (*Australian Gliding*).

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NIMBUS 2 SHOWS ITS HEELS AT HAHNWEIDE

KLAUS HOLIGHAUS, flying the Nimbus 2, won the Open Class of the International Hahnweide gliding competition, held at the beginning of May. Otto Schäuble, Std Cirrus, won the Standard Class.

Apart from Germany there were 8 countries represented with 11 pilots. The table below shows how they fared.

Each Class had four contest days. On May 6, both classes were set a 273.5km triangle. Holighaus made the fastest time, 107.7km/h, more than 10km/h faster than Bucher in the BS-1. Only three

Standard Class pilots failed to complete the task.

May 7 featured a 343.2km triangle for the Standard, and twice round a shorter triangle (355km in all) for the Open Class. Schäuble and Alfred Röhm, Std Cirrus, were the only Standard Class pilots to complete the task, while only Holighaus completed the Open triangle twice at 81km/h.

A 127.2km out-and-return was set on May 8, both classes. Holighaus and Schäuble made the fastest times on a day when less than half the competitors completed the course.

The last day, May 9, saw both classes again flying the same task, a 109.3km triangle, which once more Holighaus won. Baumgartl, Std Cirrus, was fastest in the Standard Class.

Open Class		*Pts*
1 Holighaus	Nimbus 2	2685
2 Bucher	BS-1	2359
3 Vergani, Italy	Cirrus	2123
11 Wetli, Switzerland	SHK	1701

Standard Class		*Pts*
1 Schäuble	Std Cirrus	2530
2 Zegels, Belgium	Std Libelle	2356
3 Henkel	ASW-15	2344
6 Ruch, Switzerland	Std Cirrus	2290
8 Petterson, Sweden	Std Cirrus	2280
14 Litle, USA	Std Libelle	2101
16 Bucceri, Italy	Phoebus 15	1947
25 Baumann, Switz'land	Std Libelle	1595
27 Kendall, N. Zealand	Std Cirrus	1423
33 Nielson, Denmark	Phoebus 15	1167
34 Hoimyr, Norway	Phoebus 15	1130

There were also four entries in the Two-seater Class, and this was won by Horst Wilser and Cristoph Kensche in a K-13. Tasks set were: 97.6km out-and-return; 177.5km triangle; 61.2km triangle and a 67.8km out-and-return.

BELGIAN FLYING DOWN IN 1970

AT THE annual meeting of the Administrative Council of the Federation of Belgian Gliding Clubs, the president, M. Cohard, stated that the clubs put in 9,050 hours' flying in 1970 compared with 10,462 hours in 1969. Leading clubs were Keiheuvel with 1,748 hours, and Ghent with 1,119.

As from February, 1971, the Independent Members of the Council will no longer have an equal say with the Club Representatives in its affairs, and the influence of each of the latter will depend on the membership and the performances of the respective club (NOTE: until 1934 the BGA Council consisted of independent members responsible to no one but themselves; from 1935 onwards it consisted entirely of club representatives).

Seven national records for speed round triangles were set up during the year, the fastest being 105.78km/h for a 100km triangle and 98.21km/h round a 500km triangle, both by Dr H. Smet in a Libelle.

The contest for the Victor Boin Cup, open to foreigners, was won by Henry Stouffs of Belgium with 312km on a cat's cradle course in his LS-1.

GERMAN AIRSPACE DISCUSSIONS

A DEPUTATION from the Gliding Commission of the German Aero Club has called on the Federal Institute for Flight Safety to complain about the increasing restrictions on airspace available for gliding. As a result the Gliding Commission will produce a memorandum in which it will show how glider pilots can co-operate with the Flight Safety authorities and how the gliding fraternity views the problems of airspace. When the document is completed, a further meeting will take place to find a method of co-operating to deal with the problem (*Aerokurier* [Official Organ of German Aero Club]).

DENMARK'S FIRST 500KM TRIANGLE

A 500km TRIANGLE entirely within Danish territory was flown by Ib Braes in an LS-1 on April 30.

Denmark was in a moderate high-pressure system within a polar air mass, with the 1020mb isobar round the country, and he followed its clockwise circulation by flying from Borup in the north, SSE to Hvildklide, then NW by W to Horne, and finally NNE to Borup; 507km in all.

The first leg presented no problems for the first 100km, with thermals at 1½ to 2½ m/s (3-5kt). Cloud base was 1400m (4,600ft) then rose to 1800-1900m (6,000ft+) with lift 4-5m/s (8-10kt). Later he deviated to avoid the sea and then, 15km before the turnpoint, encountered a seabreeze front. The first

leg was covered between 10:23 and 13:23.

He started the second leg along the seabreeze front, then lift became weaker, with fewer cumulus, till a better "air mass" brought improvement, and he reached the second turnpoint at 15:45. Here, too, was a sea breeze and he deviated inland. Passing the national gliding centre at Arnborg, he was down to 600m but a 3m/s "bubble" took him to 1800m. The pilot encountered many troubles on the last leg, including cumulo-nimbus, but does not say what time he got back to Borup (*Flyv*, July 1971).

GERMAN AND SWISS NATIONALS—THE WINNERS

KLAUS HOLIGHAUS (Nimbus 2) and Helmut Reichmann (LS-1) won the Open and Standard classes respectively at the German Nationals, held at Bückeburg from May 15 to 30. Only six contest days were possible (five for the Standard class).

Gerold Hauenstein (AN-66) and Hans Nietlispach (Std Libelle) won the corresponding classes at the Swiss Nationals, held at Langenthal from May 29 to June 6. Each class achieved five contest days.

LILIENTHAL COMMEMORATED

AT Stölln-Rhinow, where the gliding pioneer Otto Lilienthal met his death 75 years before, the inhabitants are to hold a competition on August 8 for radio-controlled model motor-sailplanes, according to the East German magazine *Flieger Revue*. The winner will be awarded the "Otto Lilienthal Wanderpokal" (wander-trophy).

NOTE: Although Lilienthal was unlikely to have known that radio had been discovered in 1895, a year before he died, he did intend to put an engine in one of his gliders.

DUTCH NATIONALS

THESE were held at Terlet, near Arnhem, from May 20-31. Twenty-eight pilots took part, the majority flying K-6Es or CRs. The tasks were: May 20, 104km triangle; May 21, 138km out-and-return; May 27, 197km triangle; May 29, 311km triangle; May 30, cat's cradle; May 31, 302km triangle.

Aeromedicine for Aviators

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A book for pilots rather than doctors, written by a flying doctor, it lucidly discusses such risks to amateur or professional pilots as disorientation, blackouts, oxygen failure at 25,000 ft., decompression sickness after landing, as well as particular dangers to the eye and ear, the uses—and misuses—of various drugs and facts about survival.

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On the cat's cradle day an average of ±400km was flown, while on the last day eight pilots were able to claim their goal Diamonds, and all but one completed the task.

Final leading results		*Pts*
1 A. Dekkers	LS-1	5614
2 M. Bluckens	K-6E	5198
3 D. Teuling	K-6CR	4638
4 C. Musters	K-6CR	4514

OPPORTUNITY IN YUGOSLAVIA

THE Koroski Aeroclub Slovenj Gradac has written to the German Aero Club saying it would welcome foreign visitors to sample Yugoslav soaring conditions.

The Club site is 18km from the Lavarmünd frontier crossing, towards Dravograd in the Mislinjatal (valley). It has been developed to take visitors; the hangar holds 35 gliders plus transport vehicles. All launches are by aero-tow, costing 1.20DM (14np) per minute. Modern hotels in the neighbourhood charge 13DM (£1.50) per day with full board. There are also camping facilities on the site (*Aerokurier*).

INTERNATIONALS IN AUSTRALIA

EVEN before the date of the World Championships in Australia was known, 20 sailplanes and over 60 cars (with drivers) had been offered by their owners for the use of visiting teams. Geelong Club has offered 31 crew members, 16 cars, a German and a Czechoslovakian interpreter, and their aircraft (*Australian Gliding*).

GERMAN DECENTRALIZED CONTEST

LEADING places in the 1970 decentralized contest in West Germany were taken by:

High Performance Class. 1, Hans-Werner Grosse, 3970 points; 2, Ulrich Wieland, 2924; 3, Heinz Adolf Schreiber, 2697.

Feminine Class. 1, Hanna Reitsch, 1449 points; 2, Barbara Turke, 1232; 3, Brigitte Koller, 1123.

Junior Class. 1, Karl-Heinz Horstmann, 2046 points; 2, Walter Eisele Kongen, 1556; 3, Klaus Meldinger, 1539.

ALLEMANN WINS US STANDARD NATIONALS

RUDI ALLEMANN won the second US Standard Class National Soaring Championships, held at Ephrata, Washington, from June 15 to 24. There were eight contest days. He was flying a Libelle 301 which had had its flap lever sealed so that it could not be moved in order to qualify for the Standard Class. He scored 7,032 points. Ray Gimmey (Std Libelle) was second (6,948) and Jerry Robertson (Std Libelle) third (6,806).

BOOK REVIEW

Man-Powered Flight. By KEITH SHERWIN. Published by Model & Allied Publications Ltd, Hemel Hempstead. Price, £1.75.

THE AUTHOR, Keith Sherwin, has produced a fascinating collection of photographs, drawings and details of practically every serious attempt at man-powered aircraft.

The problems involved are unique and it is an ideal design exercise because it demands an "ultimate" design.

These aircraft must take off and fly on less than half a horse power, and this means very low weight and high efficiency. Most of the successful ones are ninety to one hundred and twenty feet wing span and weigh less than one hundred and fifty pounds. However, as the book points out, flights of several hundred yards should be possible with much less sophisticated machines which are well within the design capabilities of the average aeromodeller.

The most striking revelation to me was to discover that my own first flights and the record set by the Hatfield Puffin back in 1962 have never since been equalled.

I am sure that this book will be of interest to every gliding and model enthusiast and that it will inspire more people to have a go at this pedalling business themselves.

DEREK PIGGOTT.

British Gliders and Sailplanes, 1922-1970. By NORMAN ELLISON. 296 pages. Published by A. and C. Black, price £3.25. Obtainable from BGA (postage and packing, 30p).

IN THE flight testing of gliders, initial impressions are important since it is easy to overlook the finer points in the course of analysing subsequent observations. If the same is true of books, let it be said at once that this is a really splendid piece of work. Whether your interest lies in contest soaring, designing gliders or simply talking about them in the club bar, you are going to need this book: Go and buy one instantly.

The kernel of the book comprises about 180 pages listing all the gliders and sailplanes designed and/or built in this country since 1922. This follows six concise chapters on British gliding history and the gliding industry. Wherever possible, technical details and a neat three-view drawing are provided, together with some historical notes.

British Gliders and Sailplanes 1922-70

NORMAN ELLISON

Over 160 different types of gliders produced in this country are described by a member of one of the glider design teams in Britain, as well as some light aircraft built by the glider industry. Many of the general arrangement drawings are published for the first time. There is a short history of British gliding and a chapter on the 'Self Launching Sailplane'. Amongst the appendices are notes on the various types of constructional methods used to build gliders and sailplanes and an analysis of glider production for the home market.
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Understandably, details of some of the more obscure and ancient types are less comprehensive and a few are illustrated by a perspective drawing. The amount of research must have been tremendous: quite apart from the amassing of technical data and the preparation of the drawings, it is sprinkled with anecdotes and comment which add enormously to its value. Some of it is very funny, like the story of how the Slingsby Type 45 came to be called "Swallow", and how a two-seat Primary was stolen in the night. It contains the germs of several more books, because one only has to open it at any arbitrary page to be reminded of all sorts of quaint occurrences, like the tests of the Nyborg TGNI. As the author observes, the min sink was "variously reported as being between 2.0 and 8.0ft/sec". With two possible very obscure exceptions, this reviewer failed to note any post-war omissions. Good authorities on pre-war types were equally amazed at the comprehensive coverage.

There are four appendices, of which the most interesting is a production list of machines built by manufacturers, complete with BGA numbers and/or registrations and more historical notes. Some of the registrations are very evocative.

Reviewers are normally expected to find a few minor errors even in the most favourable notice, if only to show that they have really read the whole book. In this case, it would be churlish to do so, save perhaps to observe that some of the L/D figures are obviously wildly optimistic designers' estimates.

The book is clearly a labour of love and the author has been well-served by his publishers. It is a handsome volume, and at £3.25, or slightly over 1p per page, represents excellent value. I say again, go and buy one instantly.

F. G. IRVING

How to make and fly paper aircraft. By CAPT RALPH S. BARNABY, US Navy (Ret). Published by John Murray, London, 1971. Price, £1.25.

RALPH Barnaby is one of America's soaring pioneers; he knew the brothers Wright, and in 1929 was the first to beat Orville's 1911 soaring record in America. Consequently, the "aircraft" described in this book are, not unexpectedly, all gliders.

He starts off with some simple aerodynamics, and then come the gliders, which are of a great variety of shapes, mostly of flying-wing design, and all are made from sheets 11 by 8½ inches; however, the few made by the reviewer from English quarto, 10 by 8 inches, flew satisfactorily. The instructions are interspersed with aerodynamic comments. Finally, he makes suggestions for competitions with paper gliders, going well beyond the one we had at 1970's BGA ball.

A.E.S.

CORRESPONDENCE

WASHOUT

Dear Sir,

I am truly distressed if Mr Deakin (S&G June-July, p225) has been beset by serious criticism of glider pilots by Air Traffic Controllers *et al* as a result of my accident in East Anglia in June 1970. A few points in reply, however, need to be made.

Mr Deakin should have passed such criticisms that had any substance to the BGA a year ago, if he felt that real damage was being done to a section of the gliding movement.

Although the S&G article was written and illustrated in a way that was intended (successfully) to attract attention to the hazards of flying in cu-nim conditions, neither the article nor the flying were frivolous. During the cloud flying reasonably accurate and frequent radio announcements were made, competition-style on 130.4m/cs, of height and position. No airways were infringed, nor any cloud-flying procedures ignored. The decision to abandon cloud flying was made in clear air at about 3,000ft asl and the selection of the general landing area and the decision to make

a landing, rather than to attempt either a long glide-out or further soaring, was made around 1,500ft; again in clear air.

The very low cloud I subsequently descended into was, as I made clear in S&G, not part of any major cloud mass but "low cloud that doubtless represented the last belch of a departed thunderstorm". Had I been flying in that area without any intention of entering cloud I could equally well have encountered it; indeed a light aircraft piloted by a man with no instrument experience would have been in worse trouble.

The article makes it clear that the crash had *nothing to do* with the decision to go cloud flying. It resulted from landing (a) fast (to cope with the expected wind gradient); (b) on very smooth, water-logged grass; (c) downwind (as I only later discovered). The field was, on the available evidence, the best in the area and I would have picked it from 1,000ft. (With hindsight I think that now I would pick a rougher surface like the adjoining meadow, but waterlogged plough or corn at end-June would still not be a good idea.)

The reason why I mentioned lightning, low cloud, etc, was not that they caused the accident, but that they are additional common hazards in such weather.

Now Mr Deakin does touch on a serious point, apart from merely being wise after the event. Should pilots be permitted to fly (even in unrestricted airspace) on days when cu-nims are expected?

Remember we are not talking about a ban on cloud flying, but on *any* cross-countries, since the hazards mentioned all occurred below the generally prevailing cloudbase,

One can imagine the reaction, at competitions, to the task-setter who announces plentiful cu-nims to 10,000ft plus—and then grounds everybody. Even if he only permitted pilots with 500hrs and 100 prang-free cross-countries, Platypus would still have got through the net.

I doubt if such a ban is desirable or practical. The best protection, in a reasonably free country, against mistakes is not prohibitions, but frank and honest confession of how we made our mistakes, in the hope that others may learn thereby.

PLATYPUS.

Dear Sir,

In your June/July 1971 correspondence, you carry a letter from J. Deakin concerning the repercussions of a flight written up by "Platypus". Mr. Deakin has a point, of course; we can't afford too many such incidents. However, his letter points out, as usual, the rather smug and holier-than-thou attitude of "professional aviators and air traffic controllers". Platypus admitted openly, to his credit, a lack of judgment coupled—let's face it—with a reasonable amount of bad luck. It appears from Mr. Deakin's letter that professional aviators and air traffic controllers feel they do not suffer these problems.

I wish I could believe that. Pity help the gliding movement if we allow such incidents to become weapons to be used against us by people who, for their own vested interests, don't like us. All Mr. Deakin need do really is get hold of some aviation magazines and confront his antagonists with the usual lurid "How-I-nearly-got-crunched-when-my-girlfriend-was-watching . . ." type of article. Even better—tell these faceless people to read p172 of the June S & G, where Steve White reports he was beaten up by a Phantom. Or do we have to accept that such tactics are the prerogatives of professional pilots?

Boulder, Colorado JEREMY PICKETT-HEAPS

INSTRUCTORS' ATTITUDES

Dear Sir,

Major Edmonds (S&G, June-July, 6223) expects instructors to be a cross between John F. Kennedy and the Pope. It's just not possible—instructors are human, some more than others. They give up their solo flying at weekends. They give up holidays and go on expensive and testing courses. They fly with strangers who may freeze on the controls, throw a fit, have a death wish, or simply decide to land on one wing.

They take responsibility for sending people solo and suffer anguish of spirit as their pupil does his first solo circuit (rather more anguish if it is "hers"). The ultimate proof of their care and skill would seem to be getting Major Edmonds solo at 78.

As for getting one's fair share of the flying (or, in my case, as much as I can get away with without being lynched), it's the same as getting any of life's goodies. You use whatever weapons come to hand. Brute force, low cunning, club politics, cash. The commanding personality charm—you don't first stand sadly on the sidelines waiting for someone to bring you the goodies on a plate.

Gliding instructors can't turn a club into Utopia or an early Christian community where no one is more equal than anyone else. They do their best to see fair play, but they're up against human nature. However, bully for Major Edmonds—I salute him—he gives me hope. Maybe there's still time for me to learn to fly nicely, with the help and encouragement of instructors, and they have helped and encouraged me since my very first flight.

Cardigan, West Wales. RHODA PARTRIDGE.

A NEW APPROACH TO FLYING

Dear Sir,

As the owner of a self-launching sailplane with an average income, I am finding the annual costs of operating this aircraft a very heavy burden on my pocket.

I was seriously considering giving up flying altogether, but by a piece of luck my job took me to England for a short while, and I was introduced to a completely new form of flying—the ground launched sailplane (GLS). A large group of enthusiasts in Bedfordshire operate 50 GLS, and with two winches launch these sailplanes without engines to heights between 1,000 and 2,000 feet. Apparently they make as many as 250 launches a day by this unusual method. These winches are very cheap to run (they don't fly, so no C of A is required) and the GLS costs half the price of an SLS.

I am now seriously considering selling my SLS, and on the proceeds buying a GLS, a winch and a small tractor. With the money remaining I'll be able to buy other items which I have been unable to afford in the past, such as a good variometer. If sufficient SLS operators are prepared to join in this scheme with me, it is quite feasible to form a GLS group in this area complete with clubhouse, hangar and bar.

Looking ahead, I am sure that this method of flying will permit all income classes to fly, and the absence of an engine in the sailplane should permit huge advances in performance over the present generation of SLS.

11th June 2071.

Sinksville, Arkansas. ED SCHNOBRICH.

SELF-LAUNCHING SAILPLANES

Dear Sir,

Having read through Martin Simons' letter and article in the June issue of S&G, it is obvious that he has forgotten one very important point, this being the relative costs of the SLS and the true sailplane.

Mr Simons hopes that the SLS will one day compete in competitions in the same classes as the true sailplanes. However, this state of affairs will only come about when a 1 in 40 SLS costs no more than a 1 in 40 sailplane. Therefore, until the cost of "engine ballast" is brought down to the same level as the cost of water ballast, the single-seat SLS is likely to remain the novelty toy it has been for the last 70 years since Percy Pilcher first thought of the idea.

Kirkbymoorside. NORMAN H. ELLISON.

BRAZILIAN SOARING

Dear Sir,

Being indebted to numerous members of the Brazilian Gliding Federation (FBVV) for the splendid hospitality extended to me at São José dos Campos and Jundiaí, I

cannot let your report on the 13th Brazilian Nationals (June, p218) pass without comment.

The turn of phrase in the final sentence of your report is, at least, open to misinterpretation: "the mental outlook of the people" in Brazil is a pretty elusive entity, in view of the remarkable mixture of races and the fairly high proportion of first-generation immigrants. The mental outlook of the glider pilots is quite apparent: it encompasses initiative, enthusiasm and courage in as full a measure as one would find anywhere else in the world.

Imperial College F. G. IRVING

TURNING POINTS

Dear Sir,

Whilst competing in the 1970 Open Class competition at Doncaster I had the misfortune to take a wrong turning point photograph during an out-and-return race. I took a picture of Ashbourne instead of Church Broughton and landed on the return leg approximately 20km short of Doncaster. My score for this day was 52 points instead of 900+ because I was scored on the distance from Doncaster as though I was on the first leg. I accepted this.

However, during this year's Nationals at Newton, three competitors made a similar mistake and took a photograph of a wrong motorway junction. Instead of being scored to where they landed, they were scored to the wrong turning point. Had this been done in my case the previous year, it would have significantly altered my overall position.

When I pointed this anomaly out to the organisation, they said that the wrong junction was not marked on some maps. Surely this is not a reason to change the rules at random, especially when the briefing had been quite adequate to locate the correct junction and visibility that day was very good.

I assume that the decision regarding the scoring was made by the stewards, and as the chief steward at both competitions was the same man, perhaps he would like to comment on both decisions and explain why they were different!

Andover, Hants. R. JONES.

JOHN FURLONG COMMENTS: As Ralph Jones accepted with a good grace the low marks awarded him at Doncaster, I quite understand his concern at the more generous allowance given at Newton for what appeared to be the same mistake.

The Stewards can either be consulted by the Director before his decision is made, or can receive an appeal from a competitor against the Director's decision. At Doncaster the Stewards were not consulted by the Director and received no appeal from the competitor.

At Newton the Director was in doubt and consulted the Stewards before making his decision since the Tasksetter had been unaware of a second junction and had implied at briefing that there was only one. A number of maps did not show the second junction and no photographs were available.

GLIDER RECONSTRUCTION

Dear Sir,

The Northern Aircraft Preservation Society is at present reconstructing a primary glider made by Mr E. T. W. Addyman of Harrogate before the second World War, and it is our hope that it will be returned to completely accurate exhibition condition. We are also anxious to secure as much information as possible with regard to the series of gliders which were built by Mr Addyman in order that our record of his work may be complete.

In addition, work is proceeding on the restoration of Slingsby Cadet RA854 to exhibition condition with the intention of displaying it in the colours of its Royal Air Force days.

We are, of course, very anxious that the restorations should be accurate in every detail and, with this in view, should be most grateful to any of your readers

who might be able to lend us pictures of either the pre-war gliders of the Harrogate Aircraft Club or primary gliders of the RAF in wartime markings. These would, of course, be carefully returned to their owners after scrutiny.

Any recollections of either of these types of aircraft would, of course, also be very welcome.

25 *Cromwell Grove,*
Manchester, M19 3QD.

BRIAN R. ROBINSON

DUST DEVILS

Dear Sir,

The following may be worth quoting, from a letter from a gliding type who recently went out to Johannesburg to live:

"Thermals can often be seen going off out here as they tend to suck up a lot of dust and you can see them up to a height of several hundred feet. I have observed that they turn both left and right; they move across the ground at high speed both on no wind days and windy days. On a few occasions on windy days, the thermal stays at the point of source and goes up at an angle which varies according to the strength of the wind."

Any comments from the pundits?

Oxford

JOHN TRENCHARD

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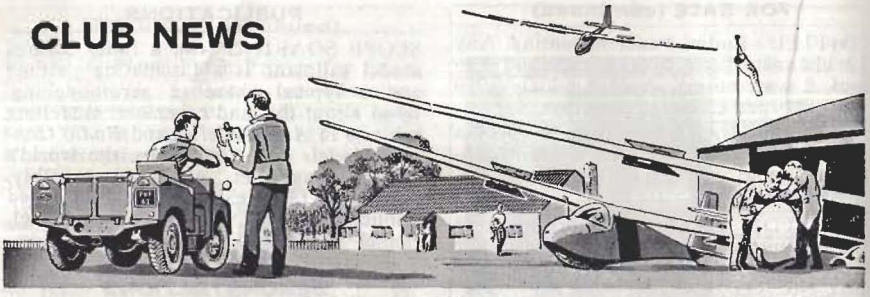
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CLUB NEWS



COPY and photographs for the October/November issue should reach the Editor, S&G, British Gliding Association, Artillery Mansions, 75 Victoria Street, London, SW1, telephone 01-799 7548, not later than August 18.

Copy and photographs for the December/January issue should be sent to the Editor not later than October 20.

AQUILA

DURING the past couple of months, Turweston has been proving its worth, and club members have had some good flying resulting in three Bronze C legs, two A and B's and one C certificate. David Catt made a club record by staying aloft for 45 minutes on his fifth solo.

At long last we have got a Skylark 3F and this should help pilots to obtain their badges. Drompey, our T-21, has sadly been in an accident and as it is not worth repairing we are hoping to replace it with another T-21.

Derek Godfrey, our CFI, is delighted with the acquisition of a double-decker bus (he's been badgering various committees about getting one for years) and work will be started soon to convert this into a canteen/control vehicle.

Has anyone any ideas on how to get a Council moving on planning permission? We are still no further in getting permission to build a hangar. E.A.C.

BATH & WILTS

KEEVIL'S re-surfaced runways—satin smooth but highly abrasive—have been causing us some headaches. At one point we were wearing out a new cable in a day's flying. But by limiting retrieve speed we made a big improvement and meanwhile Ken Lywood, our new transport chief, has produced a truck-mounted pulley which we hope will be the real answer to a difficult problem.

Launch vehicles have caused troubles too; the F100, on which Peter Walford did such a painstaking engine rebuild, has suffered an elusive oil leak, and our second F100 has been showing increasing reluctance to do its job. As a stop-gap we bought a sexy but unwilling Cadillac V8 which has now been replaced by a third F100 so that we can follow the old soldier's principle—One on, one clean and one at the laundry.

The AGM has come and gone. Astonishingly we finished with a slight profit; a difficult year in which the Bocian was out of action for months, and in which the club had to move to a shared airfield for the winter. A lot of earnest thought has been given to more efficiency, greater utilisation of aircraft and the like, but for the time being at least, we are holding subscriptions and fees at their present very reasonable level.

Early summer produced some good soaring and there has been a flurry of declarations and photography although no one has tackled a big triangle so far. One of those with ambitions is Bill Davis who flew his new Cirrus in his first competition at Nympsfield in May and gave himself, and his crew, a lot of fun as well as learning a few lessons. R.J.C.

BRISTOL & GLOUCESTERSHIRE

THE main event at Nympsfield recently was the Western Regionals, once again organised with great effici-

ency by Mike Harper. It was very pleasing to find club members in three of the top five places (see page 296). We suspect that one reason why Keith Aldridge only landed out twice was his lack of a trailer—when it arrived a few days before the comps, it was two inches too short, and had to be modified. Keith borrowed Ralph Jones's trailer when he landed out.

The weather at Nympsfield has been good to us lately, and allowed the punditry to fly an occasional triangle or two while other pilots pottered round them for fun. In particular, April 28 (when Steve White passed close by us on his big triangle) was a cracking day, and one very non-pundit spent three hours pottering round a diminutive 60km triangle.

The first weekend in May brought us a number of visitors, some to use us as a turning point others to land. This latter group included a young lady from Oxford, Janis McGill, who flew her Silver distance to land among friends.

Visitors to the club will find the clubhouse and kitchen resplendent in bright gleaming new paint, applied by Rosemary Sandford and, to the ceiling, by Stan Lewington.

We have recently taken delivery of a K-8, and the whole fleet is serviceable again—including the Swallow being rebuilt by Tony Pentelow, and work on the tugs' C's of A will be well advanced.

We were pleased to hear that our CFI, Ron Sandford, was placed sixth in the Standard Class Nationals at Newton, flying his Standard Cirrus.

M.J.C.

CAMBRIDGE UNIVERSITY

THE first few months of 1971 have proved phenomenal for Cambridge University Gliding Club, and up to May 21 we had a total of over 5,278 cross-country kilometres. On May 1 Paul Loewenstein flew the first 300km triangle from Cambridge with East Midlands aerodrome and Thaxted as his turning points, to complete his Gold C badge. On the same day our Chairman, Anthony Edwards, gained his first Gold C leg with a 303km goal flight in his Olympia 463 from Quy (near Cambridge) to Exeter. The following day Tony Maitland flew his Diamant round a 300km triangle, and since then there there have been several other almost successful attempts at this distance.

We have also had a total of five Silver C legs, which included a duration flight by Ken Whitley, an uncommon achievement over our flat site.

Duxford, our training ground, has produced six new solo pilots and has now gone over completely to diesel-powered launching equipment which should prove more economical. Unfortunately "Buttercup", our yellow Swallow, has been out of action, but it should be serviceable for our annual expedition to the Long Mynd in June.

V.N.

CORNISH

THE season opened quietly with Pete Arthur completing his five hours on the ridge and Brian Farrow his Silver C distance leg. The middle of April produced several out-and-returns and Terry Jansen flew his five hours in the Swallow.

Peter Rasmussen and George Collins took the K-13 to Fowey and back on May 1, and next day Dave Pentecost was over Bodmin with Denis Jenkin in close pursuit in the second Skylark. Denis successfully flew to Predannack after confirming with our friends at Culdrose that it was necessary (and safe) to overfly Culdrose for his Silver C distance. Harry Cooper and Bill Lewis both completed their Silver C height.

On May 16 Pat Wybrow flew his Diamant to Compton Abbas while Pete Wells brought a Skylark from Culdrose and flew to Predannack for Silver C distance.

Our summer courses now include aerotowing as part of each course, and our two K-13s are expected to be fully utilised.

G.T.C.

COVENTRY

FIRSTLY all our members would like to extend a warm welcome to our ex-Leicester Gliding Club friends and hope that they will settle down quickly and get as fond of HB as we all are—welcome to you all. The airfield at Rearsby closed completely in May and the club members split up, half up North and, fortunately for us, the other half to HB.



The traction engine rally at Husbands Bosworth

It has been the mad, mad, month of May at HB—our pilots have excelled themselves flying-wise aided by some really marvellous soaring conditions. Ken Haynes, having attempted to get a Diamond leg from a great number of gliding sites all round the Globe during a world business trip, came back to HB like the Prodigal Son, and promptly completed a 300km Diamond goal. Other achievements include one of our lady pilots, Barbara Swain, getting her five hours in the K-2B; as well as at least half-a-dozen Silver distances and durations and several Bronze legs.

Following our tremendous success last year, we have held another Traction Engine Rally on the airfield during Whitsun weekend. Once again the gods were kind and 14,500 people came to see the engines and gliding exhibitions. Notable aerobatic displays were performed by Lou Frank in the Swallow and Laurie Watts in the Bocian, who surprisingly emitted red smoke from the tailplane. Rally organiser Roger West was given an air experience flight in the Bocian by our organiser Sid Gilmore. He was instantly converted, and is now signed up for a gliding course.

CFI, Claude Woodhouse, had threatened to ground all able-bodied men (and women) if we didn't decorate the Clubhouse woodwork before the Nationals. It has now been painted a brilliant white and Army green, and we have extended the toilet facilities to cope with the sudden influx of new members and visitors. The local press have done a series of articles on the Club which resulted in a sudden flood of interested enquiries. V.G.

DEESIDE

AS newcomers to full membership of the BGA, the Deeside GC may not be familiar to many readers of "Club News", so a few words of introduction may be in order.

We fly from a strip among the Grampian Mountains near Aboyne on Royal Deeside, a location which can give wave conditions in winds ranging from NNW through to ESE. We run an all-aerotow operation, with a club fleet of Capstan and Swallow, plus two syndicate Olympias and a Skylark 4.

The mild winter has produced a steady trickle of new solo pilots to join the ever-growing Swallow flying list, the most notable (and decorative) of these being Carol Lee, our only lady Swallow pilot, whose husband, Roger, was one of six members to gain his Silver height this year. April 17 saw Gold climbs by Alan Middleton and Innes Lovie, with a near miss by Bruce Scott the previous month. His 10,200ft indicated climb turned out, on barograph calibration, to be 100ft short of the required height.

In the past, lack of oxygen equipment has put a ceiling on our flying, but its recent installation on almost all the local aircraft means that we will no longer have to play second fiddle to the performances of visiting aircraft.

This year has seen a considerable increase in our cross-country flying, from nil last year to almost 200 miles by the end of May, not all deliberate, some being attributable to the vagaries of wave conditions. A flight to near Elgin by Les Joiner was the first Silver distance started from the Aboyne site; the

first, we hope, of many.

At our AGM in April, Alan Middleton took over as CFI from Innes Lovie, who had filled the post since the club's inception, and whose hard work and dedication have been instrumental in the club's development.

We extend an invitation to visit us to any readers whose travels may take them to the frozen north. They are assured of a warm welcome, though we can't promise wave *every* day!

G.J.D.

DERBYSHIRE & LANCASHIRE

THE past few weeks have certainly been weeks of achievement for us at Camphill. We have had solos, C certificates, Bronze and Silvers, and a multitude of Bronze, Silver and Gold C legs. The crowning glory was during our very successful task week in May when, to finish the week in grand style, Mike Armstrong flew a 300km triangle from Camphill via Husbands Bosworth and Bardney for a Diamond goal and Gold distance. He flew the club K-8 on a blue thermal day and apparently had to scratch all the way never rising above 3,000ft. The hotter ships and pilots now treat the K-8 with well deserved respect. He is the second member of the family to wear a Diamond: his father, Stan Armstrong, gained one of the first ones. Mike is now busy preparing the home he will live in shortly when he marries Jenny, the club's statistician. Chris Buxton completed his Silver badge with a distance flight, and Ken Ashton got his Silver height during the task week. Mary Neighbour was disappointed when she learnt that her distance flight did not comply with the one per cent rule. Another member tried to get away for his first cross-country and eventually managed it only to land 19 miles away three hours after his launch!

BBC Birmingham have filmed and used the syndicate Olympia 460 "Redwing" for a staff training programme, and we are trying to get hold of this colour film and tape for a showing to club members. Rhoda Partridge look out!

The Mynd crowd raided us again in May on two weekends for our annual contest for the Beer Tray. They won this time—for a change—but in their excitement, they forgot to take the tray with them. Thank you though, Midland, for another enjoyable clash.

Some of our members (self included), have been over to Tollerton with our CFI to experience the joys(?) of spinning and other hairy manoeuvres in a Chipmunk, thereby to widen our knowledge, strengthen our confidence, and encourage us the more to enjoy our gliding.

Our airfield is likely to be attacked shortly for improvements to the landing areas and roads. The summer courses are well under way and some old faces are appearing along with the new. Visitors have dropped in from Lasham, Essex and Devon and Somerset as well as from neighbouring clubs, and several of our members have been on various courses at Lasham.

P.H.

DEVON & SOMERSET

IN addition to the usual A, B and C certificates, Bronze C's were completed by Mike Cook, Mary Weeks and Vic Thomas. Silver distances included Rod Hobbis, Alan Holland, D. Reilly and Ken Jenkins; duration: W. Down, and heights: Barry Salter, Mrs. Vivienne Fitzgerald and Roy Hodges (your scribe) the last two being completion of Silver C, and in the case of Vivienne being the first lady to obtain this qualification in the Club. There were also six cross-country flights including Brian Weare's journey to Lasham and Bob Rowe's excursion to the Wild Life Park at Cricket St. Thomas. Since last writing we have replaced our Tiger Moth by a Beagle Husky. The Tiger went to Keith Fordyce's Museum and was the subject of a radio comment. The Husky has worked overtime since we got it and proved invaluable during our Task Week which was held from May 30 to June 5.

Eleven gliders and 28 pilots (four from the Kent club) participated in a successful task week, held from May 30 to June 5. A total of 1,464km was flown during four days, and the winner was the team D. Bindon and A. Hodges, K-6E.

A.E.R.H.

DORSET

OUR first Task Week this year has just ended, and if the weather did not give us unlimited scope there were several good days. It started well with a Silver distance flight for a newly-minted Bronze C pilot, Lawrence Rice, who scored top points for the first day.

Later in the week Peter White excelled himself by making very sure of his remaining Silver C qualifications (having done 5hrs earlier this year) with at least two flights which gave him the necessary height and distance and made him the overall winner.

The arrival (on loan) of a Falke motor glider at the start of the Task Week has opened a new door for most of us and brought to life the current controversy over the use of such machines for gliding training. It had an enthusiastic reception and helped to ensure a good deal of flying for those not taking part in the tasks.

The week ended on the Spring Bank holiday with a grand barbecue at which a large number of members and friends helped to consume a pig which relays of volunteers had been roasting (whole) during the day. Needless to say this was not all that was consumed that evening as those who served behind the bar will testify, and everyone seemed to have enjoyed themselves—apart from the one retrieve crew which didn't get back until it was all over.

The Clubhouse is looking much spruced-up as the result of some good work with paint and Snowcem which is being put on by a team supervised by Brian Wardell which includes our youngest solo pilot, 16-year-old Robert Poole, who can handle a paintbrush almost as well as a T-21.

Nearby, the children's playground has been augmented by the addition of a slide and a concrete tunnel which, to judge by the excited shrieks sometimes heard are doing their bit in keeping the whole family amused whilst at Tarrant Rushton. M.L.B.

ESSEX

STATISTICALLY the Easter to Whitsun period has been our most successful period since flying training started at North Weald just over ten years ago. We've chalked up two Gold

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distance Diamond goal flights with Silver and Bronze legs too numerous to mention, coupled together with yet another group of first solo's. A handsome reward for all the pre-Easter training and "de-rusting" flights.

Our first home grown Gold and Diamond was achieved by Bill Medcalfe with a flight to the Abbey Calke Reservoir and back in his beautiful Skylark 4. A week later a similar flight by Alan Vincent was made to North Cranwell and back.

Our site was taken over for the Whitsun weekend by the RAFA for the annual air tattoo and a crowd reported to be 70,000 plus was treated (in beautiful flying weather) to the delights of aerobatics and display by numerous "fan assisted" and "instant thermal" jobs. For most of us the highlight was undoubtedly the solo Spitfire aerobatics—a piece of pure nostalgia.

It would seem that after all the noise and associated pollution of the air tattoo the local residents are glad to have us back on site, which is as always at North Weald just 2,700ft below Red One, why not drop in and see us?

P.McE.

ESSEX & SUFFOLK

OUR AGM which was held in February was so well attended that the committee were quite taken by surprise. All the committee members were re-elected with the exception of treasurer John Pickering who has given up gliding pending his forthcoming marriage in the summer. This position has been very ably filled by Nobby Bone. Mike Lee has since been elected to the committee as membership and publicity secretary.

A very successful Dinner-Dance was held at the Colchester Garrison Officers Club and was attended by over a hundred members and friends—a far cry from recent years when it was a job to raise twenty for a dinner only!

Last winter saw the formation of the club's first syndicate and their acquisition of a K-6CR. This was followed by the purchase of a rather bent Swallow from the Mynd by a second syndicate. Ralph Brooker, who has now obtained his BGA glider inspectorship, expects that it will take him and the other syndicate members until next season to get it into an airworthy condition. During the summer he is far too busy looking after the club gliders, instructing in the K-7 and tugging in the Auster which has, regretfully, replaced our worthy friend the Tiger Moth—what a busy chap he is and what a debt the club owes him.

Congratulations to our CFI, Eric Richards, who became the first club member to complete his Gold C—with a distance flight to Dunkeswell on May 1. Mike Lee completed his Silver C and Bronze C's have been completed by Bob Bousfield and Terry Brooker. Terry soloed only days after his sixteenth birthday earlier this year and has worked hard to achieve his Bronze so soon.

Over the Whitsun holiday we welcomed at Whatfield several gliders and their owners from North Weald. Everyone enjoyed a good weekend and our quiet Suffolk air became almost crowded!

M.L.

KENT

THE soaring season started off with a bang and by the middle of April, Pauline Kingsford, Colin Beer and Nigel Read had all completed their remaining Silver C legs while the following week John Hoye flew from the club site at Challock to Lasham.

On May 8 three pilots declared goal flights from Challock to Chilbolton in Wiltshire and return. Hugh Gardiner made Chilbolton but had to land at Lasham on the way back, whilst Ron Cousins got back as far as Rochester, a mere 30 miles from home. Cyril Whitbread, however, successfully completed the trip in a time of 7 hours 38 minutes and the 321kms covered was rewarded with a Diamond goal. At no time did he get much above 3,000ft, and when passing Lasham he heard one of the local pundits declare that "the day was not as good as it looked and that he would try a little local soaring if he could stay up for half-an-hour."

Charlie Cramer, one of our course instructors, and Keith Rosenze made a mid-week trip to the coast when they flew the Capstan to Shoreham-on-Sea, a distance of 90kms, the flight only being terminated due to air-sickness.

On May 15 the Club's birthday party

was held and was its usual success. The evening was the occasion of a visit from the local constabulary at about one minute past eleven and, lo and behold, the bar had been closed on time. After refusing the offer of a drink they left us to finish our party.

On Friday evening, June 4, the currently fashionable wave was present over the site Geoff Avis arrived at the Club for a drink and chat but realised that wave was present so he jumped into the Skylark 4 instead. He had a quick winch launch to 900ft, and by dint of burning his boats with a downwind dash in the 30-knot wind, was able to make contact and worked the wave to 5,600ft. He was later followed by Glynn Richards, our other course instructor, who managed to get to 6,200ft. R.J.H.

LAKES

AS usual, we took our own weather along on our annual "outing" to the Worcestershire Gliding Club. It held off long enough for Ian Ronald to declare Lincoln and return, and do it, on Tuesday, June 1. With this fine effort, Ian has netted the first Gold distance with Diamond for goal in the Lakes Club and, so far as we can discover, the first from the Worcestershire Club's Bickmarsh site. The only other attempt finished 56km out on the previous day, and weather precluded cross-country flying during the remainder of the week.

Charles Boucher, who soared for 4 hours 10 minutes of his Silver duration, was defeated by the evening overcast. Other members enjoyed local soaring and sampled the aircraft of the host club, in delightful surroundings. Our thanks to all the Worcestershire members for a friendly welcome, and particularly to those who gave up their own time to make our visit a success.

Glass-fibre will soon be seen in the Walney sky, since our Chairman recently took delivery of a Kestrel. We are all curious to see how the tail-parachute deploys, and few believe it will ever go back into the space apparently available. R.R.H.

LEICESTERSHIRE

FOR some time past the Leicestershire Gliding Club has been aware that its tenure at Rearsby Airfield was in jeopardy following the closure of Beagle Aircraft Ltd and has been searching for an alternative site. Unhappily for all concerned the landlord finally notified us in March that our tenancy would be terminated on May 2, and the Club has now been forced to vacate its site.

As soon as notice was given our Committee accelerated its efforts to find alternative permanent accommodation to fever pitch, but in vain. Some of the sites considered included Syerston Airfield (refused by MOD), Wymeswold Airfield (already in use for a variety of other purposes incompatible with gliding), Langar Airfield (future undecided), Melton Airfield (runways now too short), and a number of privately owned fields in the district. Our searches for a privately owned grass field foundered due to the difficulty of finding one of adequate size, free of obstructions, where the owner was willing to rent at a price we could afford.

During our search we were encour-

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aged to learn that our neighbours at Husbands Bosworth and Church Broughton would be willing for us to join with them for either a temporary period or permanently, and we are glad to say that these two Clubs will enable most of us to continue gliding. Following an Extraordinary General Meeting in late April it has now been decided that the Leicestershire Gliding Club will be wound up, and will therefore cease to exist after 11 years of activity. Needless to say this step is being taken with extreme reluctance, as the only practical course of action open. Meanwhile we should like to thank our Site Committee and many others for their efforts during the last few months. B.E.R.

LONDON

THE weather has been so outstanding this summer that it is impossible to report all the flights due from Dunstable. John Jeffries and Mike Till flew the 100 and 200km triangle at record speed, respectively, but both without a barograph! Gold C triangles have been completed by Brian Holloway and David Bowden, and Gold C out-and-returns by Paul White, Mike Garrod and Brian Holloway. One "milk run" flight was done by David Toulson to Plymouth, and Len Woods completed a 300km triangle during the Nationals.

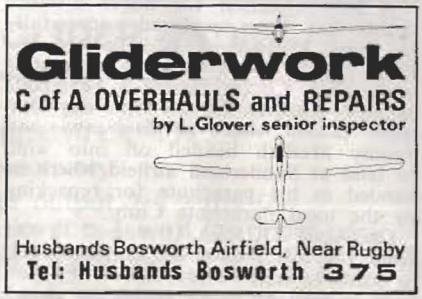
Coming down the scale, numerous 200 and 100km flights have been achieved, while Silver C flights seem to occur almost every soarable day! The most notable one was by Jack Woodford, who got to Husbands Bosworth in a K-8 in very quick time, landed, was launched again, and flew back to Dunstable.

The AGM was well attended. Roger Barrett retired from the General Committee after many years' hard work; his presence will be missed at future meetings, but no doubt the ballooning movement will benefit from his undivided attention! Tony Letts and Cedric Vernon also retired, but it is hoped to retain Cedric's valuable experience in the technical field even though he will not be at the Club very often. New members are Bird, Jones and Sheehan-Dare. Tom Zealley remains Club chairman for a further year.

Courses have been well attended this year, and have benefited greatly from aerotowing only for the first two days of each course. Plans are in hand to increase aerotows substantially next season, and we are looking for a really powerful tug such as a Rallye Commodore. In the meantime the Condor and Tiger Moth are our mainstays.

Mike Till has rejoined the Club as a staff instructor for the summer, having found the motor industry somewhat uninteresting as compared with gliding! Dick Sherwin is also with us for the summer as resident tug pilot, and there has been no lack of work for him either during the week or at weekends.

We are pleased to note that Martin Simons, once a member at Dunstable, has completed his three Diamonds "Down Under." Our congratulations from afar! M.P.G.



NORTHUMBRIA

WE were surprised to read in a newspaper article that there was no gliding site between the Yorkshire Moors and Portmoak. We are a thriving club at Hedley, a site 10 miles west of Newcastle and 30 miles downwind (in SW winds) of the Pennines, so wave is a common feature of the site.

Membership is increasing at a prodigious rate and we may soon have to restrict entry while we clear the backlog of pupils under instruction. The Club fleet is to be reorganised. The Jaskolka is for sale. This, though an excellent aircraft to fly, was never fully utilised as most pilots qualified to fly this machine quickly coalesced into private owner syndicates. In its place we are searching for a Capstan which can be flown for instruction or solo by a much larger proportion of our membership. This will also increase utilisation of our tugs.

A new direction for Silver distance flights has been explored successfully by John Williamson who landed the Dart 15R at Great Orton, Cumberland; while Dick Corker landed a Skylark 2 north of Carlisle. On the same day Don Ingle landed short at Brampton and Jimmy McBeth headed off into wind to land at Sunderland airfield where he handed in his parachute for repacking by the local Parachute Club.

On April 17 John Greenwell in the Dart 15R left 5-knot lift at 18,000 feet in wave to land before sunset; it's perhaps as well he didn't go higher as the barograph had not been wound up that morning. On May 31 Dave Osborne proved that wave isn't essential for high flyers by climbing to 9,000ft in a cu-nimb.

We have recently had solos by the all too rare female members: Carla Townsend and Sandra McKie have both qualified for A and B certificates. David Horgan with over 200 hours on power has also converted to flying the T-31 solo. J.R.G.

NORWICH

THREE years ago the Norwich Soaring Group was formed with about six members of a private owner group. We operate from Swanton Morley and are now more than 20 strong, and have become associate members of the BGA. Alf Warminger is our chairman, Bill Reekie, treasurer, and John O'Rourke our secretary. Stan Easton our CFI also looks after the technical side and we owe him a great deal of thanks for all the hard work he puts in.

The group have a Phoebus 17, Skylark 2 and a Tiger Moth, the latter completely refurbished in March/April, and waiting for things to come.

On April 28, Stan Easton completed a 300km triangle in the Phoebus and on May 2 attempted a 500km flight but unfortunately this did not come off and he landed after 380km. Justin Wills had brought up his Std Libelle the day previously for a 500km attempt which was successful, but owing to barograph malfunction he was not able to claim his Diamond distance.

Bill Checketts, one of our newer members, landed the Skylark 2 146kms away on his first cross-country on April 25, and followed this with his five-hour and gain of height on May 18, thus completing his Silver C within three weeks. Alf Warminger broke the UK out-and-return record on May 18 (see page 294).

Four members from the Peterborough and Perkins clubs visited us for a week and were able to go home with duration and height claims as well as flying their Bocian back to Peterborough. We were particularly pleased to have Don Snodgrass and his Dart on his annual visit on April 11. J.O'R.

OUSE

THE AGM held a few weeks ago resulted in some changes in the committee. John Mawson has been elected chairman, and Derek Green and Arthur Sans have been elected to the main committee. Our thanks must go to the retiring committee members, in particular Brett Atkinson, who has given a considerable amount of his time to the club.

The T-21 has been busy with more first solo flights, Geoff Harris being our latest. Jack Ramsden, Swallow pilot, has gained his Bronze C duration flights and Derek Moore completed his Silver C by flying to Catterick. The pace of the competition ladder is now getting hot, John (Chalky) Cheesborough being top man with Peter Ramsden in hot pursuit.

Chris Riddell came to Rufforth with the Torva, and the two flights he made impressed us all.

We are all busy making final arrangements for our open day. Should any gliding types like a change, come and see the display on August 7. You will be made very welcome. R.W.B.

PERKINS

JOHN BOWLES and Mike Stillingfleet went over to Swanton Morley with the Bocian for some cross-country flying. While there John was able to act as Official Observer for Alf Warminger's record flight on May 18.

Recent solos include Dick Maywood, Keith Tinker, George Jennings and Mike Allcoat. The latter gained his C two weeks later.

Two one-week courses have been arranged for the Peterborough Youth

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Council while for our own members three one-week courses are in the pipeline. J.C.B.

PETERBOROUGH & SPALDING

TO coincide with the first anniversary of the formation of the Club, the local paper provided a half-page broadsheet feature on the club and its aims. The coverage, together with its accompanying photographs, has had the desired effect in creating renewed interest in our sport by members of the general public, and brought in membership enquiries.

The excellent thermal conditions at the end of May (coinciding with the absence of our tug, away on its annual C of A) encouraged pilots Fidler and Fox to organise a mid-week, midnight, de-rigging session, ready for an early morning trek by road to Swanton Morley. We are pleased to record that their three-day visit was well rewarded, in that Tony Fox achieved his Silver C duration flight on the Friday in the Skylark 2. Tony Fidler, flying the M-100s, rounded off a successful soaring session by flying back to our base at Postlands, in company with the Perkins Bocian ably piloted by John Bowles.

The first flying week organised for Whit-week was disappointing as two of the four days were cancelled due to strong winds. Tuesday will be remembered as a corking day, when with the Skylark 2, M-100s and Bocian all airborne, an American F-111 hinged his wings to the forward position to do several slow runs to investigate our gaggle of UFOs (Unpowered flying objects).

Congratulations to Tony Noble, who only joined us in October and has proved the value of aerotow facilities by going solo after 30 flights. J.V.L.

SOUTHDOWN

THE bungey launching and ridge soaring of early April continued over Easter thanks to north-easterly winds, giving us one of our best springs for several years. This has led to the completion of Silver C legs by some club members. Sam Smith in the club's Olympia 460 and Keith Mitchell in a syndicate Pirat did their five hours; Ted Pearce in his Olympia 460 flew his Silver C distance, while Martin Burgess completed his from Firle to Alton, unfortunately damaging the Olympia 463 on landing. Repairs should be done in time for its trip to Sutton Bank. Flying from Lasham, Frank Howard and Gordon Newberry also did Silver C distances.

The Easter members' course started well with soaring from bungey launches, deteriorating later, through a winch snarl-up, to a day with only one winch launch. Those who stayed on until Saturday were rewarded by thermal soaring to cloudbase at about 4,400ft. May gave us mainly light variable southerlies producing nothing notable on the flying side.

On spring Bank holiday weekend, we were rained off on the Sunday but despite this we had a full house on Sunday night with two bedrooms full of wives and children while the men shared the other room. It was gratifying to see full use being made of the accommodation for a change. K.I.P.M.

STAFFORDSHIRE

OUR AGM, delayed by the effects of the postal strike, was eventually held on April 16 when Judy Graham and Clive Highfield took over, respectively, from the retiring Secretary and Treasurer. Barry Gilman remains Chairman for a further year whilst Doc Bradwell continues to shoulder the burdens of the CFI's office.

Flying from Meir continues unabated though we are planning to be operating from our proposed new site near Leek come next soaring season. No further flying has been done from this site recently, the pressure being on planning, negotiating and fund raising. Ground surveys have established the availability of at least two suitable landing fields at the bottom of the hill where the natives appear to be quite friendly!

Boris Clare ran a course week at the end of May; this gave a dozen or so club members the opportunity to log further soaring hours and to gain one or two legs towards Bronze and Silver Cs. The Townsend syndicate have replaced the Skylark 3F by a Std Libelle and are busily flying the paint

off it in preparation for the Task Week which began on June 2. Many other members are polishing both aircraft and soaring technique with this date in mind and the cross-country flying practice has given rise to a noticeable increase in the number of outlandings, mostly requiring embarrassingly short retrieves! B.G.

SURREY & HANTS

THE season has burst forth with real vengeance. Since April 17, when the first good cross-countries were done, we have managed 25 flights of 300km or more. Alan Purnell, Anne Burns and Hugh Hilditch have all exceeded 500 kms. Anne and Alan's were completed triangles, Hugh landed 10km short of Lasham but flew 508km.

The club's Phoebus was flown by David Carrow in the Open Class nationals to eighth place. He has now taken delivery of his Kestrel.

Roy Cross, Lasham Gliding Society's Chairman, didn't quite recover control after a cable break in his SHK and suffered the ignominy of a written-off glider. Luckily he only broke his ankle,



Peter James (in cockpit) taking tea from John Cochrane in their newly delivered Libelle
Photo: Denis Johnson

but a lesson has been learnt, he says. He has ordered a Kestrel 19! (see p303).

A second new F100 tow car is whispering up and down the runway with 1,500ft of wire. A squadron of bright yellow Piper Cubs have joined the aerotow airforce and all this should help to provide further means to enjoy the splendid season we are having.

Total cross-country distance so far is 21,000km, 9,000km of which have been done in club gliders. C.L.

SWINDON

HAVING fully recovered from our Hippie party, our flying is now back to normal with "Doo-Da" landing on the front lawn of Woburn Abbey, and so emulating Bernie Keogh's effort last year!

Our friendship with Watchfield was cemented at a recent "Orgy" (return match for our Hippie thing!)—Swindon and Watchfield Gliding Clubs challenge allcomers to beat them at bottle-walking.

We had Bob Cunningham visiting again (if this keeps up he will have to become a member!). He was first observed by Bob Lucksford who had been in contact with an SHK for several minutes and having given him careful instructions on where to land, he discovered Bob Cunningham had no radio, and therefore apologises to the pilot we talked into landing...wherever it was!

D. Trenchard completed his Silver C and D. Laurence and M. Dugmore their Silver heights. Miles Dugmore did his five hours in the Swallow at the same time, winning the bottle of champagne kindly donated by Eric Winning. Richard Cole obtained his assistant instructor rating at Bicester. C.R.E.

THAMES VALLEY

HAVING enjoyed such superb weather almost from the beginning of the season, we are well on the way to establishing new records for launches and flying time. So many legs have been gained and badges completed that we cannot list all the recipients, but congratulations to you all.

Our AGM was held on March 27 at a local hostelry and during the evening Adrien Wagenaar, our flying Dutchman,

was presented with a trophy for his splendid effort last year in completing his Gold badge in so short a time (we are currently considering buying him a watch). By an overwhelming majority Bill Breakspear was elected Honorary President for his tremendous service to the club since its inception.

Our training fleet now boasts a new Falke to alleviate any congestion on the two K7s, and we've arranged the purchase of a Dart 17R to strengthen our solo fleet. A party of TV/AFC members went to Shobdon earlier in the year to explore their wave, and a few lucky ones made contact during the second week. Since then a new wave system has been found to produce good lift quite close to Booker, during strong NE wind conditions! K.W.W.

ULSTER & SHORTS

GRENVILLE HILL, our CFI, and instructor Joe Taggart were shortly to leave for Kirbymoorside as these notes were written to collect our new Slingsby Falke, expected at Long Kesh for the weekend of June 19/20. Their intention was to refuel at Carlisle, drop in on the Dumfries club if it was flying at the time, and cross the North Channel between Portpatrick and Bangor before continuing to base at Long Kesh.

We expect the Falke will have a voracious appetite for new *ab initio* pupils and we have been concerned at the low level of recruitment over recent months. In a move to benefit both the club and publicity officer Bob Rodwell, a free-lance journalist and broadcaster, we had a BBC TV crew along on Saturday, June 5, to shoot a lengthy item in colour for the regional magazine programme *Scene around Six*.

Bob recorded live commentaries in both soaring and aerobatic flight while flying the Skylark 2 for air-to-air and ground-to-air filming, Jeremy Bryson mounted a fuller aerobatic turn in the same aircraft, and random activities on an otherwise normal flying day were also filmed. We hope for a noticeable surge in membership applications after this item is shown—it was scheduled for June 10—while Bob's benefit is a commission from the BBC to present similar TV items on other off-beat outdoor recreations in Northern Ireland.

The season's first cross-countries were flown by Laurence McKelvie and Jim Scott, both in pursuit of Silver C legs and in Jim's case completing all three. Laurence fell short by about 1¼km on his first attempt (which followed two abortive outings last season) but made it by a comfortable margin on a hastily arranged mid-week flight a few days later, when he landed beyond Keady, in Co. Armagh.

Jim pinched the Skylark from under this writer's very seat on a handsome Sunday in May, was towed upwind to Portadown, went racing down well-streeted cumulus in a stiff westerly entered cloud, came out of it over Newcastle (no, no, not Tyneside and certainly not under Lyme. It's where the mountains of Mourne sweep down to the sea). From there, at 4,800ft, he did a long final glide into a very cool reception at Bishopscourt, an RAF radar station. R.R.R.

VALE OF NEATH

SINCE starting in July, 1970, the club has logged 520 flights and we have been able to claim five A and B and two Bronze C certificates. Membership stands at 56 full flying and 27 associate members.

We recently purchased a T-21 and are negotiating for a K-2, but we are still looking for another two-seater which can be used by solo pilots and also for cross-country training.

An access road and a winch have been built and a telephone for signalling has been installed. The Nissen hut we purchased to hangar the aircraft will be erected as soon as planning permission has been obtained.

Our site at Coelbren shows great possibilities. It has several ridges in the vicinity and we have observed lenticular clouds over the site on several occasions.

Our lady members take an active part in the running of the club and our social calendar is well being looked after They also provide refreshments on site. A.B.

YORKSHIRE

THIS spring is memorable for the number of superb soaring days, and

whilst easterly winds predominated, the abundance of strong thermals more than compensated for the lack of hill-soaring conditions. In the past we have been a bit "ridge-minded", but now that extra landing space is available (you can just about hold off over the ears of the white horse—only beware of his bite) pilots are encouraged to get the most out of the air in all wind directions. On a number of days during April and May whilst the pundits down south were zooming round 500km triangles it has also looked possible from Sutton Bank and it will be interesting to see who is the first to set the trend in the north.

Some good cross-country flights have been done, notably David Lilburn's third attempt at Diamond goal when he covered 326km on an O & R, but just failed to make it back to base, and Fred Knipe's O & R to Nottingham. Bielby Sykes flew to the coast in the Blanik for his Silver distance.

The Annual Dinner-Dance was enjoyed by all and the trophies for 1970 were presented by guest of honour Mrs. George Burton. The Hartness cup for best gain of height went to David Lilburn for his climb in wave of 20,400ft, the distance cup to Barrie Goldsborough for his 300km triangle flight (both club records) and the novice cup to J. Heathcote.

At the time of writing there are 19 entries for the Northern Regionals to be held here during the last week in August (including Bank Holiday Monday). We want to make this a highly rated contest so further entries are welcome. We hope for good weather, but if we do get the odd duff day we can at least guarantee a jolly good time for pilots and crews so why not come along and enjoy a spot of Yorkshire hospitality in a home-from-home atmosphere?

S.V.G.

SERVICE NEWS

BANNERDOWN (RAF Colerne)

THE prayers of many glider pilots have surely been answered in recent weeks, judging by the standard of the weather we have enjoyed. Certainly, scarcely a weekend has passed at Colerne without something of note taking place.

Chris Foot must go to the top of the list for taking the K-6CR around a 300km Colerne, Gaydon, Lasham triangle. This task has been planned for many years from here, and often attempted, but this is the first success. Eric Thomas set out on a Silver distance attempt in the Olympia 2B and arrived over Lyme Regis with a wonderful view of the South coast from 4,000ft. His mood of euphoria during the descent suffered a rapid reversal on the ground when he found the barograph still ticking but no trace on the foil. A typical gliding story, but Eric has made sure of both the distance and the trace since.

B.S.

HERON (RNAS Yeovilton)

IT goes without saying that the soaring season produces the major satisfactions of the year and every soaring pilot remembers his own successes and exciting encounters with the elements; it does, however, tend to steal the thunder from anything one might casually mention in club news items, and therefore encourage the writer to do a lot of pencil chewing between rubbing out.

The Heron club is busily wearing out its equipment and scoring lots of gliding hits. By the end of May we had already achieved fifteen Silver legs and an equal number of near misses.

Regrettably, Cmdr John Ford is to leave us, after what can only be described as a year of personal and club achievement. We are all very grateful to him for providing so much energy and fresh opinion and congratulate him on his rapid transition from *ab initio* glider pilot to full Silver C in less than one year. He will be running the flying on HMS "Ark Royal" for some time and it is hoped that he will visit us whenever the opportunity arises.

The call of the sea threatens to deprive us of other valued members in the very near future, already having claimed Mike Livesay, Tony Wray and Ian Read. Our CFI Mike Gale is soon to follow.

Nick Wilkins organised a soaring week at Compton Abbas during those fabulous five days in May, the intention

being to gain Silver C legs and, as a farewell gesture to our very old T-21, show our appreciation by way of intensive cross-country flying. The Silver C legs were achieved and taken in the stride of normal activity at Compton Abbas; but the T-21 baffled the pundits by the regularity with which it commanded the top of the stack, and the frequency with which it returned to base firmly strapped to Nick's special trailer. D.R.B.

PHOENIX (RAF Brüggen)

WHILE Brüggen is carrying out Wildenrath's Master Diversion commitment the club has temporarily moved back to Wildenrath where we are sharing the Sub Aqua club's premises thanks to the efforts of Mick Bailey. Mick has recently rejoined the club after an absence of six years; he almost had to supply us with the Sub Aqua's gear to operate on the airfield after some very heavy rain in May.

The early part of the year was spent in getting our equipment serviceable and Godfrey Duff, ably assisted by club members, re-covered our Swallow and are working on the second Swallow.

On the flying side club members have gained many certificates too numerous to mention. Unfortunately, an expedition to Issoire in February produced one wave for two hours only, but even so Nick Nichols managed his Gold C height in it.

We are sorry to bid farewell to Jimmy Bawden and his wife Ross. The club is deeply indebted to Jimmy for the tremendous amount of time he has spent working for the club. Jimmy and Ross were presented with an inscribed wall clock at a party held for them at the Sub Aqua club. We would also like to say "thanks" to Wing Cmdr Jim Railton who left us to return to the UK some time ago.

P.H.

WREKIN (RAF Cosford)

WE had a busy Easter running yet another *ab initio* course which resulted in completing 10 A and B's while C. Harlow completed his Bronze C. May produced Silver distances for R. Harlow, B. Noon and I. Cummings, the latter also completing his duration. Also J. McKeown completed his Bronze C. Other cross-countries were carried out by B. Goodman who landed after 270km on his Gold C attempt (the longest flight from this site), G. Hunter in a K-8 flew 182km and A. Paterson contacted wave over Cosford and climbed to 9,000ft (again a site record).

The whole club moved tents, winches and gliders for four days over the Whitsun holiday and a marvellous time was had by all who joined this expedition to Chetwynd airfield, which was ran by our newly fully-rated instructor C. Joslin.

C.P.

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