Sailplane and Gliding

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August 1962

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SAILPLANE AND GLIDING

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Cover Photograph : Three R.A.F. competitors over Aston Down during practice week.

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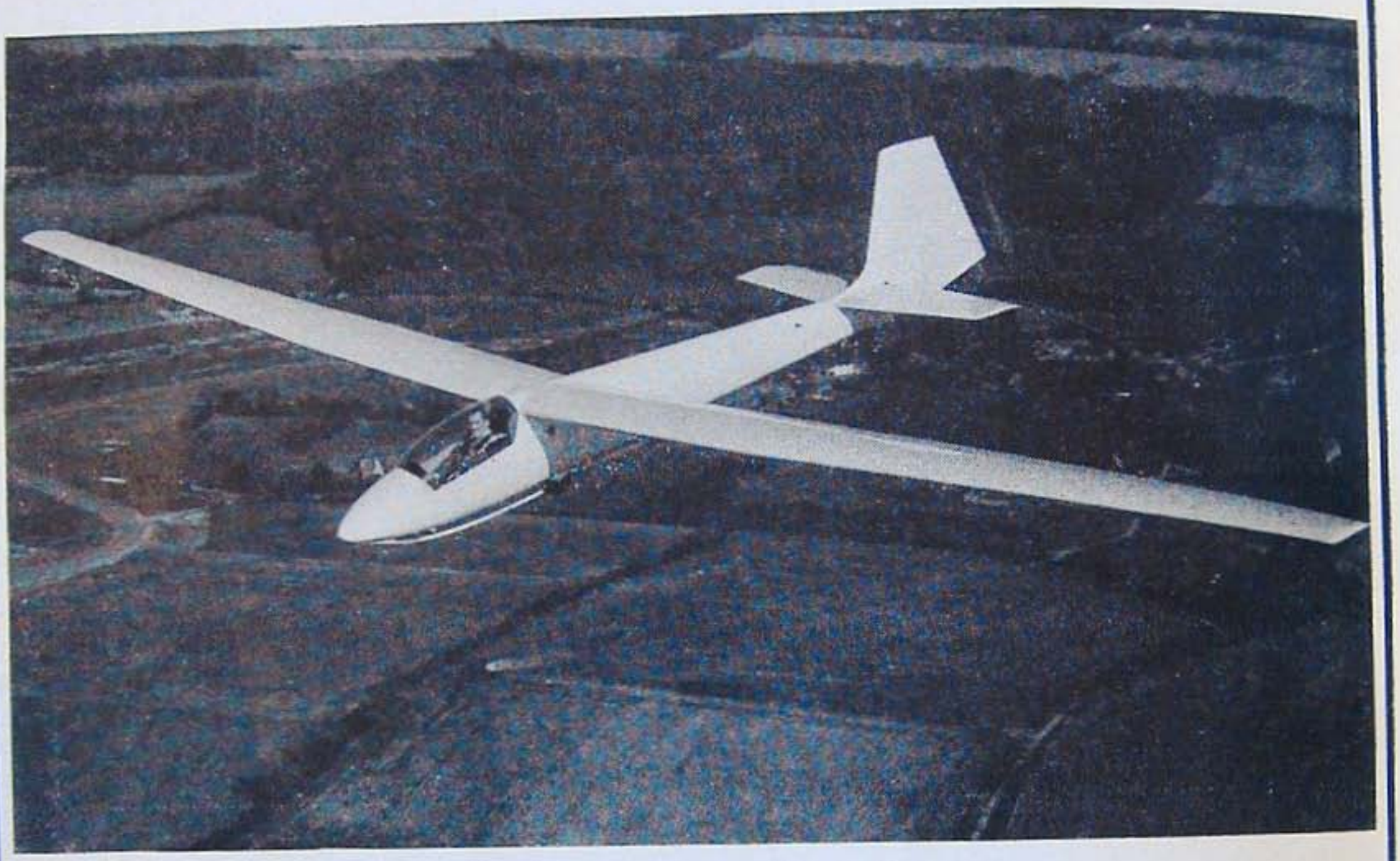
THE SKYLARK 4
18M CONTEST SAILPLANE



The final outcome of eight years of continuous development work, the SKYLARK 4 is the most advanced 18M Contest Sailplane available as a standard production aircraft. It is a direct descendant of the SKYLARK 3 series which still holds a record in National and International Competitions unapproached by any other design.

WINGS DAY
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The SKYLARK 4 is now in full production at Kirbymoorside.

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THOUGHTS AFTER THE CHAMPIONSHIPS

by Nicholas Goodhart

AFTER being at sea for a couple of years and not able to get any gliding, I was not very optimistic about my chances in this year's Nationals; it was therefore a great (and extremely pleasant) surprise to find that continuous practice does not seem to be essential and that I was able to guess the right decision on a sufficient number of occasions to get into and stay in the lead. I always look on competition gliding as a guessing game in which the problem is to guess the right answer more often than the other competitors and avoid making the odd fatal and irrevocable decision which will put you on the ground in the middle of the race.

To what do I attribute my success?

"To what do I attribute my success?" What about this!

First, to a good sailplane; the Olympia 419, loaned to me by Elliotts of Newbury, has performance and handling characteristics second to none: it turns inside all except perhaps the Olympia 463 and has a glide ratio which on one occasion appeared to approach 40:1.

Second, to a good set of instruments. I use a PZL variometer on a Burton Total Energy and fitted with a speed-to-fly ring; I also have a Memphis variometer which is not on total energy and which is for quick response and to avoid chasing horizontal gusts. A Cook Compass and an E2B provide respectively turning flight and straight flight heading information. A German Artificial Horizon with transistor power supply by Ferranti provides blind-flying capability with a Turn-and-slip as stand-by. A.S.I. and Altimeter are standard. This relatively simple set of instruments (with a minimum of electronics) worked perfectly from the day I put it together; full confidence in one's instruments is essential to peace of mind, and peace of mind is essential to successful competition gliding.

Third, to a good crew; my glider and I were well looked after throughout, and this again is important to one's peace of mind. With a Three-Diamond man in the crew, one can't really go wrong.

Fourth, luck; inevitably one must be lucky to win: there are so many times when there is very little information to go on and yet a decision must be made. On the last day I decided to cross the Bridgwater area despite the apparent lack of thermals, and it was the right decision. On the free distance day I made the wrong decision to fly to the N.W. towards Angelsey, but this was the only time that the decision was

catastrophically wrong. Fortunately most other competitors made the same wrong decision that day.

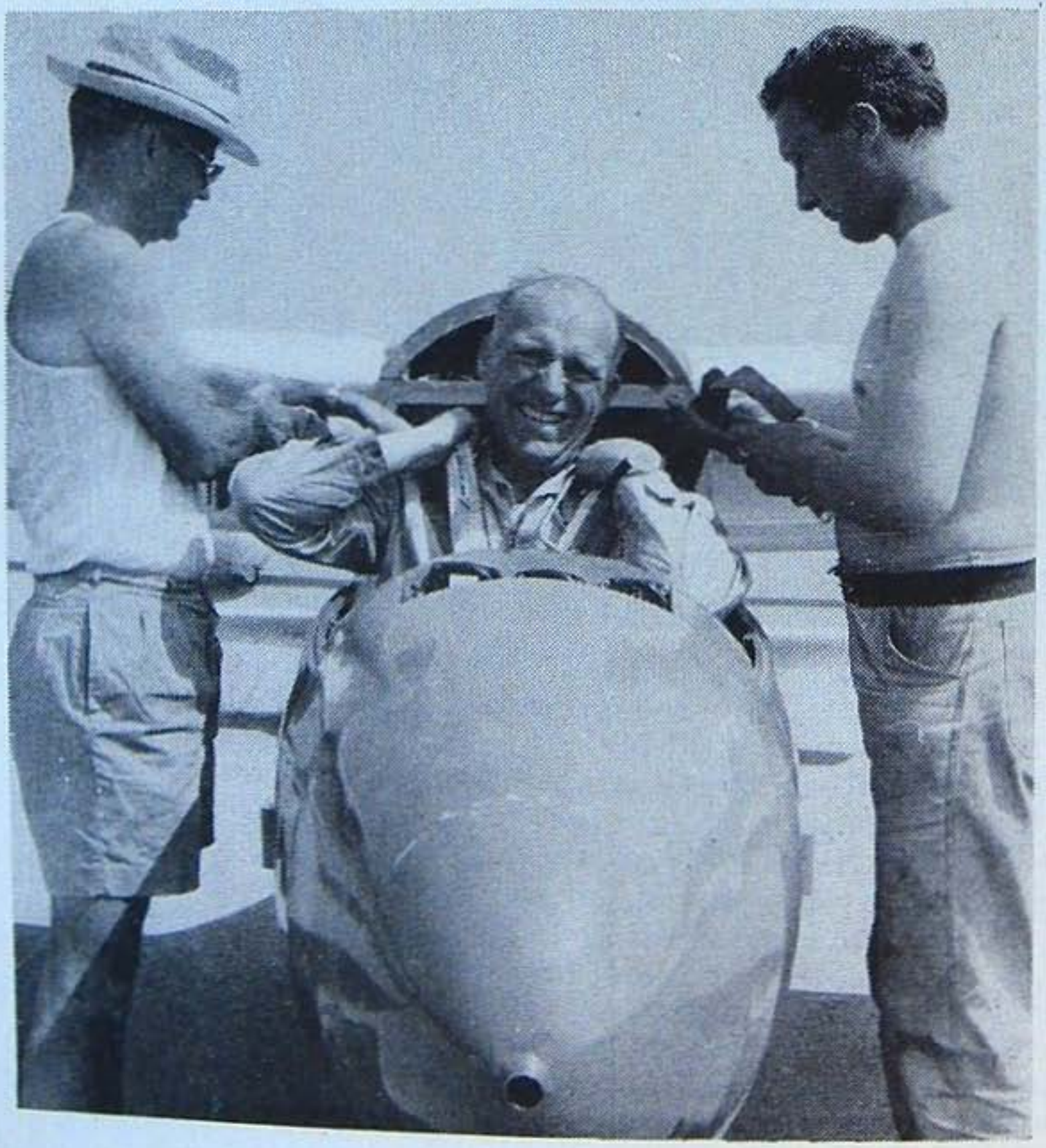
Competitions — New Style

The new principle of doing as much closed-circuit racing as possible is an excellent development and greatly added to the success of the competitions. The success with which large numbers of competitors completed the courses is clear evidence of the very high standard now being reached. Twenty-eight competitors completing a 300-km. triangle is something which even five years ago would have been pure fantasy. The cunning with which Ann Welch judges the average skill of the Leagues is as much part of the overall achievement as the skill of the pilots themselves.

Another very noticeable feature, in League 1 at any rate, was the phenomenon of "gaggling". So many pilots are of comparable skill and flying comparable sailplanes that, once in a gaggle proceeding along a course, they tend to remain gaggled. If one goes on ahead and eventually finds a good thermal, all the others are able to take advantage of it without losing any height searching, and thus the gaggle stays together. It seems that, due to watching out for other sailplanes in the same thermal, no one climbs as fast as he would alone, and thus the gaggle does not make as good a speed as it might. I feel this phenomenon is not permanently serious, and ungaggling techniques will soon make their appearance. It was, nevertheless, a significant feature of this year's Championships.

Things which might be improved next time

It is clear that if we make rules we must enforce them. A particular example is the height of crossing the start line and rounding turning-points. The rules are not absolutely clear on this point and should be clarified. Having established a rule, it is then necessary to enforce it; but at present this is difficult, since the only alternatives are to ignore the breach of the rules or to disqualify. I believe there should be a jury which should assess breaches and, depending on whether they were considered inadvertent or intentional and



"A good crew": Gordon Hookings (left) and Trevor Thomas tuck Nicholas Goodhart into the cockpit.
Courtesy of "Flight"

the likely gain from the breach, should award penalties accordingly, e.g. 50 ft. too high at a turning-point, lose 50 points; or turned 100 yards inside turning point, lose 50 points.

The other difficult point which requires attention is the problem of what may and may not be said on the radio. It is a pity to have to make rules on this, since they will have to be enforced; nevertheless, there are obviously some things that cannot be said, e.g. what the markers are at a turning point, or where the next thermal is, using a search aircraft out in front. There are many other points on which there will be some argument as to whether information should be passed by radio, e.g. weather information from other parts of the route, progress of other competitors, height and distance-to-go computations on final glide.

My own feeling is that the easiest thing to do is to limit the use of radio to retrieving information only, i.e. position of glider and trailer and estimates of possible or expected landing places. This, however, would not allow pair flying. The important thing is to start considering this point now and have some plan to cover it by the next Championships.

Yacht Race Starts

The level of competence now seems to have reached the stage when it could be possible to hold a yacht race start and fly round a relatively small closed circuit a number of times. I envisage the start as being at a declared time with everyone being launched at least 30 minutes before start time. The aim would be to cross the line at the start time at maximum altitude. Initially I feel it would be safest not to have a maximum height for crossing the line; it might also be necessary for the race to be in a series of heats of, say, 10 gliders at 15-minute intervals. But neither of these provisos would detract from the principle.

From the point of view of the competitors, this type of racing would be much more fun since one would know where one stood at all times, and the first glider home would be the winner. Similarly it would be possible to drum up considerably more spectator interest, since the contestants would appear once each lap and the leading man would really be in the lead. The mass start might be well worth watching, too. If our contest fees are to be kept down, we really must consider how to make the sport more attractive to the spectator public.

Finally, I would like to offer my own especial vote of thanks to the R.A.F. Gliding and Soaring Association and all those whose hard work contributed to the enormous success of this year's Championships. Their only reward is the satisfaction of a job well done, and yet without them we would never get off the ground.

Manuel's Latest

MR. W. L. Manuel, of Chertsey, whose Wren series of sailplanes did much flying in Britain in pre-war years and made many of the earliest cross-country flights, has built a man-powered aircraft in the hope of competing for the £5,000 Kremer prize. Photos in *Shell Aviation News* (No. 287, 1962) show it to have been built around an ordinary bicycle. The wings are of rather small span, with a pronounced dihedral angle, square tips and no taper, and the wing roots meet just below the level of the saddle, which is at about the position of the main spar. The tail is conventional with a tall rudder. The pedals drive both the back wheel and a propellor mounted at the end of a skeleton pylon which projects horizontally forwards above the front wheel. The propeller drive is geared to a 10:1 ratio, giving 1,500 r.p.m. at 30 m.p.h. The handlebars are modified to turn both the front wheel and the rudder, and are moved backwards and forwards to work the elevator; but—"there are no ailerons".

Fair Winds for France

by Flight Lieut. P. D. Lane

THE R.A.F. Germany Gliding Competitions were in progress at R.A.F. Geilenkirchen, and 1st June, 1962, promised to be another good competition day. At Met. briefing John Mackenzie said that the north-westerly airstream which gave a good race to Koblenz/Niedermendig the previous day had veered to north-east, but that the instability continued and would give good soaring conditions over most of the coastal plain after about 10.30. He promised a wind from 3.30 around 20 knots at 2,000 ft., tending to veer and increase a little over France, and half cover of shallow cumulus with a high increasing base. Further south-west he suggested that the air would be drier, giving strong blue thermals.

Free Distance was set to give the pilots a crack at the 300-km. goal, and several nominated Plessis-de-Belleville Airfield, N.E. of Paris.

I asked Mac what the chances of a 500-km. distance were, and he said that it was definitely a day to try it. I wanted to be airborne really early, but he advised a start around 10.30 to eliminate the chance of an early fumble. Thermals were already popping by 09.30, so we compromised and I agreed to be away as near to 10 o'clock as possible.

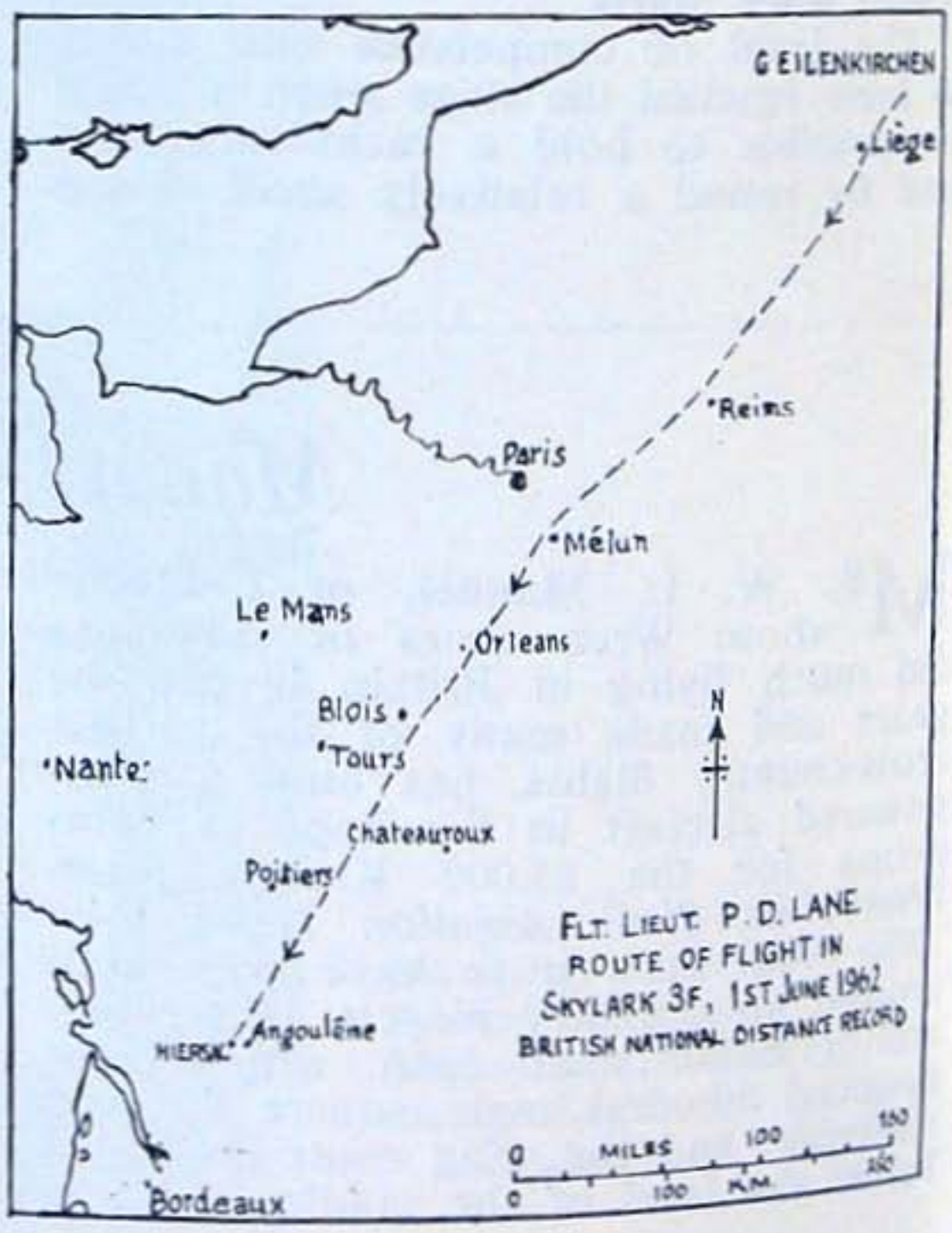
Launching was due to start at 10.30, but I agreed to have my retrieve crew see me off and nominated Le Mans as a 500-km. goal.

My crew chief, J/T Dave Parslow, volunteered to winch me off, and as we towed the Skylark 3F out to the far end of the field we could see a long cloud street forming downwind towards Liège. I towed the Skylark a little faster in the hope of catching this street, dropping him at the winch on the way.

The winch had been D.I.'d and warmed up ready by the Gliding Centre ground crew, and I was airborne at 10.04, barely a quarter of an hour after leaving the hangar.

Reaching 1,300 ft. on the launch, I flew upwind to a small forming Cu and climbed in weak lift for the first 500 ft. This eventually gave me 2 metres/sec. to 3,500 ft. and I flew west to join the cloud street lying about a mile away. Cruising at 60 knots under the street, the Skylark had covered over 30 miles by 10.30 and I left the street at 4,500 ft. about 5 miles S.W. of Liège. This position showed me that the wind had a slightly greater northerly component than I expected, so I steered 245 (c) heading for Paris.

I saw the small cumulus cloud cover decreasing ahead of me, but an ominous layer of shallow strato-cumulus lay not far away to the south over the Eiffel, and I prayed that it wouldn't spread over the plain south-west of it. There seemed to be no convenient street, so I stuck to the planned heading. I found that the thermals were becoming narrower and my MacCready scale indicated around 65 knots, so the Skylark would fly right through the thermals before I could establish a tight turn. I had to fly reciprocal heading for a few seconds to find myself in lift again, but usually my rate of climb was better than 2 metres. The lift fell off markedly just below cloud, but the base



had risen to 5,000 ft. by mid-day.

I was still drifting south of track and passed 4 miles north of Rheims/Champagne just before 1 o'clock, so I headed 255 (c) and spent a few acrobatic moments calculating my ground speed. This worked out to be around 43 knots, despite the fact that I was not cruising below 2,500 ft. Only about two-eighths of cloud remained to keep sun off, so some very erratic courses were steered while I manufactured a pundit-type soaring hat from my handkerchief. I extracted some sweets for lunch from an immensely strong polythene bag and made a mental note to open the next one before take-off.

At 2.15 I crossed the Seine west of the airfield of Melun/Villaroche with the weather looking perfect ahead of me, so I realised that I ought to pass the magic 500-km. line by 4 o'clock with any reasonable luck, but I would have to alter heading considerably cross-wind to reach Le Mans. I had just decided to forget the declared goal and use my high ground-speed to fly the maximum distance when I realised that I was down close to 2,000 ft. without passing through an acceptable thermal in the last 1,000 ft. When I remembered Mac's advice to stay high, I thought I was about to collect the just reward of over-confidence and sink to earth. However, I struck a blue thermal giving over 3 metres per sec. to 6,200 ft. and left it heading 215 (c), downwind towards Orleans. The clouds were becoming very scattered with a base over 6,000 ft. by 3.30 and shadows seemed to indicate a tailwind of over 20 knots, but I thought there could be little wind shear where I was flying because the thermals were not distorted. Visibility was excellent and my next pinpoint was crossing the Loire just south-east of Orleans. I was delighted to see that I needed only another half-an-hour airborne to clear 500 km. due west of Tours.

During the next hour all cloud disappeared, but the dry thermals remained very strong. When I passed the cluster of lakes east of Blois and had my second Diamond in the bag, I did a couple of chandelles to celebrate.

I could still see the high cloud from the front mentioned by Mac at briefing lying in the south-east, but the leading edge of the cirrus seemed to be making no progress to the west, so I thought there should be a couple of hours' soaring left. Thinking of my crew phoning back from somewhere north of Paris, I wondered if they'd guess I was crossing the line when they got no news.

Just after 5 o'clock I had passed the area of lakes between Poitiers and Chateauroux and realised that in 20 miles I would fly off the edge of my map. I visualised my fellow-navigators mumbling about "lack of flight planning" and thought how right they were when I remembered the large bar of chocolate which usually lived alongside the airbrake lever!

For most of the afternoon I left the thermals at 6,000 ft. and cruised at 65 knots in nearly 2 metres sink, climbing in the next thermal I found around 2,500 ft. I seemed to be climbing again every 20 minutes.

Realising I could easily get lost and my altimeter was set to zero on take-off, I decided to treat it with suspicion and stay high, especially as it was getting late in the day, but the ride was definitely becoming smoother towards 6 o'clock and I felt that I might land within half an hour. There seemed to be no drift on my heading of 215, and what smoke I saw showed a surface wind just east of north, so I stuck to it.

At 6.15 I made a slow, rather difficult climb from 2,600 to 5,100 ft., but this was the last good thermal I found, and shortly after I was scratching around at 1,900 ft. indicated, thinking what a poor landing area lay below me. I crossed quite a large winding river whilst climbing to 3,500 ft. and saw a fair-sized town lying on it to the south, but the surrounding area looked anything but flat. I flew on south-west, descending to

1,800 ft., and climbed back to 2,200 ft. in very weak lift. Down at 1,700 ft. indicated, I seemed to be a little lower than the altimeter reading and began to make a determined search for a flat place to land.

I spotted the village of Hiersac ahead of me and judged it was about as far as I could safely go, so I decided on the isolated football pitch lying in a hollow alongside the main road. It was just big enough and had one diagonal nearly into wind, so after a few worried moments with telephone wires on the boundary, I landed at 6.55, after 8 hours and 50 minutes airborne.

I had quite a frustrating few minutes with the crowd at first, because my French is virtually non-existent and I couldn't even show a map which they could point at, but I was able to ask if they had anyone in the village who spoke English, and the local doctor was fetched.

With his help I was able to post guard over the Skylark and went to the gendarmerie, where they had luckily a "Carte de France". This showed me that I had landed near Angoulême, N.E. of Bordeaux, exceeding 460 miles, but wasn't the sort of map for an accurate measurement.

With the help of the U.S. Army base at Braccone I sent a telephone message back to Geilenkirchen, but this unfortunately arrived corrupt and caused nearly a day's wait for my crew at Plessis de Belleville.

After an excellent dinner with the doctor, rounded off by a very appropriate cognac, the Skylark was carried by a procession down the main street to be locked up against the unwelcome attentions of the O.A.S. in the gendarmerie courtyard!

Then followed the marathon retrieve lasting nearly three days, during which my gallant crew covered 1,320 miles with my Citroën and trailer and showed dozens of papers to more Customs men than they care to remember. It was not till we were on our way back and found in the car the latest copy of SAILPLANE AND GLIDING that we realised to our delight that I had set a new British National distance record.

EDITORIAL NOTE.— This record has now been homologated: the distance was 460.5 miles.

CHAMPIONSHIP TROPHIES

winner of Individual Championship, LONDONDERRY CUP.— H. C. N. Goodhart, ' League 1.

L. DU GARDE PEACH TROPHY.— G. W. Mackworth-Young and R. E. F. Smith, winners of Team Championship, League 1.

FURLONG TROPHY.— I. W. Strachan, winner of Individual Championship, League 2.

FIRTH VICKERS TROPHY.— M. Bird and D. M. Riddell, winners of Team Championship, League 2.

KEMSLEY CUP.— London Gliding Club, for highest scoring entry in either League: Skylark 2 flown by C. P. A. Jeffery.

EoN CUP.— Royal Air Force, entrant of highest scoring British-built glider of the type most strongly represented (Skylark 3 flown by I. W. Strachan).

SLINGSBY TROPHY.— Royal Air Force, entrant of highest scoring British-built two-seater glider of the type most strongly represented (Eagle flown by J. Delafield).

PAN AMERICAN TROPHY.— To Standard Class Champion: not awarded as no Standard Class entrant reached 80 per cent of National Champion's score.

Inter-Service Team Championship

SALMOND MEMORIAL TROPHY.— Royal Air Force winning team: Sgt. J. S. Williamson, Flt.-Lt. F. D. Cretney, Flt.-Lt. G. A. Coatesworth.

Inter-Service Individual Championship

EMMETT TROPHY.— Capt. H. C. N. Goodhart, R.N.

R.A.F Individual Championships

McEVOY TROPHY.— Sgt. J. S. Williamson (League 1).

KEMSLEY TROPHY.—Flt.-Lt. I. W. Strachan (League 2).

THE NATIONAL GLIDING CHAMPIONSHIPS

Aston Down, 2nd to 11th June, 1962

NOTE.—*We are indebted to Mr. John Findlater and Mr. Peter Wickham, who gave the meteorological briefings during the Championships, for the daily weather charts, and for the accompanying notes on each day's weather which are printed in italics.*

TASKS were set and flown on every day of this year's Championships except the last, and even that eventually proved soarable.

Reckoning only the flights which earned points, League 1 flew 32,889 miles in eight days compared with 32,341 miles in the first eight days last year, and League 2 flew 26,082 miles in eight days compared with 14,689 miles last year. The total, 58,971 miles, is a record, and much of its increase over last year can be attributed to the enhanced skill of League 2 pilots, though this year's totals were achieved by only 40 entries in each League, compared with 50 in League 1 and 45 in League 2 last year.

Hours flown were 1,269 by League 1 and 1,112 by League 2, making 2,381 in all. Flights made were respectively 349 and 308, making 657, so that the miles per glider were 94.2 in League 1 and 84.7 in League 2, and hours per flight 3.63 for League 1 and 3.61 for League 2.

Tasks included the first 300-kilometre Triangle ever set in this country, and 28 pilots got round it.

Saturday, 2nd June

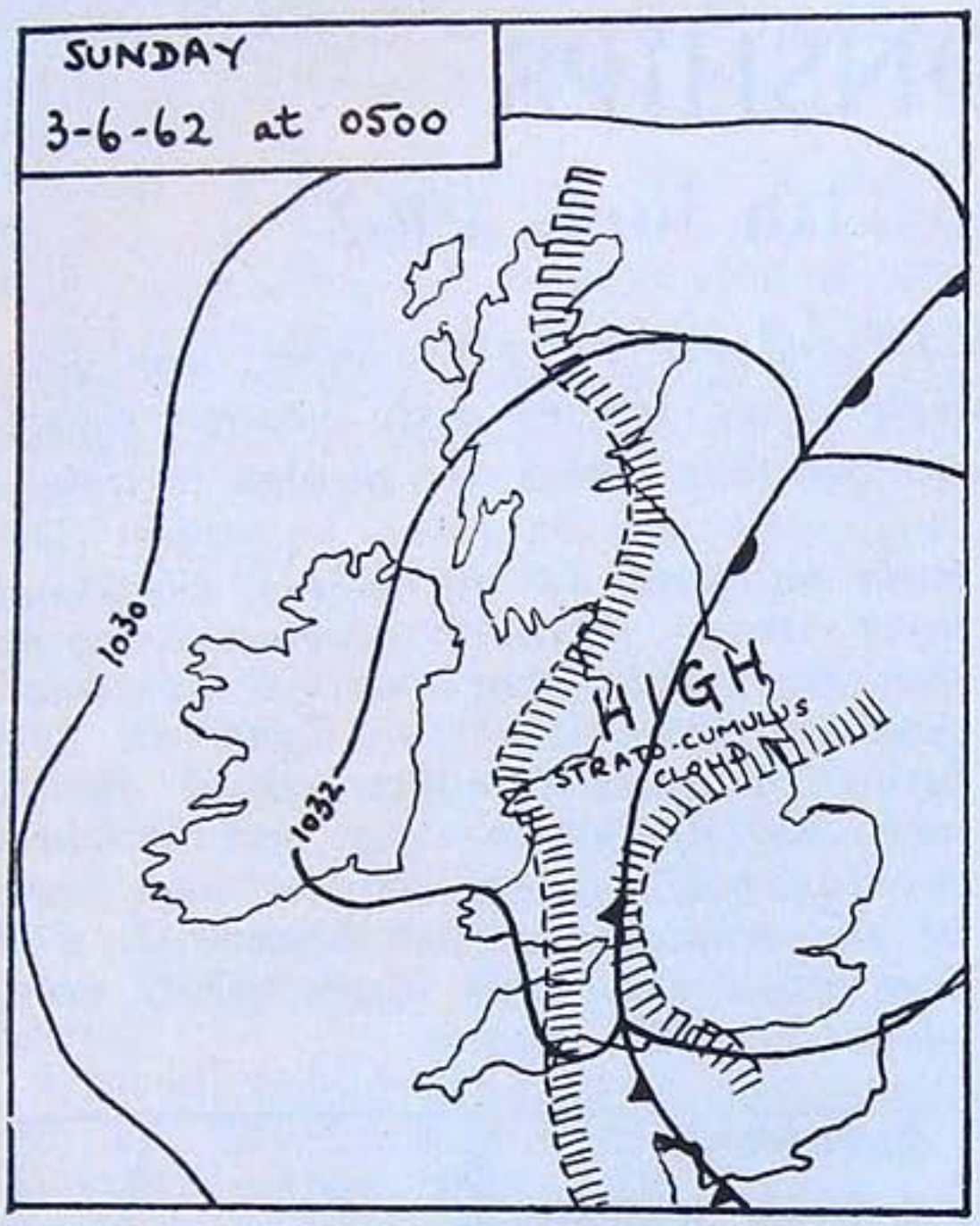
Mr. Julian Amery, Secretary of State for Air, flew in to perform the opening ceremony, and was taken up for the second glider flight of his life by Air Chief Marshal Sir Theodore McEvoy, President of the R.A.F. Gliding and Soaring Association, the organizers of the meeting. Sir Theodore found a thermal for Mr. Amery and left him to carry on up in it.

SATURDAY, 2ND JUNE.—*An anticyclone lay over Ireland and weak fronts over eastern England gave a layer of strato-cumulus cloud whose edge lay from north to south through Oxford in the early morning. To the west of the cloud layer strong thermals developed during the day and were capped by small cumulus from 5,000 to 7,000 ft. The layer of stratocumulus edged slowly westward during the day and by early evening had cast its shadow over most of the triangle set for League 2, with the result that only three pilots completed the full course.*

Only League 2 was set a task, a 64½-mile triangle via Burford and the White Horse Hill at Wantage, but clamp arrived after only three pilots had got round. They were :

Pilot	*Sailplane*	*m.p.h.*
Strachan	Syklark 3B	39.8
Paul	Syklark 2	25.14
Jeffery	Sky	19.95

Sunday, 3rd June



SUNDAY, 3RD JUNE.—*The sheet of stratocumulus which reached Aston Down the previous evening crossed the sea completely during the night and, with the anticyclone moving east across the country, the weather was set fair for a good day with thermals building strongly to over 5,000 ft., but with only fragmentary cumulus to mark them. A wind shear which persisted all day in the convection layer made the thermals rather difficult to work, and sea air reached Cerne Abbas during the afternoon; but despite these factors, conditions were good enough for well over half of each League to complete the long tasks which had been set for them.*

LEAGUE 1: Race round 300-km. triangle via Cerne Abbas "Old Man" and Lasham; actual distance 190.1 miles; course S. by W., E.N.E., N.W. by W.

LEAGUE 2: Out-and-return race to Lasham and back, 109.2 miles.

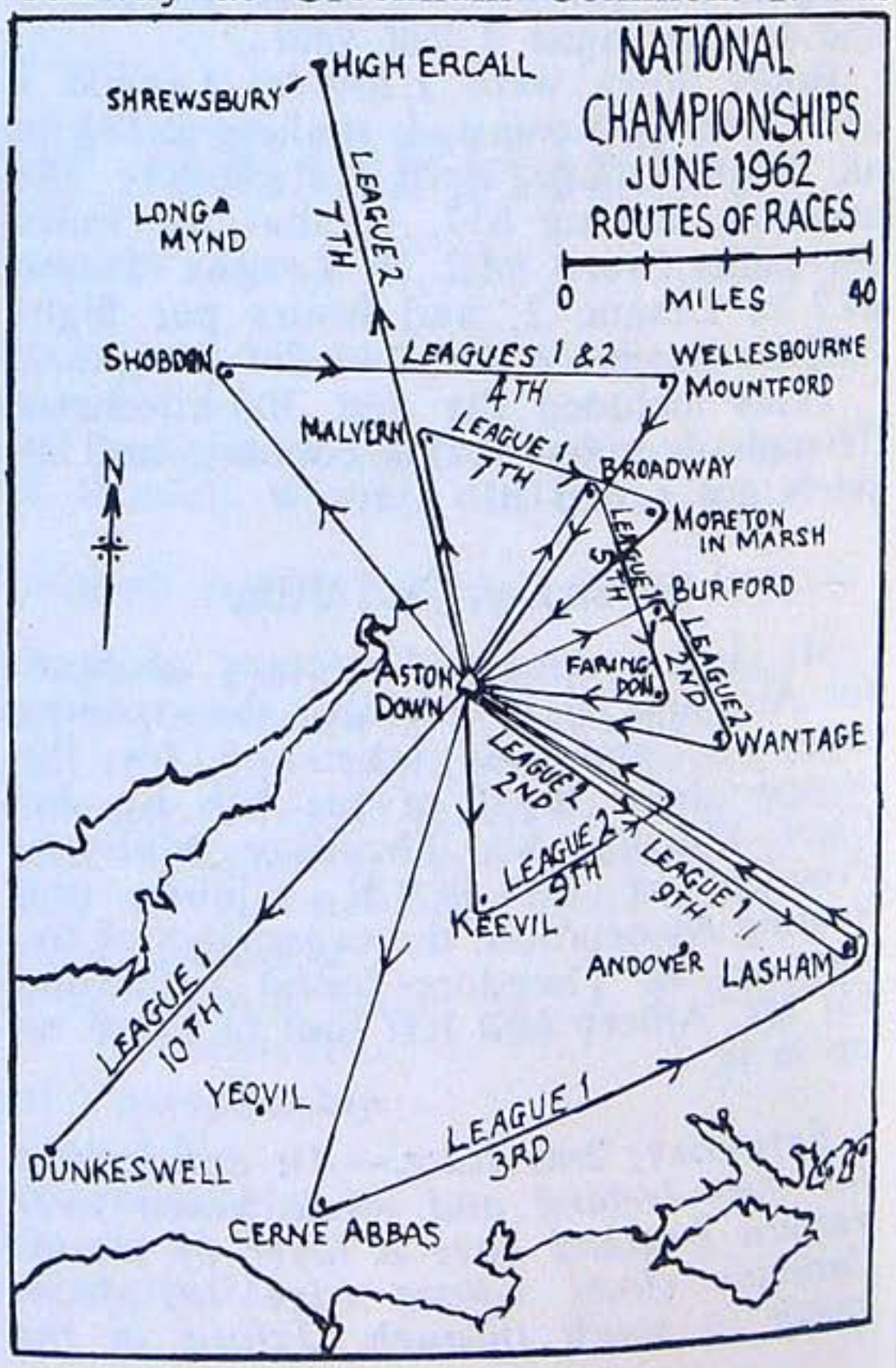
LEAGUE 1 were launched first. Except for the earlier arrivals, Cerne Abbas gave trouble to many, and two pilots were stuck there for two hours, which was a quarter of their total journey time. The sea breeze had come in but did not cause complete clamp; it lowered the cloud base by 1,000 ft., and contained some small cumulus. Only one competitor was brought down there and only two failed to reach it. Twenty miles further on, Poole Harbour brought a tongue of sea air some distance inland, producing a visible sea-breeze front which most people flew round and Nick Goodhart actually used. Among 13 who did not get round, S. Skrzydlewski with the Polish Foka landed 18½ miles short of the finish at South Marston, and Philip Wills had not yet got used to his new Skylark 4 John Williamson won the race.

League 1 : Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*
Williamson	Olympia 419	35.2
Goodhart	Olympia 419	34.8
D-Drummond	Olympia 419	32.7
Kahn	Syklark 3B	31.9
Burgess	Skylark 3G	31.1
Irving	Skylark 4	30.45
Burton	Skylark 3B	30.0

Slowest speed 23.1 m.p.h.

LEAGUE 2, on approaching Lasham, saw it immersed in a pool of blue; the clouds stopped short of it along a sharp east-west line which actually crossed the runway at Greenham Common. It was



mistaken by many for sea air, but this was a false alarm, for it provided thermals just as good as under the cumulus to the north. Philip Jeffery made the fastest speed, but Roger Dickson, with the help of a handicap bonus, beat him on points. Mike Bird and Brian Jefferson tied for second-best speed.

League 2 : Leading Scores

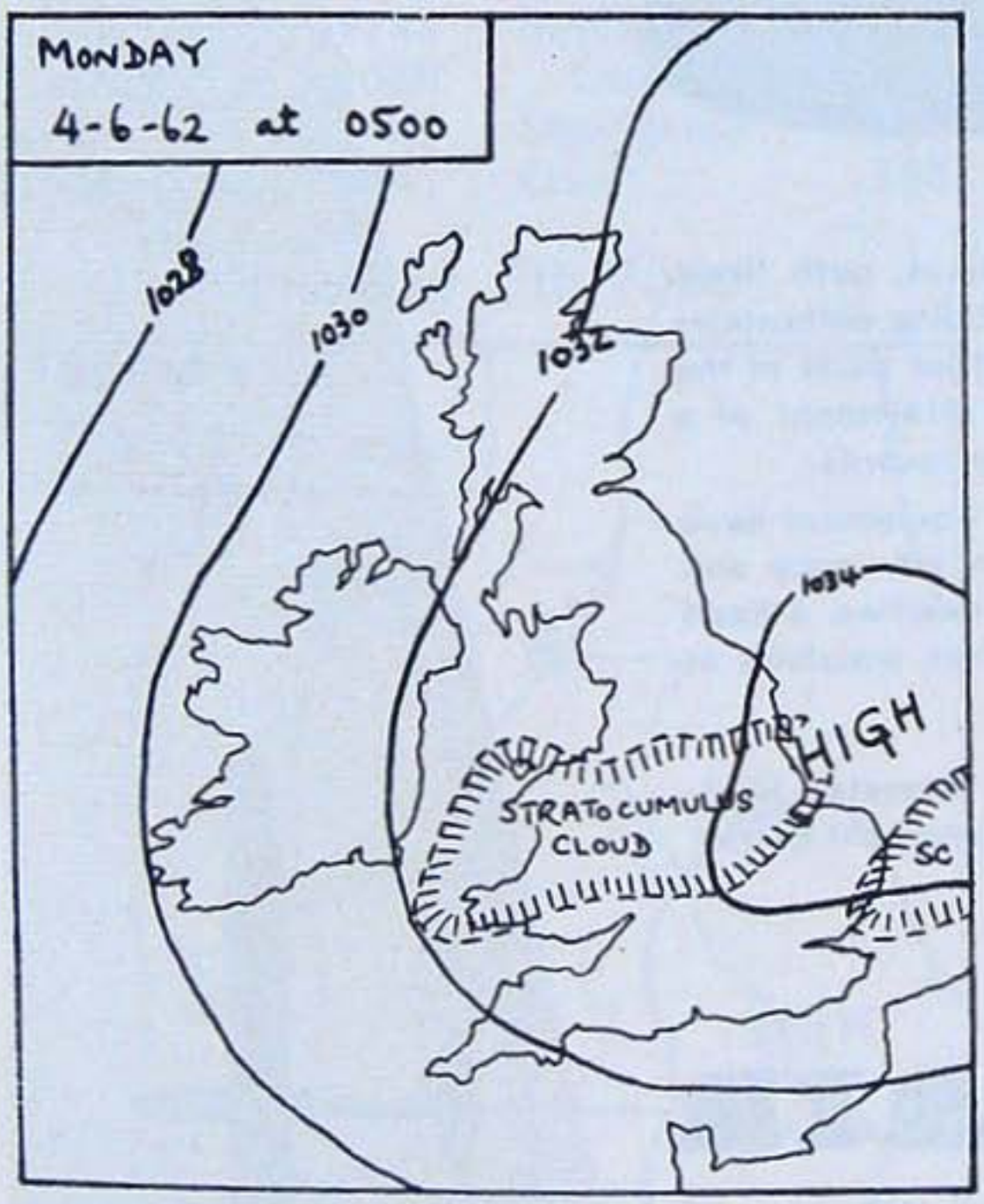
Pilot	*Sailplane*	*m.p.h.*	*Pts.*
Dickson	Gull 4	22.75	1,000
Jeffery	Sky	27.00	992
Bacon	Olympia 2	21.7	956
Paul	Skylark 2	23.65	951
Bird	Skylark 3F	25.5	936
Jefferson	Skylark 3B	25.5	936

Note: A handicapping system was in force in League 2.

League 2 : Leading Totals

Paul	1919	Collier & Sutcliffe	1495
Strachan	1872		
Jeffery	1842	Willbie	1335
Bacon	1746	Rutherford	1305

Monday, 4th June



MONDAY, 4TH JUNE.—*With the anticyclone settled over East Anglia and patches of stratocumulus moving clear of the area, fine conditions prevailed though a low inversion limited thermals to 4,000 ft. and prevented condensation. With moderate easterly winds the Severn valley produced good thermals for the route set for both leagues, but the second leg, almost straight into a 13-knot headwind, proved difficult due to a lack of reliable thermals in some areas. Competitors who reached the second turning-point in good time were rewarded with an easy downwind final leg.*

LEAGUE 1 and LEAGUE 2: Race round 231-km. Triangle via Shobdon (Leominster) and Wellesbourne Mountford (Stratford-on-Avon). Distance 142.2 miles; course N.W., E. by S., S.W.

League 2 had first launches under a clear sky; the first wisps of cloud appeared at 1 p.m. but the cumulus never exceeded 2/8 and were becoming flat by 4 p.m. Pilots found them short-lived, but they and the thermals tended to form in groups.

What with both Leagues doing the same task, competitors did not lack for company, and for most of the way the thermals were well populated.

Sixteen of League 1 and three of League 2 got round. The second leg was the most difficult, the landing pins on the control room map showing the first half to be the worst. Weak thermals caused excessive backward drift. There were no landings along most of the first leg and none in the middle section of the third.

A few got lost around Shobdon, and one pilot carried on 45 miles beyond it to a point near Oswestry.

League 1 : Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*
Goodhart	Olympia 419	30.53
Williamson	Olympia 419	30.44
James	Skylark 3F	29.85
Stone	Skylark 3	29.47
Kahn	Skylark 3B	29.00
Burton	Skylark 3B	28.99
Cretney	Olympia 419	28.81
D-Drummond	Olympia 419	28.68
Burgess	Skylark 3G	28.13
Wills	Skylark 4	27.64
Scott	Olympia 419x	26.89
Dunn	Skylark 3F	26.37

League 2 : Course Completed

Pilot	*Sailplane*	*m.p.h.*
Strachan	Skylark 3B	25.1
Hunt	Skylark 3B	23.4
Jefferson	Skylark 3B	23.0

LIGHTWEIGHT OXYGEN EQUIPMENT

Normalair oxygen breathing installations, both fixed and portable, are currently in use by gliding enthusiasts both in this country and in many other parts of the world and have contributed to the attainment of a number of world altitude and distance records.

All the items in this range of Normalair equipment have been designed to provide maximum efficiency and adaptability with minimum weight penalties; a fixed installation with a capacity of 400 litres weighing as little as 8½lb. complete.

A brochure giving full details of all Normalair lightweight oxygen equipment for gliders and light aircraft will be supplied on request.

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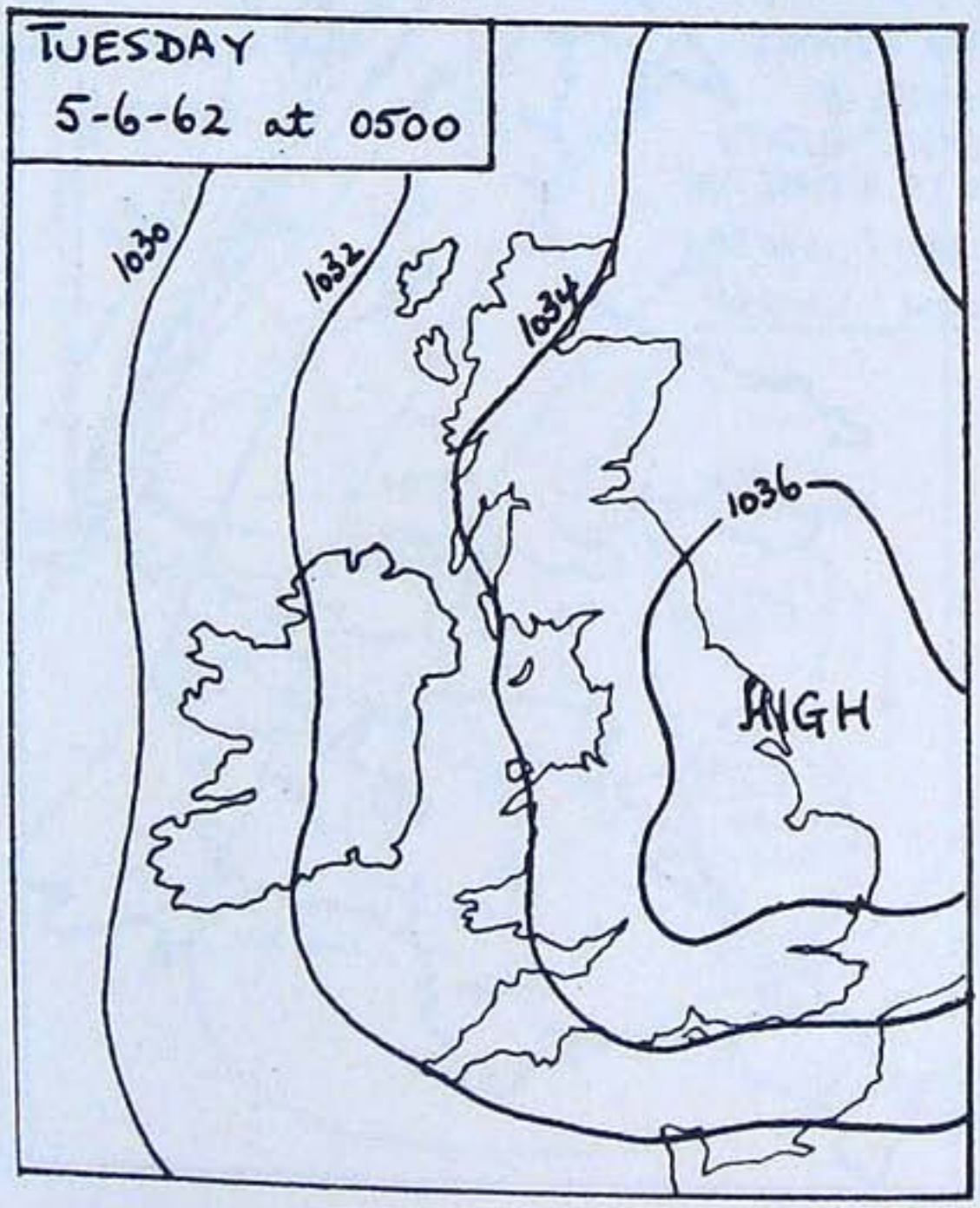
Melbourne

"Stan" Skrzydlewski from Poland in his Foka.
Courtesy of "Flight"

Leading Totals, 4th June

League 1		League 2	
Williamson	1998	Strachan	2882
Goodhart	1985	Jeffery	2472
D-Drummond	1854	Paul	2235
Kahn	1834	Jefferson	2154
Burgess	1781	Bacon	2058
Burton	1764	Hunt	1983
James	1748	Sutcliffe &	
Cretney	1688	Collier	1952
Scott	1683	Snodgrass	1901
Stone	1647	Gaze	1882

Tuesday, 5th June



TUESDAY, 5TH JUNE.—*The anticyclone was still building over East Anglia and the inversion had lowered to 3,500 ft. with a 15-knot easterly wind in the convective layer. Thermals were expected to be shallow in depth and narrow in width, with little or no cumulus formation. For League 2 the task of Free Distance gave a wide choice. They could go south-west to Cornwall, which meant a cross-wind leg at first and the strong possibility of a good deal of the Cornish Peninsula being unattainable due to the influence of sea air. Alternatively, they could go towards Anglesey with less trouble from sea breezes but with limited soaring space between the mountains and the inversion level. Thirdly, they could go straight downwind along the south coast of Wales, but here again sea air was expected to move well inland. The landing board at the end of the day showed an almost equal spread along all three routes. Some of the competitors who went to the south-west experienced severe turbulence at levels up to 2,000 ft. in the lee of hills in Devon, probably caused by rotor flow.*

LEAGUE 1: 76.5 miles Triangle via Broadway Tower (on Cotswold hilltop) and Faringdon Folly (365 trees on hill). Course N.E. by N., S.S.E., W. by N.

The ceiling really was at around 3,500 ft. (only 2,000 ft. above Broadway Tower) and under it Nick Goodhart, one of 28 to get round, scooted along considerably faster than anyone else, taking 2 hr. 16 min. Thermals were crowded

Philip Jeffery. *Courtesy of "Flight"*

again; at 1.20 p.m., there were 22 sailplanes in a single thermal over Aston Down. Philip Wills said it was "like a barn dance; you got into a thermal with eight people and couldn't get away — neither could they".

Unfortunately the Polish Foka was broken when landing on the second leg.

League 1 : Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*
Goodhart	Olympia 419	33.7
Wills	Skylark 4	28.4
Burgess	Skylark 3G	27.9
Williamson	Olympia 419	27.5
D-Drummond	Olympia 419	27.2
Cretney	Olympia 419	26.3
Kahn	Skylark 3B	25.2
Carrow	Skylark 3B	24.3

Slowest speed, 17.1 m.p.h.

LEAGUE 2:Free Distance.

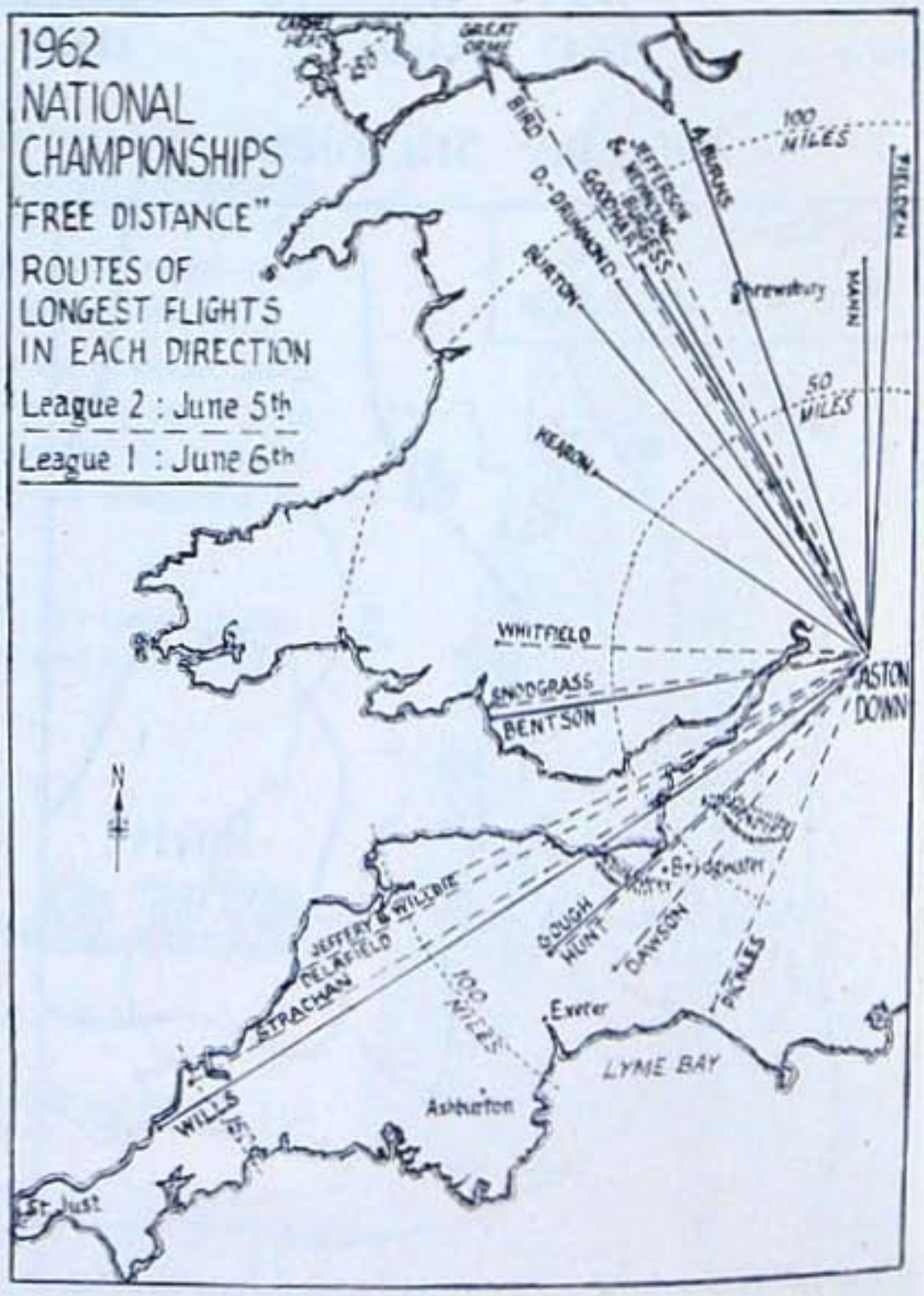
League 2 had first launches, as they had further to go — if they could. With an east wind they had a choice of the Cornish Peninsula (Land's End 194 miles), North Wales (Carmel Head in Anglesey 156 miles), or South Wales (St. David's Head 116 miles). Actually 25 made for Cornwall, 8 for North Wales, and 5 for South Wales. All routes led towards mountains whose tops were not far below the inversion, and sea breezes were expected on both sides of the Bristol Channel as well as both sides of the Cornish Peninsula.

Ian Strachan went furthest to St. Eval in Cornwall, 150 miles, keeping near the north coast. The inversion lowered from 3,000 to 2,000 ft. as he went westward, making things awkward along the high ground from Bude onwards, where wind-shadow thermals kept him going to Wadebridge, from which he glided out the remaining 8 miles. J. Delafield, with 119 miles to Bude, made third best distance of the day — second best on the Cornish route, and his Eagle's handicap bonus gave him second highest points.

Chris Wills and A. Pickles made a solitary group on the Dorset coast at Bridport, and Peter Collier fled north from the sea breeze at Lyme Bay, but it got him in the end.

At Parkham, by Bideford Bay, Ron Willbie hit a bank, put his machine out of action and hurt his nose; Phil Jeffery, seeing this from 3,000 ft., immediately came down and landed. As he had been going up well at the time, all competitors at a subsequent briefing agreed to compensate him for this gallant act by crediting him with an extra 15 miles.

Easily the best of the North Wales aspirants was Mike Bird, who avoided the mountains by going round the north-east corner and along the coast to Colwyn Bay, where he landed on a hill. He found it difficult all the way, and never got above 2,500 ft. The next best, New-



holme and Jefferson, landed within sight of Wales at Oswestry.

Best distances along South Wales were both 72 miles: by George Whitfield to a spot in the mountains which the local pronunciation did not enable him to telephone through till someone procured a pencil and paper; and by Don Snodgrass to the beach at Port Talbot after wandering across the north/south valleys and getting wind-shadow thermals off the east slope of each one.

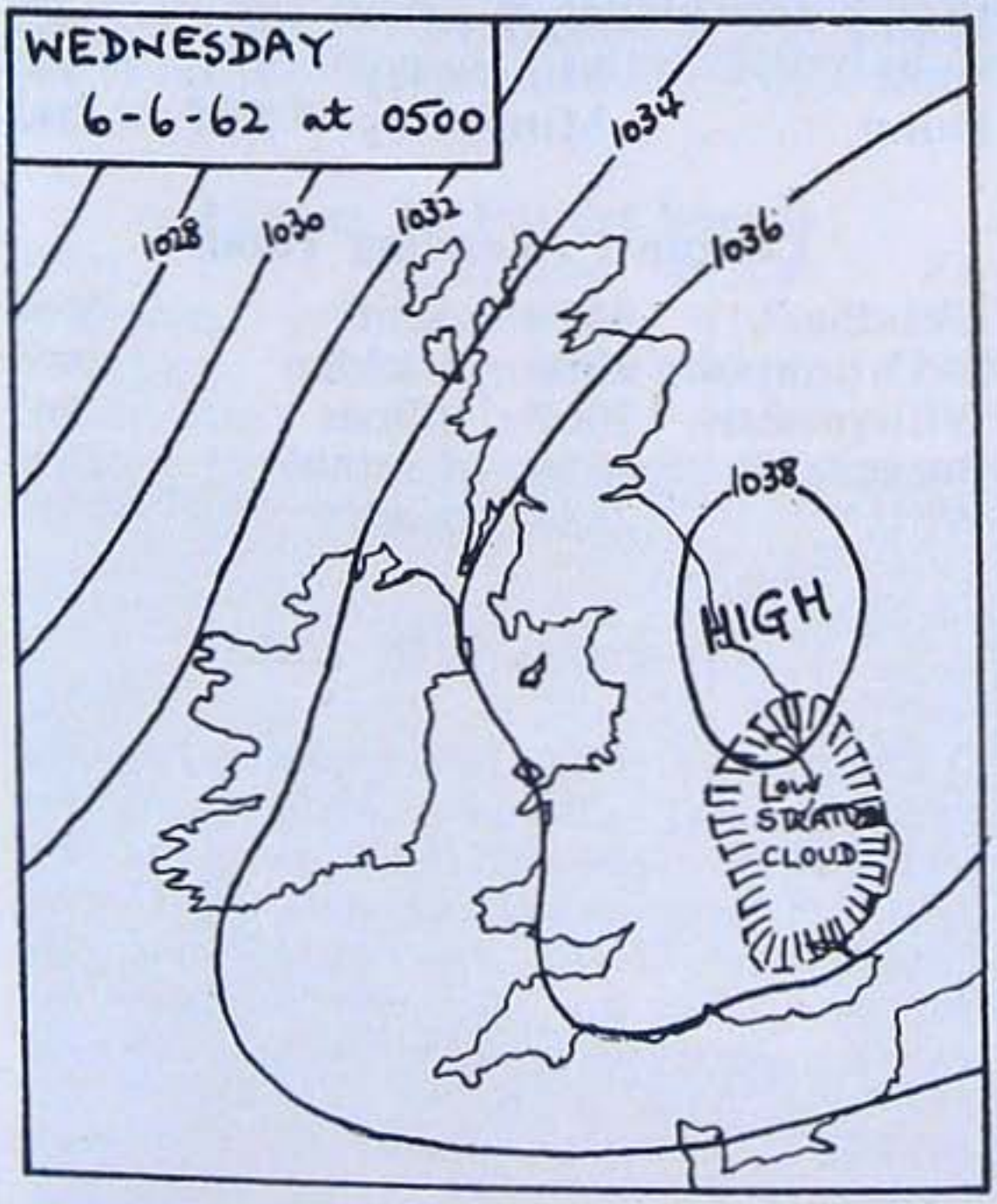
League 2: Longest Distances

Pilot	*Landing*	*Miles*	*Pts.*
Strachan	St. Eval	150.3	1000
Delafield	Nr. Bude	119.2	838
Bird	Colwyn	127.2	824
Jeffery	Parkham	106.6	665
Willbie	Parkham	106.6	665

Leading Totals, 5th June

League 1		League 2	
Goodhart	2985	Strachan	3872
Williamson	2766	Jeffery	3137
D-Drummond	2611	Paul	2775
Burgess	2563	Jefferson	2688
Kahn	2525	Delafield	2588
Cretney	2414	Collier &	
James	2392	Sutcliffe	2561
Scott	2269	Hunt &	
Dimock	2133	Gregg	2444

Wednesday, 6th June



WEDNESDAY, 6TH JUNE.—*The pressure pattern had changed little from the previous day, and superficially the day seemed likely to produce similar weather. However, a new feature was a large patch of fog and low stratus moving westwards from eastern England. As the sun rose, the edge of the sheet turned into small cumulus, and eventually the whole layer dispersed without much of the low cloud reaching Aston Down. The air was damp and hazy, and took several hours to warm sufficiently to produce even weak thermals. Not until fairly late in the afternoon did the thermals become strong. Pilots who elected to go to the north-west travelled with the difficult soaring conditions. Smoke haze in the rather stable air filled most of the valleys of eastern Wales.*

LEAGUE 1: Free Distance.

LEAGUE *2:* Out-and-return Long Marston, 64 miles; but the task was cancelled owing to prolongation of League 1 launchings.

With a similar wind, the geographical spread available to League 1 was much the same as it had been to League 2 the day before, but there was a strip of high cloud across the western borders of England and Wales. Nearly everyone made for North Wales, and Nick Goodhart drew a line on his map across Anglesey to the Skerries, but calculated that he would need 12,000 ft. over Snowdon to make the remaining 55 miles to the Isle of Man, and Snowdon's summit was in an inversion.

Only three set off for Cornwall, but they included the day's winner, Philip Wills, who thereby raised himself from 14th to 5th place. Two or three miles out to sea over Bridgwater Bay was some odd form of sea-breeze lift, providing a cloud which he went into; after that there were wind-shadow thermals, and finally, a line of lift north of the centre of the Cornish Peninsula where apparently two sea breezes met. Andy Gough reached Tiverton, half-way between Devon's north and south coasts, and Rika Harwood crossed Bridgwater Bay to Watchet after hopping along most of the way in thermals from estuarine mud flats.

Most of Britain's top pilots got bogged down among the mountains of East Central Wales and in western

Free Distance — but whither on the map?

Shropshire, including Peter Scott, who was trying to get as near as possible to Manchester, where he had to catch a plane that evening in order to attend a dinner in America next day. Many of them found that towns gave better thermals, after trying to get good ones from hills and mountains.

But Anne Burns bypassed all this. Although her crew had set off for Devon, she thought it looked better northwards, so struck off due north and got the best thermals of the day from the "Black Country" near Wolverhampton. She then decided that, as the wind might drift her into the Manchester Control Zone further north, she had better keep west of it, and although Shropshire's thermals were poor, this north-westerly course led her to Hawarden, west of Chester. Thus she beat all the other pundits except Philip Wills, but only got 630 points because he had exceeded her by 51 miles.

Others to go due north were Roger Mann, who was disappointed with the Malverns and after that saw too much cirrus to the N.W., and John Fielden, who deliberately made for the Pennines in the hope of continuing along their west side in lee waves. He actually found one which maintained him at 2,500 ft., but it was of limited length and he finally had to glide from it down to Leek.

Wally Kahn unfortunately hit a concealed hump when landing on a common, and remained earthbound thereafter.

League 1 : Longest Distances

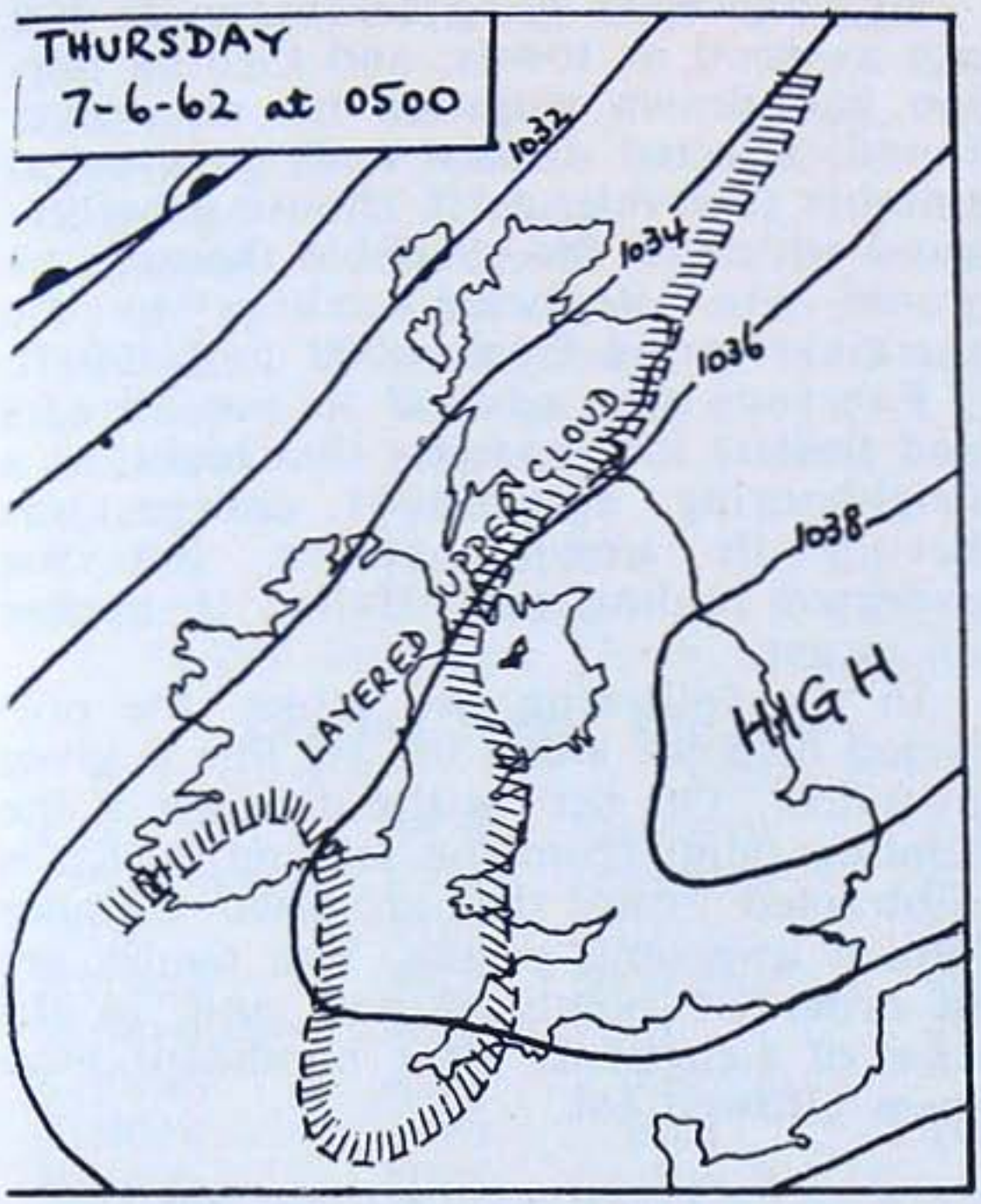
Pilot	*Landing*	*Miles*	*Pts.*
Wills	Newquay	158.4	1000
A. Burns	Hawarden	107.1	630
Fielden	Leek	95.8	548
Goodhart	Penybont	88.4	494
Burton	Llanerfy	86.0	477
D-Drummond	Llanfyllin	85.8	475
Burgess	Llanmynech	84.2	465
Coatesworth	Weston	82.3	450
Gough	Tiverton	81.1	442
Stark	Llandrimo	81.0	441
Irving	Montford	77.8	418
Ince	Welshpool	77.1	413
Mann	Stafford	76.6	409
Scott	Minsterley	75.0	397
Dunn	Minsterley	73.7	388

League 1 : Leading Totals

Goodhart	3479	Scott	2666
D-Drummond	3086	Fielden	2656
Williamson	3067	James	2645
Burgess	3028	Cretney	2598
Wills	2889	Kahn	2550

Thursday, 7th June

THURSDAY, 7TH JUNE.—*The synoptic situation had changed little from the previous day, though there were the first signs of fronts from the Atlantic Ocean. Thin cirrus cloud covered Ireland and the Irish Sea but did not threaten the contest area. With light winds and the inversion base at 6,000 ft., strong dry thermals provided good soaring conditions.*



LEAGUE 1: Race round 135-km. Triangle via Malvern College Rugby pitch and Moreton-in-Marsh airfield (84.2 miles). Course N.N.W., E.S.E., S.W.

LEAGUE 2: Race to High Ercall airfield near Shrewsbury, 75.1 miles N.N.W.

LEAGUE 2 was launched first and 36 of 39 pilots got there; Delafield was first to arrive at 15.09 and "Lefty" Kurylowicz last at 16.33.

League 2 : Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*	*Pts.*
Jefferson	Skylark 3B	41.3	1000
Strachan	Skylark 3B	40.9	988
Snodgrass	Skylark 3F	40.9	988
Delafield	Eagle	37.9	970
Carr	Skylark 3B	38.0	896
Spottiswood	Skylark 3B	38.1	895
Jeffery	Sky	37.4	878
Bird	Skylark 3F	37.0	864

Slowest speed, 21.1 m.p.h.

In LEAGUE 1, 34 of 38 competitors completed the course. Philip Wills and Nick Goodhart tied for first place with exactly 1 hr. 55 min. 44 sec. each, Goodhart's start and finish both being 23 min. 9 sec. later than Wills's.

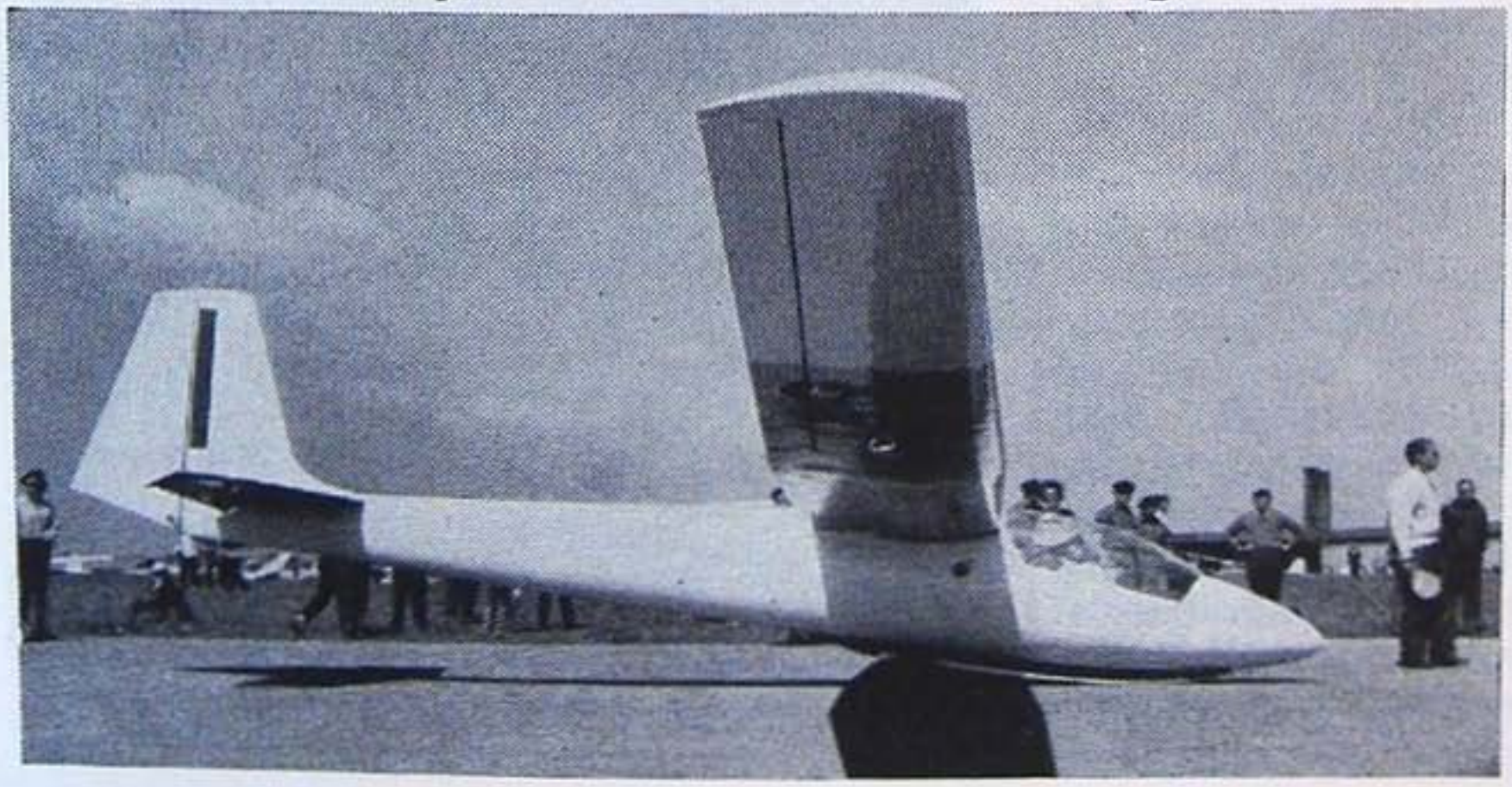
Bredon Hill region on the second leg was found the most troublesome spot by John Williamson and Tony Deane-Drummond, who did 10 minutes' low scraping there. Brennig James, who hurried too fast and came down near Malvern, found quite large areas of strong downcurrent and large areas of weak lift.

League 1 : Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*	*Pts.*
Goodhart	Olympia 419	43.7	1000
Wills	Skylark 4	43.7	1000
D-Drummond	Olympia 419	43.2	984
Mann	Skylark 4	41.8	944
Williamson	Olympia 419	41.7	935
Burton	Skylark 3B	39.2	864
M-Young	Skylark 3G	38.6	853
Dunn	Skylark 3F	38.2	835
Stephenson	Skylark 3F	38.1	834
A. Burns	Skylark 3B	38.1	833

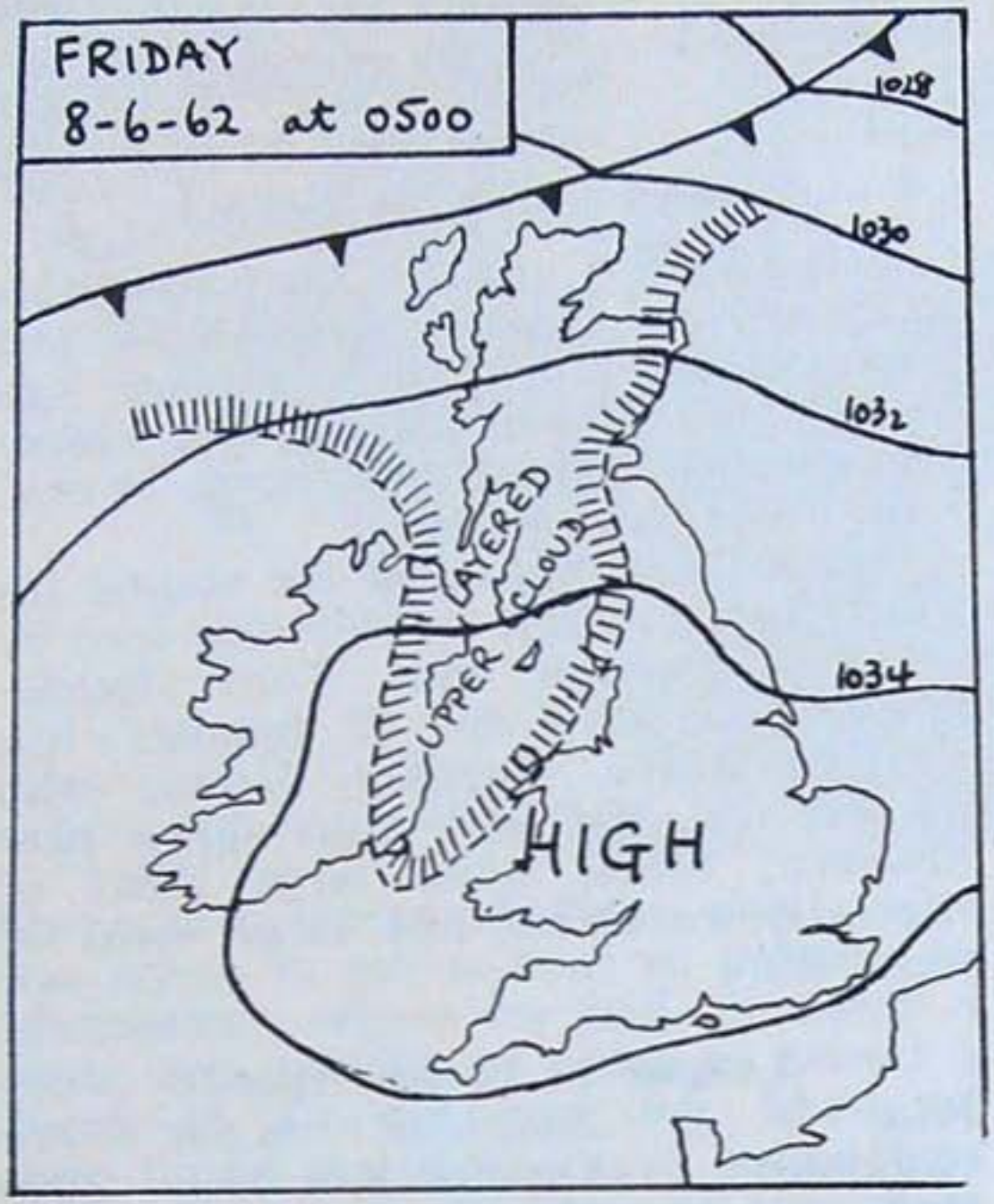
Leading Totals, 7th June

LEAGUE 1		LEAGUE 2	
Goodhart	4479	Strachan	4860
D-Drummond	4070	Jeffery	4310
Williamson	4002	Jefferson	3688
Wills	3889	Paul	3592
Burgess	3761	Delafield	3558



Philip Wills's first contest launch in his Skylark 4.
Courtesy of "Flight"

Friday, 8th June



FRIDAY, 8TH JUNE.—*The anticyclone was declining and moving south-westwards across southern England, giving strong dry thermals up to about 5,000 ft. Usable thermals began at about 10.30 B.S.T. and persisted until a little after 19.00 B.S.T., enabling long distances to be attained. Apart from a few small patches of cirrus cloud the sky was clear all day.*

LEAGUE 1: Yeovil, Lasham, then along a line through Berwick-upon-Tweed.

LEAGUE 2: Yeovil, Lasham, then along a line through Great Orme's Head.

Courses: S.S.W. to Yeovil (58 miles), E.N.E. to Lasham (72 miles), N. by W. to Berwick (315 miles), N.W. to Great Orme (193 miles).

Landing pins on the map showed that the first leg was easy; there was a bad patch N.W. of Winchester on the second leg. Beyond, League 1 tended to land in groups: one around Aldermaston, and a big one from Oxford to Bicester, with a good soaring area beyond it to Daventry. Newbury region brought several of League 2 down, and the three to go furthest landed close together at Lechlade. Three pilots were worried were by the sea breeze reaching Shaftesbury on the second leg.

Airfields were good for thermals, but not as good as towns; and George Burton had drawn rings on his map-cover round selected towns and airfields at suitable intervals, as if choosing beforehand which of the available thermals he would use. Reported ceilings to the thermals varied from 4,000 to 6,400 ft.

Everyone was advised to put all cars and trailers into hangars that night, as a neighbouring agricultural college was having its annual dinner, but the expected raiding party failed to appear on target.

In the following two tables, the projected distance along the set line is given in miles; "Off Set" is the distance of the landing point from the set line, which is subtracted from the projected distance before awarding points. The names are in order of points earned, and, in the case of League 2, after handicaps have been allowed for.

League 1 : Highest Scoring Flights

Pilot	*Landing*	*Proj. Dist.*	*Off Set*
Goodhart	Loughborough	242.2	0.0
Wills	C. Lawford	212.7	3.1
D-Drummond	Rugby	208.7	0.1
Smith	Badby	203.8	2.3
Burton	Daventry	202.2	0.8
James	Daventry	203.1	2.7
Cretney	Daventry	198.3	0.0
A. Burns	Northampton	205.7	11.3
Piggott	Northampton	204.1	10.2
Coatesworth	Croughton	187.3	0.0
Fielden	Bicester	184.3	0.2
Warminger	Bicester	181.1	0.0

Tony Deane-Drummond.
Courtesy of "Flight"

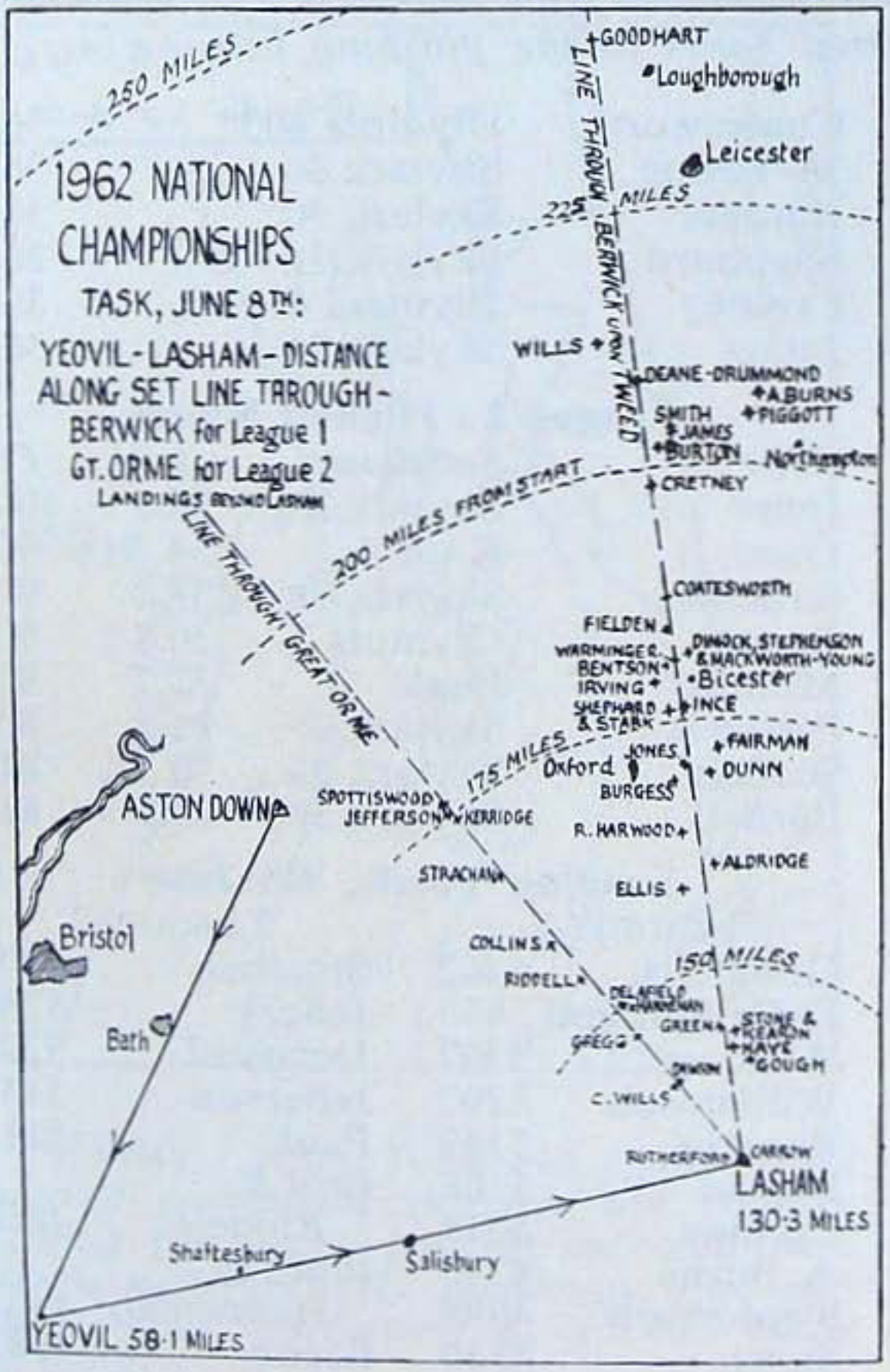
League 2 : Highest Scoring Flights

Pilot	*Landing*	*Proj. Dist.*	*Off Set*
Spottiswood	Lechlade	176.6	0.1
Kerridge	Lechlade	174.9	0.0
Jefferson	Lechlade	175.4	0.6
Evans*	Kingsclere	155.1	0.0
Strachan	Faringdon	167.5	0.4
Dawson	Woodgarston	140.7	0.2
Delafield	Newbury	149.9	1.3
Hanneman	Newbury	149.5	1.6
Collins	Hungerford	158.2	9.7
Riddell	Welford	154.8	0.6

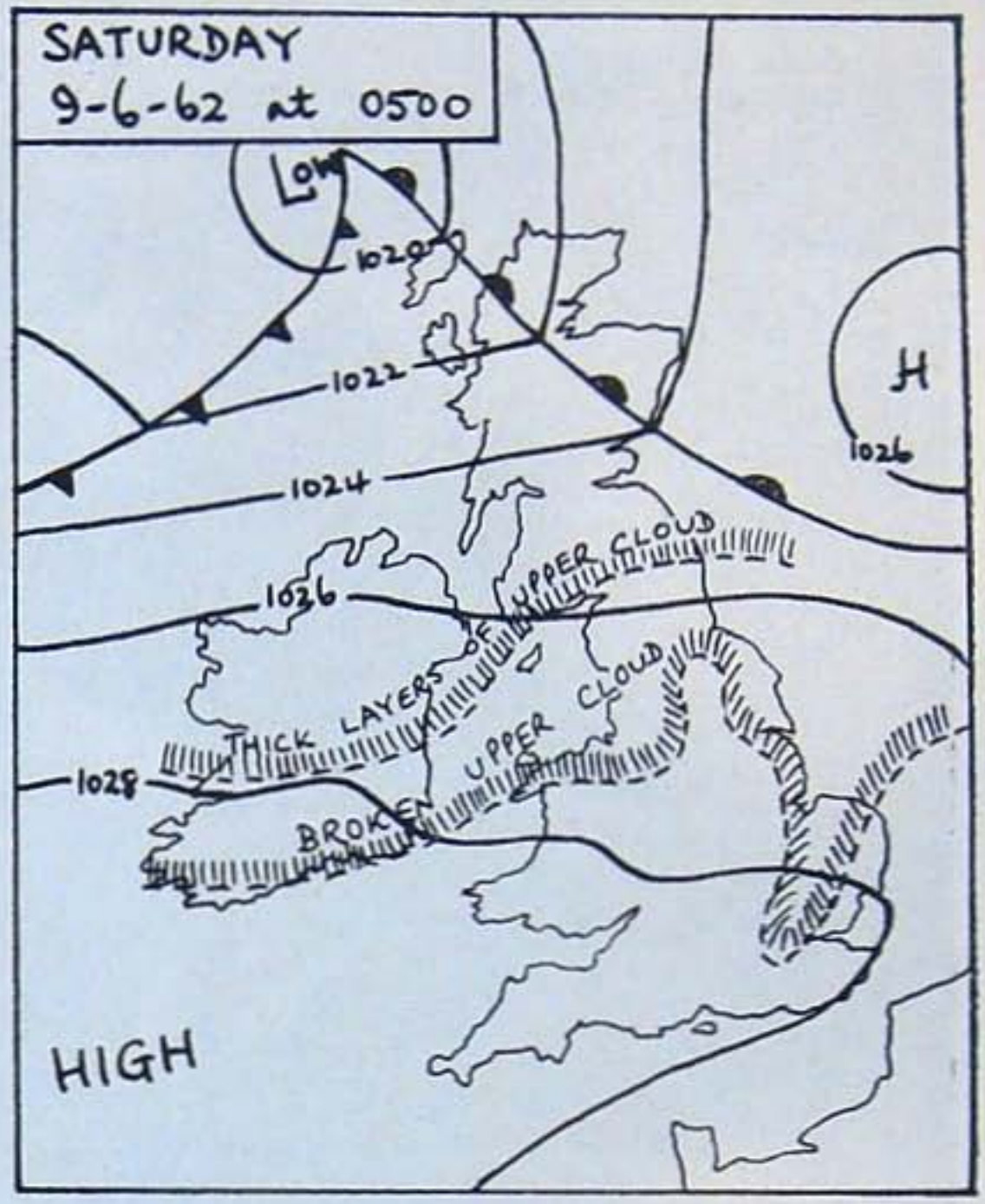
**Hors concours* (Irish visitor).

Leading Totals, 8th June

League 1		League 2	
Goodhart	5479	Strachan	5801
D-Drummond	4918	Jefferson	4677
Wills	4742	Jeffery	4501
Burgess	4426	Delafield	4403
Williamson	4417	Paul	4232
Cretney	4206	Riddell & Bird	4116
Fielden	4190	Collier & Sutcliffe	4028
Burton	4086	Gregg & Hunt	3994
Stephenson	4022		
A. Burns	4014		
Stone	3767		



Saturday, 9th June



SATURDAY, 9TH JUNE.—*With the anti-cyclone now to the south-west of the country and Atlantic fronts moving into Scotland, the upper layers were becoming unstable, and bands of cirrus and alto-cumulus castellanus lay not far to the north and west of Aston Down. Thermals were building strongly to 4,000 ft. by mid-day before upper cloud thinned out the thermal population. The upper wind increased during the afternoon from 5 kt. to 10 kt. and added to the difficulties of completing the last few miles back to Aston Down.*

LEAGUE 1: Out-and-Return Race to Lasham and back; 119.2 miles.

LEAGUE 2: Race round 134-km. Triangle via Keevil and Membury. Distance 83.3 miles; course S., N.E. by E., N.W. by W.

League 1's track passed only a little south of the third leg of League 2's triangle, so all approached the finishing line from about the same direction. In League 1, 30 of 39 finished the course, and in League 2, 19 of 39. The scene at the finishing line was exciting; many pilots only just made it, and some only just didn't. Derek Piggott came to a stop a few yards beyond, and Peter Scott and Mick Kaye landed 100 and 200 yds.

Peter Scott walks the last hundred yards to the finishing line.

short in an adjoining field. The trouble was twofold: cirro-stratus had begun to dim the sun, and a contrary wind on the last leg had unexpectedly picked up to 10 knots.

In League 1, George Burton made best speed. Nick Goodhart, only half a m.p.h. slower, used a belt of cumulus most of the way to Lasham, stretching all the way to Hungerford; on the return it was still there, and the front end had advanced to Newbury but the rear end was at Cirencester. There he had 2,000 ft. — enough for a glide in — but wisely climbed another 500 ft. Lasham was under blue sky, but, as on the previous Sunday, the thermals were nevertheless good. Paddy Kearon, and also Philip Jeffery of League 2, only just made it through dead air from 5,500 ft. at Swindon.

League 1 : Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*
Burton	Skylark 3B	42.2
Goodhart	Olympia 419	41.7
D-Drummond	Olympia 419	40.2
Williamson	Olympia 419	38.2
Wills	Skylark 4	37.6
Coatesworth	Olympia 403	36.8
M-Young	Skylark 3G	36.7
Burgess	Skylark 3G	36.4
Shephard	Skylark 3F	36.3
Cretney	Olympia 419	36.1
James	Skylark 3F	36.1

League 2 : Highest Scores

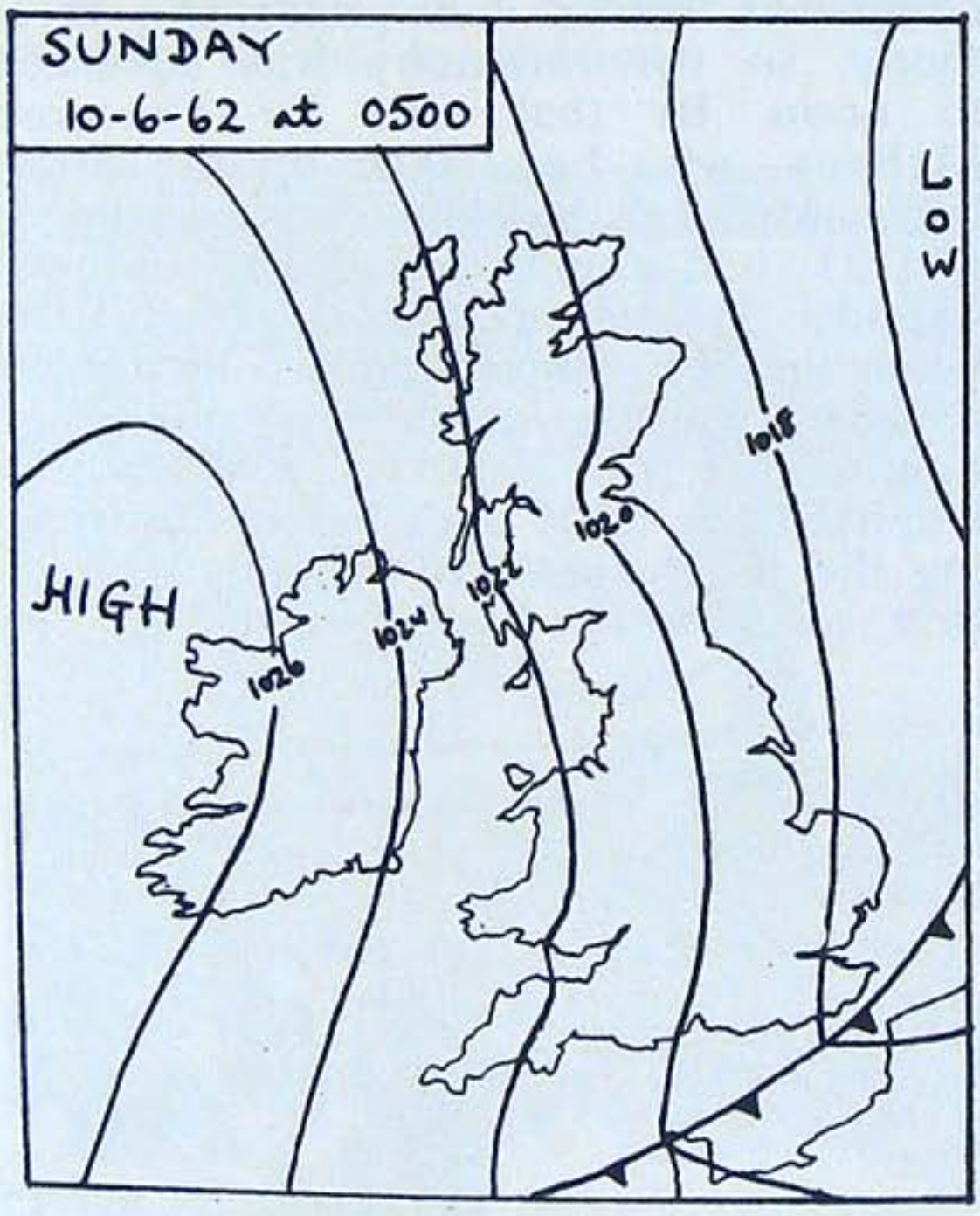
Pilot	*Sailplane*	*m.p.h.*	*Pts.*
Innes	Skylark 2	38.3	1000
Gaze	Ka-6	34.3	902
Strachan	Skylark 3B	38.0	902
Bacon	Olympia 2	30.8	900
Minton	Eagle	32.7	866
Paul	Skylark 2	31.2	832
Scallon	Skylark 2	30.3	812
Purnell	Skylark 3F	33.9	811

Leading Totals, 9th June

League 1		League 2	
Goodhart	6462	Strachan	6703
D-Drummond	5857	Jeffery	5284
Wills	5597	Delafield	5222
Williamson	5292	Jefferson	5131
Burgess	5249	Paul	5113
Burton	5108	Bird & Riddell	4856
Cretney	5018	Innes & Hanneman	4842
A. Burns	4745	Bacon	4683
Stephenson	4698		
Stone	4530		

Another milk-drinking pundit: George Burton.

Sunday, 10th June



SUNDAY, 10TH JUNE.—*A cold front moved southward through the country during the night, leaving the area in a fresh north-westerly airstream. The surface wind, north-west at 15 kt., made launching rather difficult and tended to break up thermals during the late morning. By early afternoon the wind decreased a little and thermals became moderately strong and usable. Also, the upper air conditions were suitable for the formation of lee waves between about 5,000 and 7,000 ft., and although most of the hills on the task routes were not quite in the best direction for full use to be made of wave effects, many pilots encountered lee waves and used them to some extent.*

LEAGUE 1: Race to Dunkeswell (Honiton), 75.3 miles S.W.

LEAGUE 2: Andover, then Distance along a line through St. Just (Land's End).

LEAGUE 2's line passed just south of Exeter and across the middle of Dartmoor, which was the farthest anyone got. The going was very good at first, but many came down between Yeovil and Chard, 95 to 110 miles; between the Crewkerne-Chard-Honiton line and the sea, 10 miles south, there was an area of blue sky. After that it was good again till Exeter Airport, 131 miles, where nine landed (Dawson, Findon, Hanneman, Jerzycki, Rutherford, C. Wills, Collins, Hunt and Jeffery), while seven more came down around Exeter a few miles further (Gaze, Delafield, Spottiswood, Strachan, Loveland, Neumann and Snodgrass). Only three got up on to Dartmoor: Brian Jefferson (144 miles, 0.4 miles N. of the line), Mike Riddell (150.8 miles, 5.4 miles S.) and David Kerridge (153.5 miles, 4.4 miles S.).

The 1,000 points went to Peter Dawson, who landed at Exeter Airport with an Olympia 2 and got 20% handicap bonus. Others who landed there scored 917 with 10% bonus or 835 without bonus.

League 2 : Highest Scoring Flights

Pilot	*Landing*	*Points*
Dawson	Exeter Airport	1000
Gaze	Nr. Exeter	980
Delafield	Nr. Exeter	975
Kerridge	Ashburton	970
Loveland	Exeter	958
Neumann	Nr. Exeter	940
Riddell	Ashburton	940
Jefferson	Bridford	927

At the starting board.

League 1, who were further north, found the only troublesome area to be the soggy North Somerset plain, an 18-mile stretch between the Mendip and Quantock ranges, each of which rises to a little over 1,000 ft. and has an escarpment facing S.W.

They used various techniques. Most of them skirted right round it to the south, near Yeovil. Some carried on, hoping for a thermal from Bridgwater, three-quarters of the way across; some lucky ones got high enough over the Mendips for their laminar-flow gliding angles to take them right over; and Tony Deane-Drummond noticed that some tiny hills in the middle of the plain were producing a small cumulus cloud or two.

Both Anne Burns and Andy Coulson, after setting out from the Mendips, thought better of it and returned to them to gain more height. Mick Kaye got a wave in lee of the Quantocks in an oblique N.N.W. wind.

League 1 : Fastest Speeds

Pilot	*Sailplane*	*m.p.h.*
Williamson	Olympia 419	43.2
Goodhart	Olympia 419	43.0
Wills	Skylark 4	40.6
Scott	Olympia 419x	37.5
D-Drummond	Olympia 419	37.4
Piggott	Olympia 463	35.4
Gough	Ka-6	34.0
Burton	Skylark 3B	33.6
R. Harwood	Skylark 3B	32.2
Warminger	Olympia 419	30.4
Dimock	Skylark 3F	30.3

Slowest : 21.3 and 16.4 m.p.h.

Monday, 11th June

MONDAY, 11TH JUNE.—*A belt of rain ahead of a warm front passed through Aston Down during the night, and conditions in the early morning did not look promising for contest flying. Upper cloud layers were rather thick, though breaks in the layers were likely, and in fact did appear by late morning. Thermals were set off under the breaks, and waves appeared in the stable layer just above the small cumulus which formed; but soaring conditions, though good locally, were not evenly distributed over Gloucestershire.*

The weather was not expected to clear in time for even a short task to be completed before the prizegiving ceremony, so the ceremony was advanced to noon. By that time Sir Theodore McEvoy, who had taken up the prize-giver, Mr. Rex Stocken, for a circuit in a T-21, had caught a thermal and was happily floating around at cloud base, when the occupants became conscious of a crowd waiting for them down below. Eventually Mr. Stocken reached the trophy-laden table and, before distributing the prizes, gave an amusing description of how he had competed in the

At the finishing line.

John Delafield.

Courtesy of "Flight"

first British soaring contest ever held — at Itford on the South Downs in 1922, forty years before.

The ceremony ended with three cheers for the Royal Air Force Gliding and Soaring Association, who had laid on such an excellent organisation at Aston Down; for Group Captain R. R. Goodbody, the Officer Commanding; and Air Chief Marshal Sir Theodore McEvoy, president of the Association.

The caféteria, a popular corner of the hangar.
Photos, various, by A. E. Slater.

Championships Weather Summary

THE first week of the Championships was dominated by an anticyclone which gave mainly easterly winds and a certain amount of stratocumulus during the first few days, followed by a period of almost clear skies and dry thermals whose depth was limited by the height of the anticyclonic inversion. Towards the end of the first week the anticyclone declined and allowed some weak fronts to cross the country, bringing alternating periods of broken high-level frontal cloud and convection cloud at low level in the fresh north-westerly polar air.

National Championship Results

League 1

Final Place Open Class	Final Place Standard Class	Pilot or Pilots	No. of Contest Day and Date 1 3rd	2 4th	3 5th	4 6th	5 7th	6 8th	7 9th	8 10th	Final Points	Comp. No.	Sailplane	Entrant or Owner
1.		H. C. N. Goodhart	985	1000	1000	494	1000	1000	983	994	7456	75	Olympia 419	H. C. G. Buckingham
2.		A. J. Deane-Drummond	904	950	757	475	984	848	939	824	6681	72	Olympia 419	Army Gliding Assn.
3.		P. A. Wills	171	923	795	1000	1000	853	855	919	6516	1	Skylark 4	Private Owner
4.		J. S. Williamson	1000	998	768	301	935	415	875	1000	6292	86	Olympia 419	R.A.F.
5.		P. G. Burgess	845	936	782	465	733	665	823	591	5840	139	Skylark 3G	Private Owner
6.		G. E. Burton	808	958	165	477	864	816	1000	722	5830	67	Skylark 3B	R. Prestwich & Ptns.
7.		F. D. Cretney	735	953	726	184	805	803	812	548	5566	205	Olympia 419	R.A.F.
8.		Anne Burns	702	415	649	630	833	785	731	589	5334	19	Skylark 3B	Private Owner
9.		G. H. Stephenson	699	841	591	336	834	721	676	598	5296	8	Skylark 3F	Private Owner
10.		A. J. Stone	676	971	485	333	751	551	763	597	5127	101	Skylark 3	Handley Page
11.		H. R. Dimock	673	848	612	134	765	721	725	643	5121	150	Skylark 3F	Private Owner
12.		F. G. Irving	824	420	548	418	810	708	787	549	5064	266	Skylark 4	Private Owner

13.	1.	A. D. Piggott	697	353	637	247	774	783	797	771	5059	181	Olympia 463	A. Schmidt
14.		G. Coatesworth	662	415	560	450	678	753	832	566	4916	90	Olympia 403	R.A.F.
15.		D. B. James	767	981	644	253	24	812	811	616	4908	160	Skylark 3F	Private Owner
16.	2.	A. W. Gough	615	817	279	442	663	532	772	733	4853	175	Ka-6	R.A.F.
17.		R. E. Dunn	721	892	0	388	835	665	800	511	4812	45	Skylark 3F	R.A.F.
18.		J. S. Fielden	623	863	622	548	795	739	293	201	4684	200	Skylark 3	Private Owner
19.		M. C. Fairman	601	560	513	380	693	671	689	478	4585	177	Skylark 3	Private Owner
20.		E. G. Shephard	682	442	575	0	805	698	820	537	4559	52	Skylark 3F	Army Gliding Assn.
21.	3.	D. H. G. Ince	726	530	0	413	678	704	789	610	4450	100	Olympia 460	Elliotts of Newbury
22.		R. A. Mann	698	206	603	409	944	441	603	502	4406	36	Skylark 4	Private Owner
23.		J. D. Jones	670	555	19	348	776	677	663	533	4241	180	Skylark 3F	Private Owner
24.		C. W. Bentson	758	495	513	345	697	720	693	0	4221	161	Skylark 3F	Private Owner
25.		P. M. Scott	758	905	606	397	—	407	299	826	4198	10	Olympia 419x	Private Owner
26.		G. Mackworth-Young R. E. F. Smith	752	208	27	23	853	721	829	519	3932	13	Skylark 3G	Private Owner
27.		D. D. Carrow	746	415	663	54	790	496	278	470	3912	20	Skylark 3B	Private Owner
28.		C. A. P. Ellis	617	188	480	292	735	614	747	181	3852	9	Skylark 3	London G.C.
29.		D. A. Smith	84	552	617	143	795	817	298	542	3848	42	Skylark 3B	Private Owner
30.		A. H. Warminger	84	236	279	325	741	725	713	647	3750	44	Olympia 419	Private Owner
31.		H. Mettam R. Harwood	89	187	528	291	655	644	656	688	3738	65	Skylark 3B	Private Owner
32.		N. W. Kearon	108	303	503	325	819	551	615	401	3625	73	Skylark 3B	R.A.F.
33.		C. Green	83	442	550	205	642	556	604	501	3583	18	Skylark 3F	Private Owner
34.		D. M. Kaye	266	332	172	336	758	547	299	597	3307	60	Eagle 3	Private Owner
35.		E. Stark	63	240	35	441	731	698	259	547	3014	190	Skylark 3F	Army Gliding Assn.
36.		J. L. Bayley	257	247	548	0	780	82	643	200	2689	233	Skylark 4	R.A.F.
37.	4.	K. R. Aldridge D. W. Corrick	76	253	0	375	201	630	243	149	1927	33	Skylark 2C	R. H. Perrott & Ptns.
38.	5.	A. Coulson	68	212	0	0	128	449	264	141	1262	3	Olympia 460	Private Owner
39.		B. J. Davey & R. T. Cole	102	211	27	0	145	173	239	249	1146	11	Eagle	Private Owner
Retired		W. A. H. Kahn	876	958	691	25	—	—	—	—	2550	4	Skylark 3B	Private Owner
Hors Concours														
Retired		S. Skrzydlewski	268	863	56	—	—	—	—	—	1187	6	Foka	Poland

Note.—A dash indicates that the sailplane was not flown; a zero that the pilot flew but did not score

League 2

Final Place	Pilot or Pilots	No. of Contest Day and Date 1 2nd	2 3rd	3 4th	4 5th	5 7th	6 8th	7 9th	8 10th	Final Points	Comp. No.	Sailplane	Entrant or Owner
1.	I. W. Strachan	1000	872	1000	1000	988	941	902	872	7575	165	Skylark 3B	R.A.F.
2.	J. Delafield	469	813	468	838	970	904	760	975	6197	74	Eagle	R.A.F.
3.	C. P. A. Jeffery	850	992	630	665	878	371	783	835	6119	64	Skylark 2	London G.C.
4.	J. B. Jefferson	250	936	968	534	1000	989	454	927	6058	37	Skylark 3B	Private Owner
5.	I. Paul	968	951	316	540	817	640	832	710	5823	2	Skylark 2	Dr. Kilch & Ptns.
6.	M. Bird D. M. Riddell	218	936	417	824	864	857	740	940	5796	173	Skylark 3F	Private Owner
7.	P. Hanneman D. F. Innes	0	819	780	520	823	900	1000	917	5759	207	Skylark 2	R.A.F.
8.	F. A. O. Gaze	303	791	788	359	825	689	902	980	5637	210	Ka-6	Private Owner
9.	G. McA. Bacon	790	956	312	260	728	737	900	787	5470	158	Olympia 2B	R.A.F.
10.	A. O. Sutcliffe P. E. Collier	602	893	457	609	842	625	465	833	5326	78	Skylark 2	Bristol G.C.
11.	J. D. Spottiswood	218	769	246	538	895	1000	765	886	5317	132	Skylark 3B	R.A.F.
12.	R. Rutherford	571	734	334	495	691	776	764	917	5282	41	Skylark 2	Private Owner
13.	H. N. Gregg M. S. Hunt	264	744	975	461	735	815	423	835	5252	70	Skylark 3B	Private Owner
14.	D. C. Snodgrass	463	807	731	399	988	279	720	835	5222	168	Skylark 3F	Private Owner
15.	G. T. Collins	0	819	768	528	588	878	666	835	5082	103	Olympia 2	R.A.F.
16.	C. Wills D. Scallon	223	874	314	416	646	847	812	917	5049	148	Skylark 2	Surrey G.C.
17.	D. Kerridge A. Purnell	463	0	735	585	299	990	811	970	4853	147	Skylark 3F	Surrey G.C.
18.	V. C. Carr D. Cunningham	241	792	538	435	896	615	765	560	4842	176	Skylark 3B	Coventry G.C.
19.	K. Newholme	197	883	296	641	634	700	436	744	4497	25	Olympia 2B	R.A.F.
20.	J. R. Chandler P. Dawson	157	514	354	510	642	924	301	1000	4402	113	Olympia 2	R.A.F.
21.	A. S. Loveland	159	210	241	582	758	733	702	958	4343	89	Olympia 401	R.A.F.
22.	R. D. Dickson	132	1000	354	601	792	124	375	710	4088	34	Gull 4	Private Owner
23.	G. S. Neumann & R. G. James	79	0	270	645	717	702	727	940	4080	55	Eagle	Cambridge Univ. G.C.
24.	P. Goldney J. A. Evans	509	393	384	394	698	950	479	652	4027	12	Skylark 2	Army Gliding Assn.

25.	S. M. Morison F. W. L. Shepard	144	785	280	397	701	447	494	656	3904	58	Eagle	Army Gliding Assn.
26.	G. R. Whitfield A. L. L. Alexander	221	135	465	439	771	662	498	603	3794	187	Olympia 460	Cambridge Univ. G.C.
27.	A. Doughty	192	432	315	358	641	598	436	665	3637	91	Jaskolka	Private Owner
28.	R. I. Tarver A. Findon	0	783	76	583	690	268	296	917	3613	48	Olympia 463	F. Wright & Ptns.
29.	K. W. Blake H. U. Midwood	176	207	394	107	598	536	793	674	3485	201	Olympia 2	Private Owner
30.	D. W. Stowe P. R. Philpot	228	144	407	476	710	578	485	455	3483	81	Skylark 2	Private Owner
31.	T. A. McMullin	19	151	484	445	666	665	540	431	3401	40	Olympia 2	Private Owner
32.	P. Minton & R. Martin or O. Mingo	290	91	277	650	827	0	866	321	3222	96	Eagle	Imperial Coll. G.C.
33.	L. Kurylowicz E. Jerzycki	0	126	273	176	573	640	355	917	3060	222	Mucha Standard	Polish A.F.A.
34.	R. Marshall	0	300	268	219	649	631	302	665	3034	93	Olympia 2	Southdown G.C.
35.	R. G. Procter J. E. Torode	121	211	205	31	561	701	378	702	2910	196	Bocian	R.A.E. G.C.
36.	A. Pickles A. Eldridge	132	296	300	481	294	482	358	297	2640	28	Olympia 2	R.A.F.
37.	R. H. Perrott G. F. Fisher	60	268	262	29	579	580	224	697	2587	14	Olympia 2	Bristol G.C.
38.	R. C. Stafford Allen & R. Conant	124	154	327	—	722	79	465	635	2531	179	Eagle 3	London G.C.
Retired	R. T. Willbie	463	872	245	665	—	—	—	—	2245	68	Skylark 3B	Private Owner
Hors Concours													
37+	A. Heinzl T. Evans	0	74	76	166	286	950	327	684	2563	235	Ka-7	Dublin G.C.

The Service that Pretends the Air is Flat

Flat as your hat — Flatter than that

(*pace* RUDYARD KIPLING)

by Philip Wills

THE reprint from *The Journal of The Guild of Air Traffic Control Officers* of my December speech to their London Lodge has produced a lot of letters from all over the world from denizens of the more oppressed countries delighted to see that in Britain the glider pilot is at least allowed to put his case, and this article has been reprinted in some foreign languages.

Most foreign gliding organisations, struggling against the octopus of Air Traffic Control, with its incomprehensible jargon, have tended to give up in despair, and watch the life being slowly squeezed out of them. So I propose to write one or two more articles in an attempt to put the problem in a comprehensible form.

The various sectors of the flying world are riven with arguments on the merits and demerits of existing Air Traffic Control. Professional pilots say the only thing wrong is that there is not enough of it. Most others, sporting, club and glider pilots, say that whilst existing A.T.C. procedures may be necessary in bad weather, at night, and around the (very few) busy airports, it has imposed restrictions elsewhere which have largely inhibited the expansion of many important branches of aviation in this country. These procedures have been built up almost entirely for one branch only of the aviation community and have ignored the rest.

Air Traffic Controllers say the air is dangerously overcrowded. Non-professional pilots quote figures showing that, over the U.K. as compared to the U.S., it is practically empty; these figures show this numerically by the relative number of aircraft, by the extremely small number of so-called "Air Misses", and still more by the almost entire absence of collisions. But most of all these pilots say, in a puzzled way, that when they actually fly in it, they simply can't understand all the talk of overcrowded air emanating from the Stygian recesses of Control Rooms. Why can't A.T.C. peer out of its darkened cellars and see for themselves that the sky is to all intents and purposes virtually empty? They feel increasingly indignant and even angry that these esoteric men of authority keep on squeezing them out of more and more air on the grounds that it is "overcrowded".

Where lie the reasons for this extraordinary and paradoxical situation which, above all others, is frustrating our efforts to catch up with other countries in this important field of General Aviation, which in America is far the largest sector of all ?

Recently I ascribed it to stone-age equipment. As one result I was invited to see for myself, and was given a most friendly and full tour of an Air Traffic Control Centre. I must admit that at the entrance to the cave I did not observe the male denizens dragging in their shrieking womenfolk by their hair. But, once inside, the illusion was not bad.

On one side a number of folk appeared to be playing something like a Neanderthal version of our childhood's game of "Consequences", using pencils and strips of cardboard. One felt that in the 20th century an electronic computer might play it with a much better chance of getting the answers quickly, which would permit far more aircraft to fly in controlled airspace than now.

On the far side of the cave a number of intent faces were lit by a flickering greenish glow, for all the world as if they were engaged in making fire by rubbing two sticks together; they were, in fact, peering at a number of moving bright dots on radar screens. These told them fairly accurately where each aeroplane was, *except for its height*. So if they saw what appeared to be a collision, they could not tell if the two real aircraft, in the real air, had in fact collided, or whether one had passed 1,000 ft. or 5 miles over the other (which, of course, it always had), until the two blips serenely emerged from their temporary coalition. On his recent circuits of the

globe Colonel Glenn, in the eyes of A.T.C., may well have collided with quite a number of humble Tiger Moths.

This, of course, is one of the main roots of the trouble: *to the A.T.C. the air is flat.*

Immediately one envisages the whole of Britain as one vast asphalt plain, with no obstructions. A reasonable guess of the average number of aircraft over the U.K. at one time is 300: the area is, say, 60,000 square miles. They are dashing around more or less at random, except for convergence at one or two nodal points. Surely, even now, except near these foci, they will hardly ever even see each other? Think of 300 — or 3,000 — motor cars alone in this vast obstructionless desert. Ah, but wait for the second brilliant convention — *the drivers are blind*! Now indeed it feels a bit more frightening, although in practice even if it were so, away from the traffic centres collisions would still be almost non-existent.

This convention that aeroplane pilots are blind is, of course, wrapped up in less blunt terms. "The policy of see-and-be-seen is no longer adequate protection in view of the increased closing-speeds modern aircraft." Immediately one sees two 707's approaching each other head on at a combined speed of 1,100 m.p.h. Of course, they couldn't possibly swerve out of each other's way in time. But in fact all fast aircraft are under A.T.C. control, can communicate with A.T.C. and give their altitudes, and can be kept apart (sorry, "given separation"). If one fast aircraft were to approach, say, a glider which is virtually stationary, the "closing speed" is little more than between two slower aircraft fifteen years ago, when "see and be seen" was perfectly acceptable. And the glider pilot, who in the normal course of his flight is keeping a very sharp look-out indeed on all the air around him, because his continued flight demands it, would have little difficulty in keeping out of the way.

The difference between the actual nearly empty air of the pilot, and the overcrowded air of A.T.C., therefore depends entirely on the fact that, with rudimentary apparatus available to them, A.T.C. have had to invent a special kind of two-dimensional, flat air, inhabitated by pilots who are blind.

The *facts* continue to prove that this is wrong, that the air really does go up and down as well as to and fro, and that pilots *can* see in clear daylight (glider pilots can not only see very well indeed, but also hear quite a bit). Of course, A.T.C. really knows all this. But until it is given equipment which allows it officially to recognise it, what can it do?

The answer is: for heaven's sake stop talking about your "overcrowded air", because it isn't the same as the real air: what is missing is not air-space but adequate instruments and technique. To distort this is to mislead the public and infuriate the pilots. Until you have 3D presentation, please keep your feet on the ground, realise that your eyes (whatever your radar says) are 5 ft. 10 in. above them, so very seldom do the twain meet, resist the pressure of vested interests that want the air to themselves, go on pressing for decent equipment, and until it arrives spare us from restrictions that must eventually break our spirit. It isn't as if Britain suffers from an excess of it.

BLOWING AWAY AND TOWING OUT

ONE moment you have a glider, and the next moment — there it is, gone, upside down and useless. After 30 years of gliding no cure has yet been found for this infuriating and unnecessary method of breaking gliders, although some clubs have grown wily with age, and now rarely, if ever, commit this form of indiscretion. Unfortunately, blowing over does seem to be one of those lessons which can be learnt only by experience, because it invariably happens in the opening years of a new club, as though it were a sort of initiation rite. Perhaps it is, as the act of picking up the pieces must leave a lot of people feeling older and wiser.

Broadly, gliders blow over for two reasons: because they are badly parked, and because the glider is held wrongly at the launch point when flying in strong (perhaps too strong) winds. If a glider is not parked across wind with the into-wind wing adequately weighted, and an anti-weathercocking block to the lee of the tailskid, then no-one should be surprised if it is damaged. Everyone knows this, but fewer people seem to understand how to look after a glider when it is facing into wind at the launch point, since the glider is invariably blown over because the tail is being held *down*. In strong winds a glider on the ground and facing into wind (a) should always have someone in the cockpit; in single-seaters the pilot should get in across wind, and in two-seaters either the pupil or the instructor should remain in the cockpit; (b) the stick should be held forward; (c) the brakes should be open; (d) someone should hold down the nose; (e) someone should hold the tail *up* by the lifting handles; (f) one, or preferably both, wingtips should he held until the moment of launch. And finally, after landing, no one should get out of the cockpit until help arrives; the stick should be held forward and the brakes kept out.

Towing out across the field with a car often seems to produce a crop of minor confusions in what is essentially a very simple process. The fault here is not so much letting the glider blow over, even in an into-wind tow which obviously has to be done with great discretion and plenty of weight on the nose, but the towing and steering. The car driver should proceed at walking pace, with both windows open so that he can hear, and at as near a constant speed as he can manage. This is particularly necessary when crossing discontinuities in the surface as runway edges and winch tracks. If the car goes on slowly and steadily, the glider bumps gently over the roughness (with less wear and tear than if it were landing). But if the car driver stops or slows right down in his concern for the glider, it merely runs into the deepest part of the hollow and then sticks there, and has to be brought out with a worse bump, wear on the clutch, and probable breakage of the feeble bit of clothes line that some people use as a field rope.

More important than this is the steering of the glider. A moment's thought will make it clear that this cannot be done by the car driver, but that the maximum control can be exercised by the wing-tip holder. Instead of wandering vaguely along, feeling rather out on a limb, he should concentrate on keeping the glider's nose directly behind the centre of the car, and should continue to do so even if the glider shows

signs of running into it owing to the absence, or demise, of the person at the nose or tail. On an overrun much more damage can be caused by holding back on the wing in a desperate attempt to stop the glider, since this merely means that the far wing instead of the nose hits the car. A dented nose cone is preferable to a hole in the structural leading edge.

* * *

Now about something really successful. Details of the first, I hope, of a long line of civilised, instructor retaining clubhouses.

ANN WELCH.

SCOTTISH GLIDING UNION CLUBHOUSE

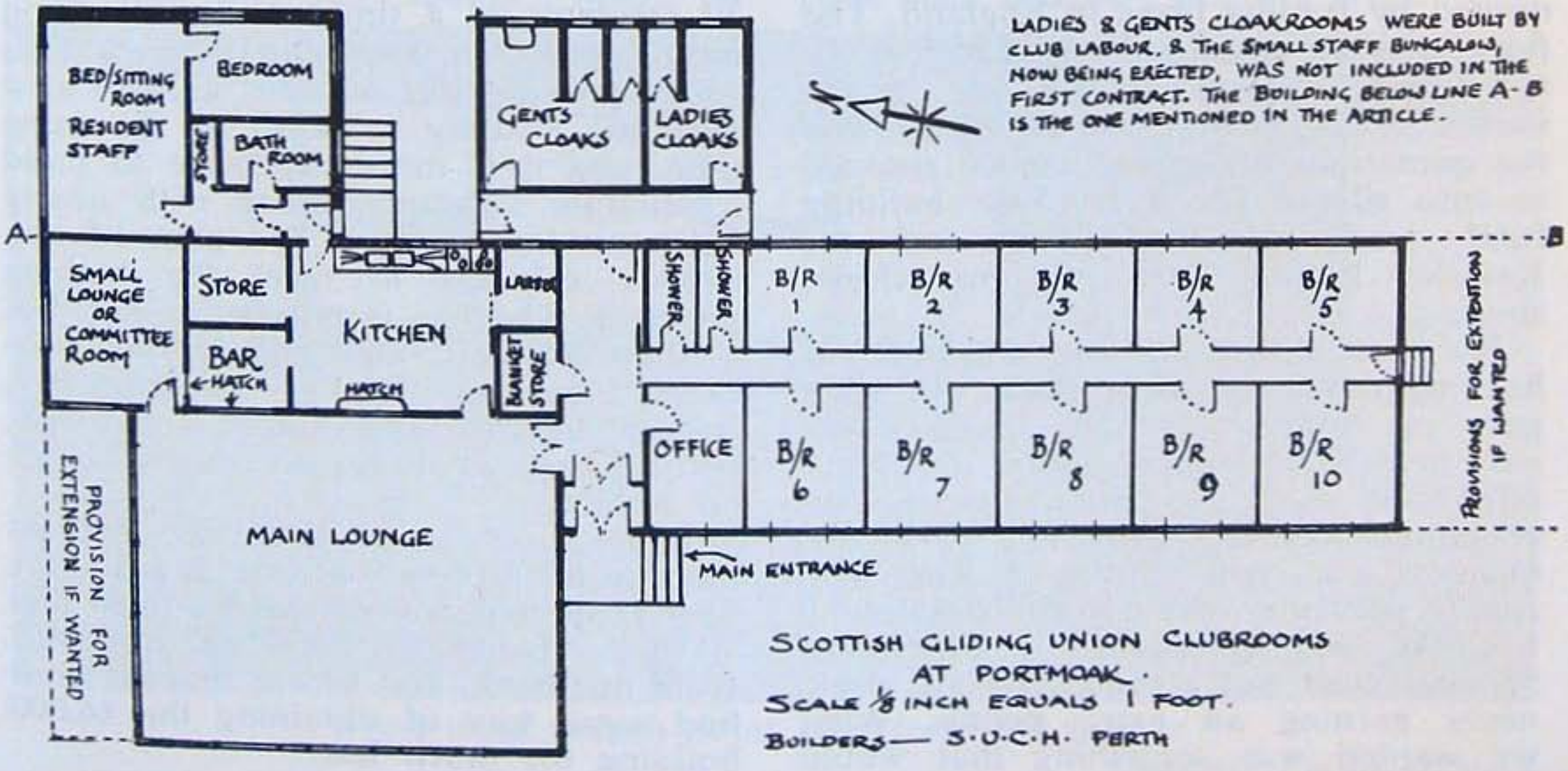
OVER a year ago, when the first article about clubrooms appeared in SAILPLANE AND GLIDING, we already had the foundations of our new building laid. And now that a full year of using it has gone by, we can more than verify the statements concerning the value of such a possession.

Within the past year our membership and resultant subscriptions have nearly doubled. Flying fees are vastly increased from the extra usage of what would previously have been blank days, and the money that was formerly handed out to local hotels for summer course accommodation is now directed into the clubroom coffers.

Apart from this we have Saturday evening film shows and lectures all through the winter, and a full-scale dance once a month. This brings in lots of business for the residential side of the clubroom every week-end during the off season. Needless to say, the bar does well after flying finishes and the B.G.A. must find our sales of scarves, ties, literature, etc., greatly increased.

When we first settled on our own land at Portmoak, ideas for our permanent building progressed through the usual stages from grandiose, concrete-and-steel erections (which had to have "flying character" built into them) to humble little structures made of a multitude of huts. Sketches for the latter eventually looked like a collection of bathing boxes on a beach, and one of the concrete jobs, which was hexagonal in form, would have looked like a three-tier wedding cake with the added disadvantage of heavy initial cost and lack of adaptability from the point of view of extension and interior fitting.

Gradually it became apparent that to suit our purpose, site, and cash resources, an "L"-shaped building of unit construction, timber on a brick base structure, was the answer to our needs. To those who argued that a brick structure was more permanent and



LADIES & GENTS CLOAKROOMS WERE BUILT BY CLUB LABOUR. & THE SMALL STAFF BUNGALOW, NOW BEING ERECTED, WAS NOT INCLUDED IN THE FIRST CONTRACT. THE BUILDING BELOW LINE A-B IS THE ONE MENTIONED IN THE ARTICLE.

SCOTTISH GLIDING UNION CLUBROOMS AT PORTMOAK.
SCALE ⅛ INCH EQUALS 1 FOOT.
BUILDERS — S.U.C.H. PERTH

West wind launch point and clubroom entrance.
Courtesy Photo Express

secure in gales, a Commonwealth member replied that his experience of wooden buildings in severe weather conditions in Canada and Sweden was that not only could they be made perfectly secure and last a lifetime, but that, for a building that would stand empty sometimes, when required, a wooden one heats up more quickly than a brick one.

This brick v. timber argument continued for some time until a worthy member of the committee, who is also an architect, produced more drawings of our latest ideas for a unit construction cedar building, along with prices quoted by leading firms in England. The floor area we envisaged was 2,850 sq. ft. (3½ times as large as the one in the sketch in SAILPLANE AND GLIDING), and the quotations of around £6,000 stunned us into silence for a bit. Our building fund amounted to £1,500 and the Kemsley Flying Trust had just closed shop.

We got down to the business of hacking down the floor area, but soon gave up because *nothing smaller than our first idea would really do. It is important that the clubrooms be an economic working unit.* Too *large* for business and you run at a loss. Too *small* prevents you from developing business, and it becomes a fine place at week-ends but stands cold all week, never earning an extra penny. What we wanted was something that would increase and strengthen the social ties of our membership by remaining open every day all the year round, and house permanent staff. We had to have something that would earn its keep in lots of ways. The kitchen has to cater for parties up to 80 in number and the lounge be big enough to cope with a good going dance. A snug committee room was needed to allow those who don't dance to drink in comfort and still not be cluttering up the dance floor. The bread-and-butter business of course running while members are staying on the site required good bedroom accommodation (*not a bunkhouse*) for up to 30 residents at a time. And wash hand basins with hot and cold in each bedroom provide the sensible answer to a mob all wanting to wash at the same time, and it is more expensive to build a separate ablutions block with nearly as many basins in it. We planned two shower cabinets to meet the bathing problem. The bar is not just a bar, but a shop as well, and sells photo postcards, sweets, books, haberdashery, badges, aspirin, razor blades, sun lotion, and all sorts of things needed by people on holiday.

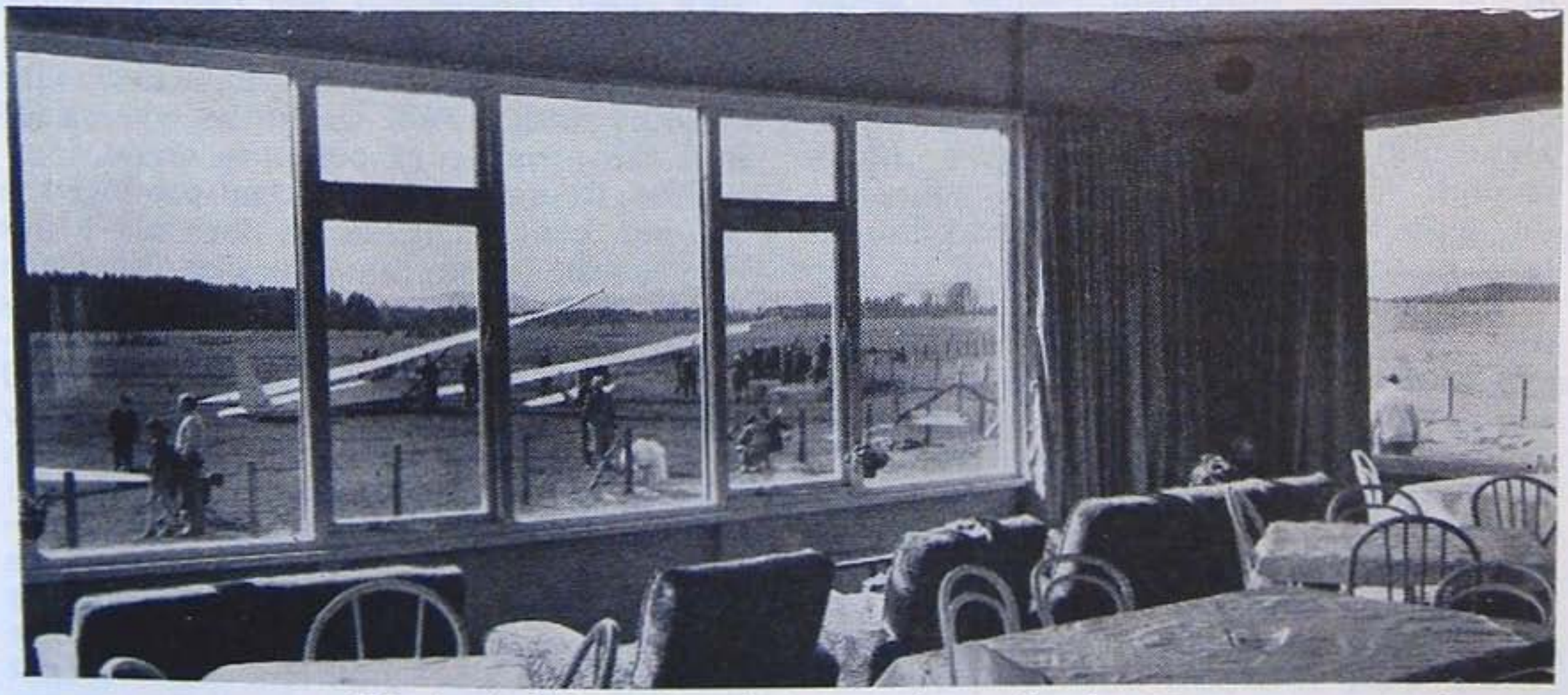
With all this in mind, we decided that in the absence of the K.F.T. (the new Trust had not started) we must find a sugar daddy to back an overdraft from our bank, and before that we must find some way of obtaining the £6,000 building for much less.

Miraculously we found a way to cut the cost first. Our architect knew the managing director of a new construction firm in Perth, right on our doorstep. When he was brought into the discussion it was pointed out that a large proportion of the £6,000 asked by English firms was to cover heavy rail costs and subsistance allowances of the team of builders to be sent to the job. Furthermore, it was suggested that as a convenient showpiece for his future customers he could bring them into the new building for a meal at all times. That seemed to bear fruit, because we soon had a firm quotation from him of £4,200.

With lightning speed a local brewer was contacted, and after he had examined the past records and our estimated business with the building, he readily agreed to act as guarantor for us on an overdraft of up to £2,750 for a period of up to ten years. The next day the firm order for the job was placed and spread payments over 12 months from the completion date arranged.

Now, just because the price was lowered we did not want an inferior job. On the outer wall we got a double skin of all-weather ply covered with cedar wood, glass fibre insulation and the usual plaster board inside. The large sun lounge windows facing north, west and south are double-glazed. There are polished hardwood floors in the snug and the sun lounge which is 24×30 ft. and makes a fine ballroom. There is Swedish door furniture. The all-in figure mentioned covered the building of the brick foundation (three feet up at the front), erection of the building, all plumbing including a large-capacity hot water storage tank with two immersion heaters, cold water tanks, the shower cabinets, hand wash basins in every bedroom, stainless steel sinks and drip boards in the kitchen and bar, dual wiring for power and electricity using both normal and off-peak systems — in fact, the lot.

As the building took shape our enthusiasm grew, but we had behind it all a sneaking feeling of inadequacy when we thought of the cost of furnishings. But these worries soon vanished when the Cunard liner Britannic sailed into the ship breakers' yard near by. The S.G.U. had six excursions to the yard with trailers and wrecking tools. After having stated our needs, we were given a free hand to help with the demolition. Beds, chests of drawers, wardrobes, splash boards, mirrors, interior spring mattresses, feather pillows, bunk ladders, light fittings, duckboards, hessian doormats, sheets of plastic from bathroom walls and lots more all found its way to the lift system in the bowels of the ship. With a bit of practice we packed the lift full of our spoils, and the smallest lady member of our party was shut in to operate it. A shuttle service to the upper promenade deck was run, where a crane driver



West wind launch point seen from the lounge.
Courtesy Photo Express

obligingly lifted the lot ashore. We paid cash for the lot and took it to Portmoak in our glider trailers. Mirrors 7s., splash-backs with fitments 3s., wardrobes £1, chests of drawers 30s.

Later we bought a reconditioned commercial fridge at £17 and two brand new electric cookers at less than cost price, and we were in business.

Club members rolled up with chairs, settees, tables, etc., and our final bit of luck arrived when one of our former members, who was selling up his linen mill, sent us first-quality linen sheets, blankets, etc., all at around 5s. each.

There is a lot more like this, but now to a *very important point*. When advertising for a caretaker and wife to live in on the job, woodworking qualifications were asked for. From about 40 applicants we were lucky enough to find an excellent couple — the wife to do the cooking and household management — the husband to help in the bar *and carry out glider maintenance and repairs.*

The husband was a master joiner to trade with experience of aerolite glues and boat-building, so now with the guidance of our own qualified ground engineer he keeps the work in hand. Apart from this his skill as a shop fitter saw him through lots of work fitting out the kitchen, bar and clubrooms.

On mid-week days we encourage local organisations to use our catering facilities, and car clubs, scooter clubs, car treasure hunts, finish up their outings on our airfield and add to the lolly which will soon pay off the overdraft, and start to help refinement of our flying operations. We aim to have a full-time instructor on the site as soon as we clear the debt.

The local education authority is now sending a party of ten schoolboys and girls along one day each week with two teachers (who happen to be members of the S.G.U.) for flying instruction in the two-seaters. This is done on a group subscription and pay-as-you-go basis.

In spite of the capital expenditure from income, to supply some necessary bits and pieces — £200 for stock in hand, wages, rates, heat and light, etc.— the clubrooms finished the first nine months with a net profit of over £600 and the promise of better to come.

The flying accounts also produced a 50 per cent increase in the net profit during the nine months, due to much more flying being done, and this was a shattering answer to the "stick-in-the-muds" who mumbled that we would turn into a "social club" when our new palace of comfort came into operation.

It is no new discovery that comfortable clubrooms provide a suitable platform from which to launch a vigorous flying programme, and any club living animal-like in a barn sort of structure will do well to plan for the earliest change possible to civilised living quarters.

ANDREW THORBURN.

Bishophill, lounge and bar.

Courtesy Photo Express

F.A.I. Gliding Commission News

ARRANGEMENTS for participants in the next World Championships (to be held in Argentina in February 1963) were announced at the meeting of the F.A.I. Commission for Motorless Flight (C.V.S.M.), held in Paris on 21st and 22nd June, by Snr. Riega, Director of the Championships, and Snr. Caran, Argentine representative in Europe. They are summarised below, together with other matters discussed.

World Championships, 1963

Travel by sea will be by the Argentine line E.L.M.A. (Empresse Lina Maritima Argentine), who have agents in every main port. Ships to Buenos Aires call at most ports, including London, Liverpool and Antwerp. Entrants' 50% share of freight will only be payable on arrival in Buenos Aires. Approximate costs payable (i.e. 50% of total return fare): Passengers, 1st class $360, Tourist $240, Trailers $275-300. Freight is by measurement, but wheels and tow-bars are probably excluded. The journey takes 3-4 weeks.

Travel by air: all participating countries may obtain offers of charters, etc., and submit to F.A.V.A.V. (Argentine Gliding Federation), who will make the final decision and communicate methods selected by 20th October 1962 (one quotation already obtained by OSTIV equals approximately £200 per head return, less Argentina's 30%).

Tow cars in Argentina may be hired via F.A.V.A.V.

By 1st August, F.A.V.A.V. require from all countries preliminary advice of:

(1) Number of aircraft to be entered in each class.
(2) Number of personnel arriving by air and by sea.
(3) Number of OSTIV personnel arriving by air and by sea.
(4) Names of three most suitable ports of departure in order of convenience.

If the above particulars indicate insufficient participation, the maximum entries may be increased to 4 per nation (2 per Class) and Argentina will advise accordingly by 20th August. The participation fee must be paid by 1st October.

The General and Particular Regulations (including marking system) were finalised; the original draft copy is in the B.G.A. office. Radio is not permitted in the Standard Class. Barographs will be required on certain days for Air Traffic Control purposes.

With the preliminary advices on 1st August, F.A.V.A.V. will be happy to receive any ideas calculated to make the Championships successful.

Records

The only change agreed is, from 1st January 1963, to delete the 200-km. Speed Triangle and substitute a 500-km. Speed Triangle.

Suggested Changes

Various suggestions were made for alterations in Section 3 of the Sporting Code, and will come up again for possible decisions at the next meeting on 30th November and 1st December. Discussions took place on the following suggestions:

On the necessity of landing after goal flights, races, etc. Further views are asked for.

That some time next year, Silver C distance be increased to 100 km. (62.137 miles) either in a straight line, broken leg ("dog leg") or triangle.

That the broken leg for Gold C distances be eliminated, to avoid out-and-returns.

That in World Championships, the figure C=1,000 (the winner's score for the day) be reduced on certain days. This suggestion came from the Poles, and all nations are asked to submit ideas and definite proposals.

It was decided to make no changes in the regulations for the three Diamonds.

Lilienthal Medal

The Lilienthal Medal for 1962 was awarded to A. "Pirat" Gehriger, for many years Secretary-General of the Swiss Aero Club, organiser of the 1948 World Championships in Switzerland, leader of the Swiss team in other World Championships, expert sailplane pilot, and Chairman of the F.A.I. Gliding Commission. The medal is awarded for outstanding contributions to progress in soaring flight.

THE BRITISH GLIDING ASSOCIATION

by the Chairman

THE British Gliding Association was founded on 4th December, 1929, which day can also be counted as the birthday of the British gliding movement. Over the years, the B.G.A. has grown in status and stature, until today it occupies a position in sporting aviation unequalled anywhere in the world in the responsibilities delegated to it by the authorities, and in the respect accorded to it both nationally and internationally.

MEMBERSHIP — consists of Full Member Clubs, Associate Member Clubs, Private Owner Groups, and Individual Associate Members.

Subscriptions (1962) are: Full Member Clubs, £25; Associate Member Clubs, £15; Private Member Groups, £3 3s.; Individual Associate Members, £1 1s.

STRUCTURE.— Control is exercised by a Council consisting mainly of delegates elected by Full Member Clubs, with the Chairmen of the various Committees. The Council meets once monthly at the Association's Headquarters, shortly to be transferred (July, 1962) to: Artillery Mansions, 75 Victoria Street, London, S.W.1 (Telephone SULlivan 7548/9). Here is located the permanent secretariat, under the Association's Secretary, Miss Frances Leighton.

The Council delegates authority in specified fields to various Committees and Panels. At present (1962) the main structure is as follows:

PATRON: H.R.H. Prince Philip, Duke of Edinburgh.
PRESIDENT: Lord Brabazon of Tara.
VICE-PRESIDENTS: Lord Kemsley, Air Chief Marshal Sir Theodore McEvoy.

COUNCIL

CHAIRMAN — P. A. Wills
VICE-CHAIRMAN — Ann Welch
TREASURER — B. A. G. Meads

- INSTRUCTORS' PANEL — Ann Welch
- AIRWAYS COMMITTEE — H. C. N. Goodhart
- TECHNICAL COMMITTEE — F. G. Irving
- FLYING COMMITTEE — E. J. Furlong
- ACCIDENTS ANALYSIS — G. J. C. Paul
- SITES COMMITTEE — A. L. L. Alexander
- MAGAZINE COMMITTEE — P. A. Wills
- CHAMPIONSHIPS COMMITTEE — E. J. Furlong
- F.A.I. REPRESENTATIVE — P. A. Wills
- ROYAL AERO CLUB AVIATION COMMITTEE — P. A. Wills
- PUBLIC RELATIONS — F. D. Storrs
- O.S.T.I.V. REPRESENTATIVE — A. H. Yates

The above represents a comprehensive organisation designed to meet the needs of a complete specialised branch of aviation activity. Apart from the permanent Secretariat (six people), *every Committee is chaired and run by enthusiasts working in their spare time on an honorary basis.*

The results of their work have created such confidence that in the United Kingdom responsibility in nearly every field is exercised by the B.G.A. instead of the Ministry of Aviation. Alone amongst the nations of the world, the British gliding movement is not subjected to governmental control, but itself handles all

matters connected with (a) Aircraft Registration, (b) Certificates of Airworthiness, (c) Pilots' Licenses, (d) Pilots' Medical Examinations, (e) Instructors' Categorisation, (f) Instruction Standards, (g) Pilots' Qualification Standards. In addition to this formidable list, accidents are reported to and analysed by the Association (serious ones are in addition reportable to the Ministry), and Airworthiness requirements have been established by the Air Registration Board in the closest consultation with the Association's Technical Committee.

International Records and sporting matters and the award of international Pilots' Badges (laid down by the Fédération Aéronautique Internationale) are delegated to the B.G.A. by the Royal Aero Club.

CONTROL.— Member Clubs and Groups bind themselves to abide by the Operational Regulations of the Association, and in this lies the core of the self-imposed discipline on which our good name has been founded. These Operational Regulations, forming the distillation of over 30 years' experience, are as follows:—

OPERATIONAL REGULATIONS

Applicable to Member and Associate Member Clubs unless relevant Service procedure and discipline is in force, and to Private Owner Groups.

General

G.6.— All Club local regulations, in addition to the B.G.A. Operational Regulations, but not in place of or contrary to them, must be posted in a visible place in the Club premises.

G.7.— All Clubs shall compile and keep such log books and flight time sheets as to enable an accurate record of the Club's flying operations to be kept.

G.8.— All gliders shall be covered by third party insurance for at least £10,000.

Qualifications and Licences

Q.4.— No pilot may fly more than 5 miles from his take-off point unless he has a C certificate and carries with him maps marked clearly with the Airways and Control Zones.

Q.5.— Before going solo, a glider pilot is required to sign a Declaration of Physical Fitness. Before starting to give instruction, the Declaration must be endorsed by the instructor's own doctor, or, if this is not possible, he must produce a medical certificate. Exemption exists for pilots holding a Private or Commercial Pilot's Licence, or Service personnel holding appropriate medical certificates.

Airworthiness

A.2.— All gliders flying at Club sites shall possess one of the following which shall be valid:

(a) Ministry of Aviation Certificate of Airworthiness or Permit to Fly;
(b) B.G.A. Certificate of Airworthiness, or Permit to Fly, with card displayed in the cockpit;
(c) Equivalent Service document;
(d) Equivalent document for visiting aircraft from abroad.

Exemption exists for test flying carried out by or on behalf of manufacturers approved by the Air Registration Board or B.G.A. (details from the B.G.A.).

A.3.— All Club gliders shall be inspected each day by a club-approved person, who must sign that the glider is serviceable before it is flown on that day.

A.4.— Except as otherwise permitted by the B.G.A. Technical Committee, all gliders flown from club sites shall be fitted with automatic back-releasing hooks. Locking of such hooks is prohibited, except for special occasions such as aerobatic displays by experienced pilots or instructors. It is the responsibility of the pilot who has flown with the hook release locked to free it before anyone else flies the aircraft.

Launching Equipment

L.2.— All equipment used for launching, including the wire, rope or cable, must have been inspected and approved as serviceable each day before being

used. Winches and tow cars shall, as a minimum, be checked for sufficient fuel, oil and water, for the proposed launches, and that there is a serviceable cable cutting or releasing mechanism.

L.3.— A weak link, not exceeding 1,000 lb. in breaking load or in accordance with that specified in the C. of A. of the glider to be launched, whichever is the lower, shall be used on every launch other than bungey launches except where the strength of the cable, as manufactured, is below this figure. (Note: In 1961 there were no gliders on which a 1,000 lb. rope could not be used.)

L.4.— The glider end of all launching cables must be fitted with linked rings designed to fit the release mechanism on the glider. Distorted or cracked rings may not be used.

L.5.— To ensure that the winch or car driver can see clearly when the cable is released, the glider end of the cable must be made visible by a flag, parachute or similar device.

L.6.— On multi-cable winches, the engine must not be run while work is being carried out on any cable.

L.7.— On twin-drum winches the end of the left-hand cable, seen from the glider end, shall be coloured red.

L.8.— If cable runs are nearer to each other than 200 feet.:

(a) only one glider may be attached to a cable at any one time, and

(b) after every launch the used cable must be drawn in to the winch before another cable is used.

Signals

S.5.— An adequate system of communication must exist between the person in charge of launching and the winch or tow-car driver, or tug pilot.

S 6.— One of the following procedures must be used for all launches, other than bungey launches, unless a serviceable telephone or radio system is installed between the person in charge at the glider end of the cable and the winch or car driver or tug pilot:—

ONE BAT METHOD.— Bats to be easily visible at the distance required

(a) Take up slack, take-off path being clear: one bat moved to and fro in front of the body.

(b) All out: one bat moved to and fro above the head.

(c) Stop: one bat held stationary vertically above the head.

TWO BAT METHOD

(a) Take up slack, take-off path being clear: one bat moved up and down.

(b) All out: two bats moved up and down.

(c) Stop: two bats held vertically above the head.

LIGHT METHOD

(a) Take up slack, take-off path being clear: dashes of one second duration and three seconds interval.

(b) All out: quick dots at one second interval.

(c) Stop: steady light.

Lights may not be red or green.

S.7.— When telephonic or radio signalling is used, means must exist for an emergency stop signal which can be received notwithstanding the noise of the engine.

S.8.— When aero-towing, the order of the tug pilot to the glider pilot to release shall be the rocking of the tug laterally. This order must be obeyed immediately.

S.9.— The signal by the glider pilot that he is unable to release shall be that he flies out to the left side of the tug as far as is practicable and rocks the glider laterally.

Flying

F.8.— No persons may fly in a glider unless they have individual harness which is kept fastened throughout the flight.

F.9.— A glider joining another in a thermal shall circle in the same direction

as that established by the first.

F.10.— No glider shall enter cloud within a radius of 5 miles of a gliding site except from at least 200 feet below the lowest part of the cloud.

F.11.— No glider shall enter cloud unless all its occupants are wearing serviceable parachutes and have been instructed in their use.

F.12.— Any newly rigged club aircraft, or any club aircraft which has been subject to adjustments or repair since its last flight, must be first flown by a pilot approved by the C.F.I. or his deputy for that purpose.

F.13.— The launching cable must not be attached to the glider until the pilot is ready to be launched, and the launching signals must not commence unless the projected take-off path is clear.

F.14.— All pilots must report any suspected defects or heavy landings to the instructor in charge before the aircraft is flown again.

Flying Instruction

I.1.— Each Club which accepts flying members whose experience as pilot in charge of gliders is less than 10 hours shall inform the B.G.A. of the name of its Chief Instructor, who shall be the holder of a current B.G.A. Instructor's Category, with a C.F.I. Endorsement (details page 18 of Air Law).

I.2.— Instructor Categories shall be held also by professional instructors and by instructors in charge of *ab initio* courses, except where the course is for full flying members of the instructor's own club. Taking charge involves, in this case, being on the site and accepting full responsibility.

I.3.— The C.F.I. shall register all his Club Instructors with the B.G.A. before they start to give instruction to pilots and pupils who have not yet gained their C certificate.

I.4.— No Instructor shall be the C.F.I. of more than one Club, unless they operate from the same site.

I.5.—All flying instruction given shall be in accordance with the B.G.A. manual and syllabus.

I.6.— All pilots shall be required to keep a log book at least until they have completed their Silver C certificate. This shall be made available to the instructor before flying.

I.7.— The C.F.I. shall have an overall responsibility for all matters concerning flying on or from the Club's site, and no flying may take place without his authority. His decision in flying matters is final.

I.8.— The C.F.I. may appoint deputies to carry out his instruction if absent, but he remains responsible for all flying activities.

Aero-Towing

T.7.—The sum of the tows made by the tug pilot and the glider pilot, in their respective capacities, shall be not less than six.

T.8.— It is the responsibility of the tug pilot to ensure visually that the glider is, in fact, released.

Accidents

P.2.— All accidents, and all incidents which might have caused damage to machine or pilot, must be reported on the card or forms supplied by the Association for the purpose in less than a month from the occurrence. If the accident is of sufficient severity to be reported to A.I.B., the Association must be informed of its occurrence within 24 hours.

NOTE.— Incidents which should be reported include: fouling of the cable with the glider during the launch, wrong or mistaken signalling, failure of any part of the glider during flight, damage to the glider when ground-handling or rigging, etc., or for which there is no obvious explanation, inadequate daily inspection, near collision, etc.

It must here be stressed that anyone in our free country who wishes to may glide: he or she may construct a glider to their own ideas in their own backyard and fly it from their own ground. But if they wish to fly from B.G.A. clubs, they must conform to B.G.A. standards.

RESPONSIBILITIES OF COMMITTEES.—Perhaps the most concise way to sketch the break-down of the work amongst the various Committees and Panels is to quote their Terms of Reference. These are as follows:—

TERMS OF REFERENCE OF COMMITTEES, PANELS AND OFFICERS, 1961-62

Flying Committee

1.—To examine the Rules and Regulations for Championships, Competitions, and Contests, and to make recommendations to the Council.

2.—To examine proposed amendments to the F.A.I. Regulations for Records and Gliding Badges, Operational Regulations and the legislation affecting the Operation of Sporting Gliders in the U.K., and to make recommendations to the Council.

3.—To examine any other matters affecting glider flying which are not covered by any other B.G.A. Committee.

4.—To deal with any unusual problems in connection with the award of Gliding Certificates and Badges.

5.—To examine, and recommend to the Council, all claims for the homologation of gliding records.

6.—To examine and make recommendations to the Council for claims to Annual Awards.

7.—The Chairman of the Committee is empowered to make decisions on Items 4 and 5 above without reference to his Committee.

Technical Committee

To advise the Council on technical matters, in particular to supervise the Airworthiness Scheme.

1.—Supervision of the issue of Certificates of Airworthiness.

2.—Supervision of the Approval of Inspectors.

3.—Consideration of all technical problems.

Magazine Committee

The Magazine Committee is responsible to the Council for the efficient running of the Association's magazine, and for assistance and advice to its Editor. Editorial policy, however, is independent.

World Championships Master Committee

Responsible for the supervision of all arrangements for sending a British Team to compete in the World Gliding Championships.

The Chairman of the Committee also to be Chairman of the Pilots Selection Committee and any other sub-committees formed in connection with the World Championships.

Instructors' Panel

1.—To assist Clubs in all matters of gliding instruction, including the arranging of lectures, courses, etc., and the circulation of information.

2.—To lay down standards for qualified gliding instructors; to appoint examiners and to carry out such tests as are necessary to maintain these standards.

Routine matters to be left to the Chairman to deal with without reference to the Panel.

Sites Committee

GENERAL PURPOSES OF THE COMMITTEE:—To facilitate the acquisition and retention of suitable sites for gliding by gliding organisations of all kinds including individuals and the B.G.A. To serve as a go-between as regards clubs, individuals, owners of land and public authorities as they affect land for gliding.

In furtherance of the above purposes:

1.—To advise anyone interested on the suitability of a proposed site.

2.—To assist in negotiations with the owner of a proposed site for licences, leases or purchase.

3.—To mediate in any dispute arising between any gliding organisation using,

or proposing to use, any site and other persons or organisations.

4.—To advise and assist on all other matters affecting sites, such as rating, taxation, planning and public health.

5.—To incur expenditure, to be defrayed by the B.G.A., on visits, correspondence and in other ways likely to further the above purposes, such expenditure not to exceed £50 in any calendar year without the express authority of the Treasurer of the B.G.A.

Airways Committee

1.—To provide B.G.A. representation on all relevant Ministry of Aviation working parties or Committees concerned with the allocation and use of U.K. designated airspace.

2.—To provide B.G.A. specialist representation as may be necessary at all formally convened discussions on these and related subjects, including "air misses".

3.—To maintain personal contact with planning, and introduction of changes in U.K. controlled airspace.

4.—To negotiate direct with the Ministry of Aviation departments on matters affecting changes in controlled airspace, seeking local concessions and the like.

5.—To maintain a continuous watching brief on all matters concerning controlled airspace and to advise the Council on important problems as they arise.

Management Committee

To deal with matters of staff, administration and the Secretariat other than those which are the normal responsibility of the Secretary, and to give the Secretary any advice she may need on such matters.

Accidents Analysis Officer

1.—The responsibility of the Accidents Analysis Officer is to assist Clubs to eliminate accidents by analysing and reporting upon all relevant information available.

2.—The Accidents Analysis Officer is to do this by:

(i) Receiving all reports rendered in accordance with B.G.A. Operating Instructions, Paragraph 29.

(ii) Taking all possible action to ensure that the cause of each accident is revealed and eliminated.

(iii) Ensuring that the Chairmen of the Instructors' Panel and Technical Committee receive copies of reports which affect their work, or on which they may be required to take action.

3.—In addition to this, the Accidents Analysis Officer is to:

(i) Maintain a record of all Accidents and Incidents reported to him.

(ii) Render an Annual Report to the B.G A. Council.

(iii) Report to the Council at their routine meetings any event, action, or conclusion which he considers should be brought to their attention.

4.—Reports rendered by Clubs are confidential and the information contained in them is not to be revealed to anybody, except insofar as is necessary to perform the duties described in paragraphs 1 to 3 above.

INCOME OF THE ASSOCIATION.—A comparatively small part of the income of the Association derives from Membership fees. The balance is made up from charges made for Pilots' Certificates and badges, and a large proportion from the sale of books covering every aspect of the sport, gliding ties, various miscellaneous articles of equipment, and the publication of our own magazine, SAILPLANE AND GLIDING. This also is done on a voluntary basis (SAILPLANE has never yet had to pay for an article), and is undoubtedly the best magazine devoted solely to the sport in the world. It is sold in over 60 countries.

The success of the British gliding movement lies largely in this fact: that we are trusted to control ourselves, and do it better (we think) and much cheaper (we know) than any other nation in the world.

Flying the "463"

by A. D. Piggott

Winner of the Standard Class Championship, 1962

I HAVE always been an advocate of smaller and lighter gliders and was, therefore, particularly pleased to be given the opportunity to fly a new Olympia 463 for this year's Championships.

The result was indisputable. With the 463 I was able to compete on at least equal terms with the Skylark 3's in all conditions. Furthermore, I had more fun and flying for less worry and tedious ground-work than with any other machine I have ever flown.

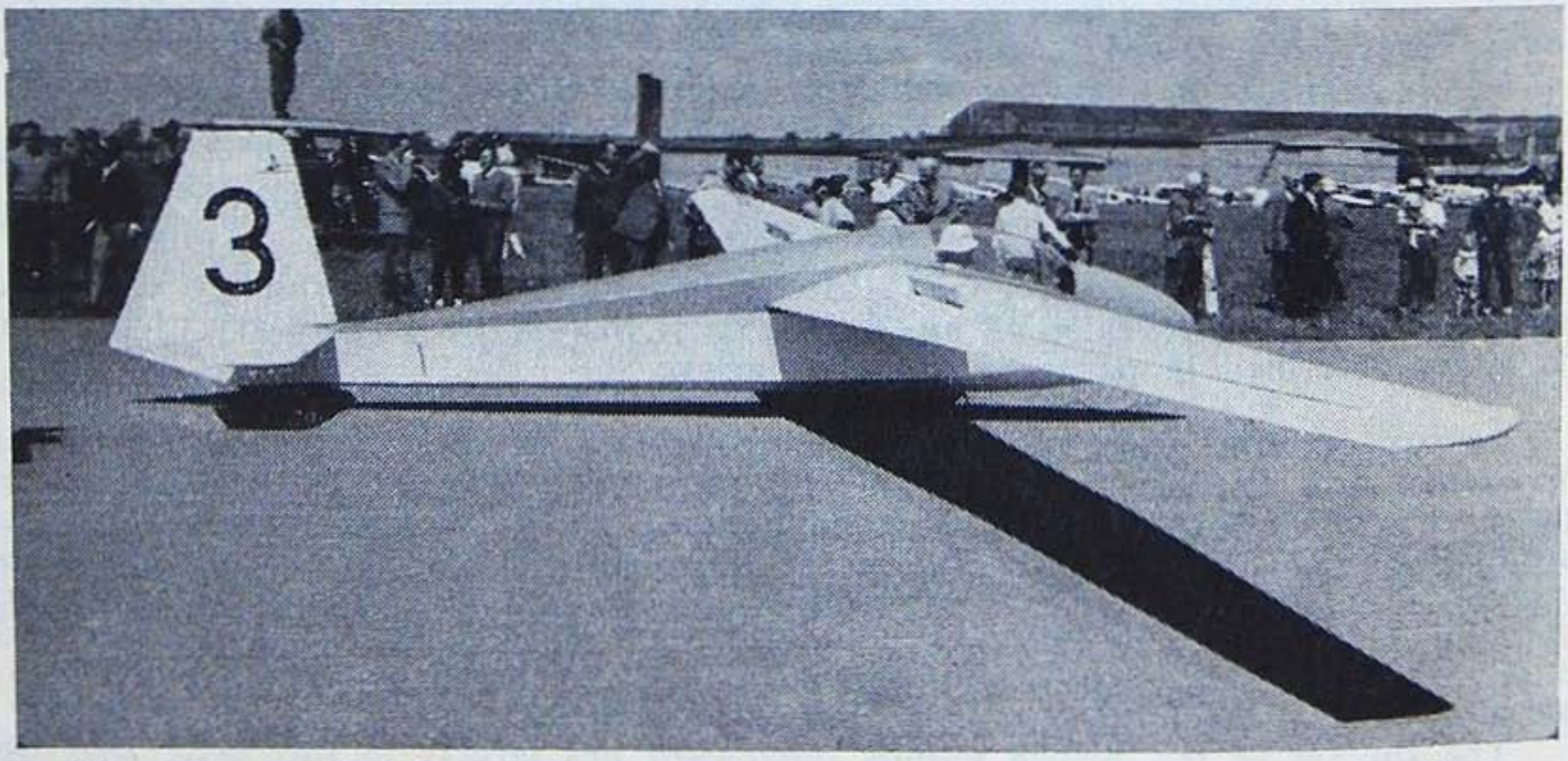
The increased wing chord and other detailed alterations on the 463 are the answer to the criticisms of the early models, and the performance has been greatly improved. The very low total weight of 380 lb. (a little more than a Tutor) makes rigging and ground-handling simple. Unlike the present-day 18-metre gliders, it would be well worth rigging the 463 on a marginal day or even for a few circuits!

The wings weigh under 100 lb. each and the wing-tip is light enough for your wife or girl-friend to carry without strain. Rigging is very similar to a normal Olympia, except that expanding collets are used instead of the larger tapered main pins, and that most of the safety-pins have been eliminated. The folding tailplane is an added convenience, as it takes only a moment to unlock and fold up alongside the fin.

The cockpit is roomy, and adjustable rudder pedals make it comfortable for tall and short pilots. The shoulder-wing position gives the pilot an excellent view in all directions, including behind. This proved a great comfort when sharing thermals with 18 or more other machines.

The fuselage has been designed for strength and low weight, and is not very beautiful to look at. The nicely faired ply and fibreglass nose and cockpit changes behind the wing to the very rugged flat-sided fabric-covered rear fuselage. The main wheel has a very efficient internal expanding brake and is mounted well forward with a short skid in front and a fairing behind it. This arrangement prevents the wheel running into a hole or step. It also eliminates any risk of skid or bulkhead damage in heavy drift landings, as the landing shocks are taken on the wheel. The landing run on dry ground proved to be very short.

However, it is in the air that the outstanding features become apparent. The turning radius is incredibly small, and it is possible to turn inside and out-



The Olympia 463 in which Andy Coulson competed in the Championships.
Courtesy of "Flight"

climb almost any other type of glider in narrow thermals. The controls are much lighter and crisper than in other British gliders, and accurate centring is made very easy by the quick initial response to aileron movements. Once trimmed, it will circle continuously hands-off in thermals, and it showed no sign of lack of stability or twitchiness.

The low all-up weight, low drag and hook position make winch launches of 1,600-1,800 feet normal, and on most days an aero-tow is a quite unnecessary expense.

The stall seemed acceptable, and when thermalling tightly the pre-stall buffet is very obvious a few knots before the stall. Control is very positive up to the moment of stalling, and the recovery is immediate. Measured by flying in close formation, the stalling speed was almost identical to that of the Skylark 3.

I found the nose-down attitude at high speeds rather deceptive and, during the first few days of the competitions, I was tempted to suspect the A.S.I. of under-reading, and so flew too slowly between thermals.

The performance at high speeds was obviously up to standard, as on several occasions I flew 50-60 miles with the Best People in their 419's and Skylark 4's until usually I made a stupid blunder and was forced to fumble around in weak lift while they disappeared into the blue.

In marginal conditions the 463 proved excellent, and I only hope that none of my pupils were watching as I climbed away from 350 feet over the edge of the airfield on the practice day, or, worse still, near Ross on Wye. On several occasions I watched most of the near-by Skylark 3's go down, and I always felt that I was competing on at least equal terms with them.

After over 40 hours of intensive competition flying, I am convinced that this machine is a great step ahead in putting the fun back into gliding. With a lightweight and inexpensive trailer (Andy Coulson's weighed under 7 cwts. with the glider inside) it can be retrieved by any 8-10 h.p. car and is a very attractive proposition for both clubs and private owners who want more fun and more flying.

* * *

Chips from the Champs

Competitor, to fellow competitor who had charged close beneath him the day before: "D'you want the paint back off your rudder?"

Question asked at briefing about turning-point heights: "How do you know if you're at 3,300 ft. when you're going round a big curve starting at 5,000 and ending at 2,000?"

Team member: "Crewing for *** is rather like jury service: when you've done it you should be exempt for seven years."

Slogan on paper tea-mugs in the Cafeteria: "Keep your eyes on your work! . . . Safety first!"

Philip Wills, describing his flight on the day when both Leagues had the same task and every thermal along the route was packed with gliders: "A marvellous day — but, my *dear*, the *people*!"

Meteorologist concluding his last briefing: "Prizegiving will be dry and I shall be going home at half-past eleven."

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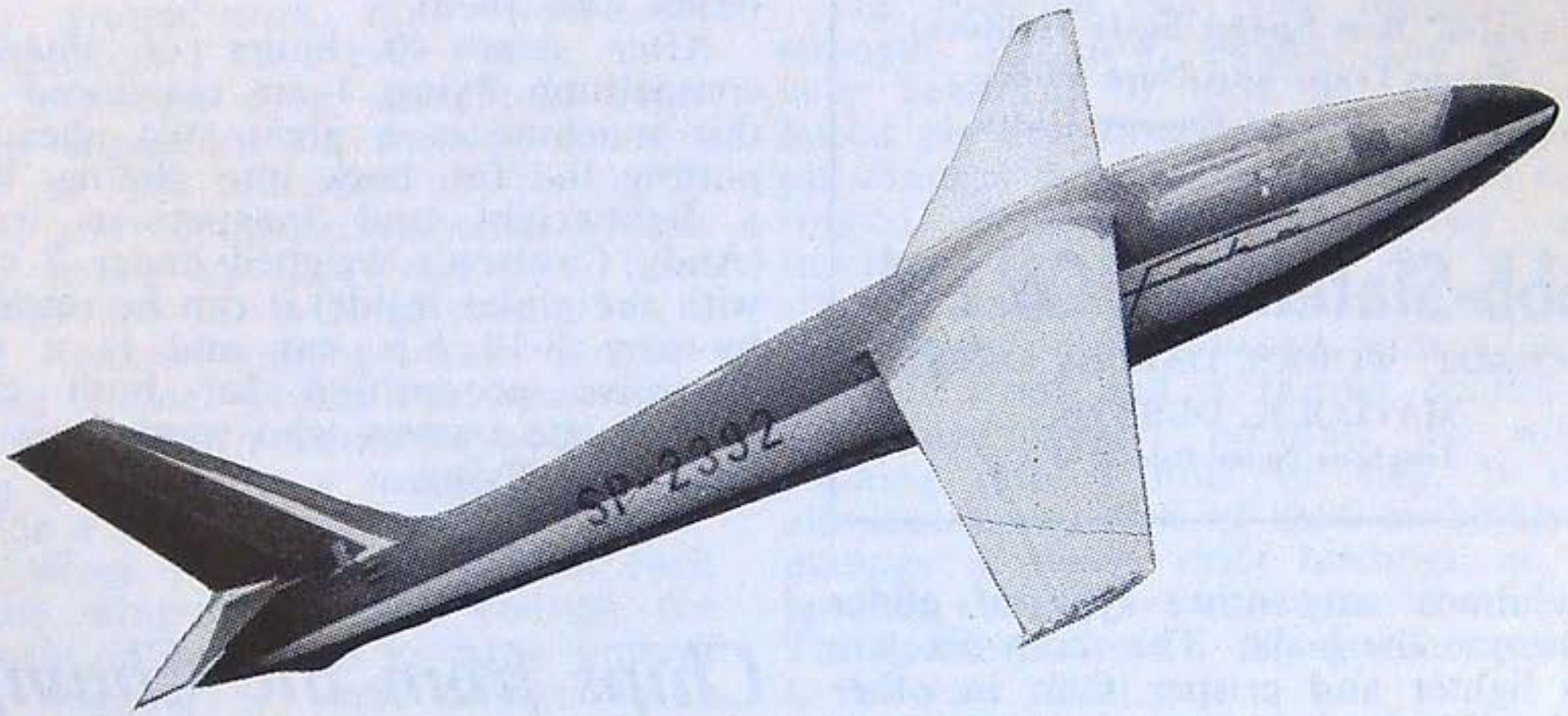

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B. A. G. Meads, M.B.E.—An Appreciation

AFTER 25 years' faithful service, Basil Meads has relinquished his position as our Chairman. We would not like this occasion to pass without putting on record our appreciation and thanks to him for all he has done for us. Who better to put our thoughts in print than Cyril A. Kaye, who has worked with Basil from the very beginnings of gliding at Camphill? Basil is now our very active President and we all feel privileged to have a man of such experience in this important position.

J. PETER MACKENZIE,
Chairman, Derbyshire and Lancashire Gliding Club.

MORE than 25 years ago the writer and other members of the Committee agreed a proposal that the subject of this appreciation should be the first Chairman of the Derbyshire and Lancashire Gliding Club.

Now, after more than 25 years of continuous service in that office, we have lost that Chairman but we have gained a President. This is perhaps no bad exchange since it leaves us, still in harness, one who has been identified with this Club from its inception, and moreover one who has been identified with flying since long before that, both with and without the aid of engines.

In those far-off days when "Kronfeld on Gliding and Soaring" was the only authority for those who wished to pursue "the effortless sport", a young enthusiast known to his familiars just as Basil was caught up in the pursuit. Whether he was present when Kronfeld first demonstrated the art at Scarborough and elsewhere is not on record, but it is highly probable, for not long afterwards there began to appear certain gliding activities in the Derbyshire Peak, motorless aircraft were observed being towed along the highways between the Stockport district and the Peak, and certain "build and repair" activities were noted in the neighbourhood of Manchester, all associated with the Manchester branch of the Royal Aeronautical Society and the name of B. A. G. Meads.

By peculiar chance the same name occurs in the early annals of the Lancashire Aero Club coincident in time with the names of Bert Hinkler and certain long-distance projects which then attracted the public eye, of Roy Dobson, later to become the boss of Hawker-Siddeley, and of Roy Chadwick, to whose credit were later to stand the design of some very famous bomber aircraft bearing the name of AVRO.

The founder members of the D. & L.G.C. were not to know of this — did not in fact know of it until long after they had learned that there were not many names in the aircraft world with whom Basil was not on Christian name terms. It was also not realised, and certainly not appreciated, that many impossible problems in Club development owed their apparently miraculous solutions to the personal genius of the Chairman and his ability to call on the resources and experience contained within this vast circle of knowledgeable people. "Ask Basil" became the accepted course for puzzled members when their own resources proved unequal to the unpredictable crises which arose with such regularity in those days, as indeed they continue to do.

That this should have led to a benevolent dictatorship was perhaps one of the strongest factors in the first quarter century of the Derbyshire and Lancashire Gliding Club. No one was

better placed than the writer to observe and appreciate the value of a leader who was not only able in the spheres of organisation, finance, diplomatic negotiation and practical know-how but was also a pilot and instructor of no mean repute in aircraft of all sorts and sizes and, withal, was quite happy to take his coat off, sweep the hangar floor, lay concrete, mend broken gliders or improve the bar takings as need arose.

Sometime about the mid-point in the quarter century, a speaker at an A.G.M. proposing a Vote of Thanks to the Chairman, said of him, "No other member put more into this Club than our Basil; none took out less". On those words the writer may well close this appreciation, knowing they are as true now as then, and knowing also that it will be the intention of our new President that they remain so.

C. A. KAYE.

NATIONAL CHAMPIONSHIPS, 1962

Aston Down, June 2nd-11th

by Ann Welch

WELL, it happened again, nine days of continuous soaring weather. After the dreary cold spring which seemed an interminable continuation of winter, it was unbelievable that the anti-cyclone (and a warm one, too) should arrive precisely on the day required. Now, after five consecutive good weather Nationals in England, surely such luck cannot continue.

Before the Championships began, there were various misgivings about the site at Aston Down and the organisation, which was going to have to set itself up on an empty station, but these were soon dissolved. The airfield was excellent, the surrounding country beautiful, and the R.A.F.G.S.A. had, with immense hard work, set up an entirely adequate base. Throughout the Nationals their organisation ticked over smoothly, resulting in flying arrangements to everyone's satisfaction. They are to be congratulated on a very happy meeting.

The task-setting policy of more triangles and out-and-returns, with fewer distance flights, paid off, and resulted in cheaper championships for competitors as well as less exhaustion all round. It was fortunate that the weather supported this policy, because with the best will in the world it is difficult to set triangles in strong winds! At Aston Down we had some days on which there was practically no wind at all, and it was even possible to include change of scene for the pilots into the task-setting considerations — a rare possibility in England!

The problem of selecting turning-points for triangles in weather in which records may be possible is, however, a nightmare, even if a considerable amount of work is done prior to the meeting. For competition purposes it is necessary to have a turning-point at which Observers can be stationed, and which will not be easily confused with some similar feature. It is quite a different problem from that of the lone pilot who can select, say, a railway junction in a town to photograph. Surprisingly, suitable competition turning-points are

Courtesy of "Flight"

fairly hard to find, but the difficulties are increased by the F.A.I. rule which says that each leg must be at least 28 per cent of the total distance. Even a small latitude here to, say, 26 per cent would help and still give a well-shaped triangle. It is not, of course, necessary in championships to comply with this rule, but failure to do so will prevent anyone claiming a speed record for the flight.

A further result of the "reduce the retrieving" policy showed up on the pilots and crews, the latter becoming fairly uniformly sunburnt, while the pilots had only brown faces and right hands.

In serious competitions, starting-line and turning-point observation has always been a bit of a problem. There is the need to identify the gliders and also to check that they do not exceed the permitted height With a large number of gliders, or hazy conditions, it is impossible to guarantee not to miss someone, particularly if gliders are forced to fumble about in the area looking for lift. Putting out markers which have to be noted by the pilots is not wholly effective, since it is often difficult to site them so that they cannot be seen from afar.

The problem of height checking at the turning-points is made greater by the high speed at which the gliders may round the point, sometimes diving from 5,000 feet and rounding at their maximum permitted speed before pulling up again. It is necessary to have an optical range-finder at the start line and each turning-point, but these cannot cope with a number of gliders at the same time, and in any case a reading may be taken inadvertently while the glider is still diving or climbing. Clearly a foolproof answer must be found, because this problem is becoming greater, but at the same time it is essential that costly equipment is avoided as far as possible. Having observers, a range-finder and ground markers works perfectly well in reasonable conditions, but there are times when it becomes too difficult. It would be made easier if the glider was required to do a complete 360° turn round the point at a constant speed; although this would be an unpopular requirement in marginal con-

ditions. For big championships the Swiss idea of doling out a small camera each day to each competitor is a good one. This would obviously have to be used in addition to the observers and markers, but it could provide valuable evidence on both the rounding of the turning-point and on the height. Ideally the camera should have a pistol grip.

At Aston Down we were able to communicate with the turning points by an h.f. radio link. It was an experiment, but the results showed that it was a valuable aid to the observers, as well as increasing the amount of information which could be given to the public.

The unseen observers who go out before flying starts and arrive back long after it has ended, probably just in time to hear someone complain that he was not seen, deserve particular thanks. It should not be thought for one moment they merely lie in the sun all day. At one point, one of them ran up a tower at frequent intervals to get a better view of doubtful or distant gliders and was firmly charged 6d. each time by the custodian!

Related to the question of start lines and turning-points, some sort of penalty system for exceeding the maximum 1,000 metres needs to be thought about. It is obviously not necessary or desirable to disqualify the whole flight. The start line penalty is not really a problem, since a glider's incorrect or unobserved crossing can be timed from the take-off or release time. For turning points the penalty could be something like five minutes for any infringement plus two minutes for each 100 feet. Thus a pilot turning 500 feet too high would have 15 minutes added to his time.

This year with good weather we had no troubles with X (the minimum distance to score). It never had to be less than the usual 20 miles. I think that there are advantages in keeping X low provided that is it difficult to exceed in a straight glide, as it gives more freedom when setting into-wind tasks and on days which turn out to be more difficult than was expected. The disadvantage of a low X is that a very poor day can count as a contest. This, I think, can be overcome by requiring that 20 per cent of the competitors exceed twice X in order that it should be a contest day, rather than the present rule that 20 per cent of them need merely score. This has the advantage, also, of reducing the marks step between those who just exceeded X and those who were, say, one field less.

At Aston Down our weather service was, as usual, excellent. We are tremendously lucky in this respect, and we should be thankful for the Met. Office support which allows us to have better forecasting for Nationals than can be found in many World Championships.

Finally, although our Nationals are large, with an astonishingly high standard of flying and fierce competition, they are still fun. The primary object is to get good flying and enjoy it. Long may this continue.

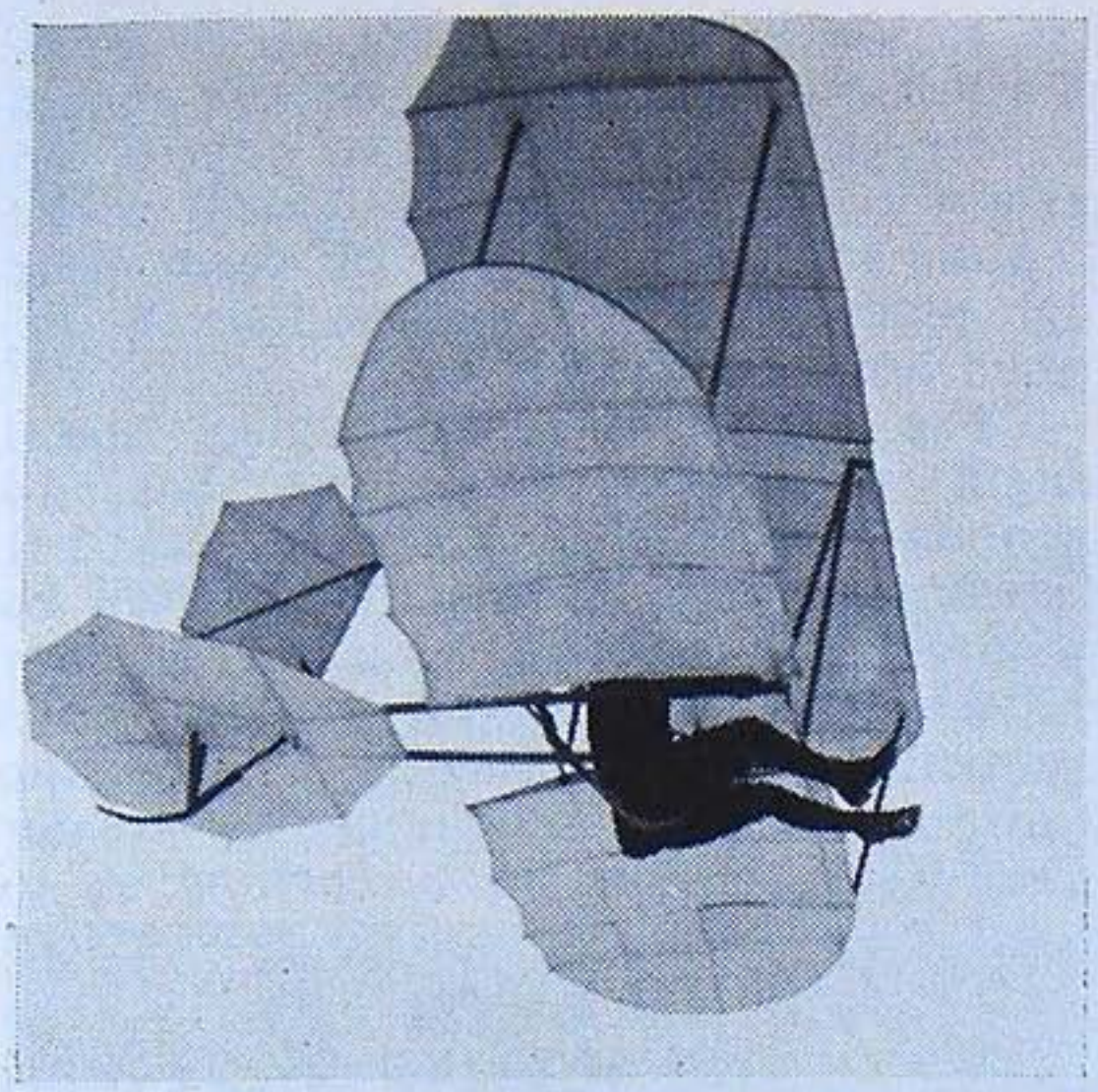
Early Gliding in the Alps

by Paul Valentin

Director, Gstaad Sports Centre

A few months before the world's first prolonged soaring flights in 1922, *a gliding competition was held in Switzerland, and although no soaring was done by the competitors, an entertaining time was had by all.*

AVIATION was still in its infancy in 1922, in comparison with present technical achievements. Above all, this was the time of the *début* of motorless flight. It is true that the first attempts go back to 1910, but for many years they went no further than "hops", demonstrated here and there in Switzerland to a sceptical public at meetings where powered flying showed more promise. At that time, ski-ing was still quite tiring to the legs of the many courageous men who practised it; on the other hand, the sport of "sail-flight" provoked general stiffness and aching, and tested them even more. But the pioneers were, and still are, indefatigable, and fought to keep them-



selves for a few seconds in the air on board apparatuses which they had made themselves. Of course, breakages and repairs were frequent. But " if at first you don't succeed, try, try again ". Several unshakeable men did not abandon their project. Enthusiasm knows no limits.

We were recently looking through E. Tilgenkamp's book " Schweizer Luftfahrt ", and we found that it is exactly 40 years since the first winter sail-flying camp was held at Gstaad. The " Mittelschweiz " section of the Aero Club organized an ' International course of motorless flight for beginners ", from 15th February to 15th March, 1922, and a Competition from the 8th to the 15th March.

Why did they choose Gstaad as the setting for this sensational demonstration of flying ? For this reason: " A great deal was expected from this demonstration, not only for aviation, but also for international tourist publicity, and this is, in fact, why Gstaad and the Swiss Tourist Centre were brought in."

And so the well-known promoter and initiator of Swiss sporting aviation, Robert Gsell, and the chief designer of the Federal aircraft works, engineer A. Haefeli, applied themselves with enthusiasm to the organization of this competition. After they had managed to engage the famous German record holder, gliding instructor Willy Pelzner, they finally enrolled four participants, who met at Gstaad with five gliders — a biplane with single strut, a braced monoplane with lattice tail, a monoplane with overhanging fuselage, and a biplane with two pairs of struts. Their names: H. Schmid, F. Chardon, Cuendet and Spalinger. The take-off ground was the embankment of the ski jump course at la Matte, near Eggli. Two inhabitants of Gstaad were engaged for 20 frs. per day as " porters " for the planes. Most of the gliders brought to Gstaad were not, of course, yet capable of flying, so that there was much scattered wood at the take-off. On top of this, the deep snow prevented the sailplanes from acquiring the necessary take-off speed, so that breakages were inevitable.

Robert Gsell made this report on the first demonstration of sail-flying in our country:

"The interest shown by the tourist community and the hotel keepers of Gstaad — the leader of the competition and the participants were given free board and lodging — dictated the choice of this station, as well as the hope of being able to make easy and safe take-offs because of the sloping snow fields.

" As a result of the late arrival of the pupils, the teacher, Willy Pelzner, defended the reputation of the organizers single-handed for three weeks, against the

One way to fly.
Courtesy Paul Valentin

sceptics who were not lacking among us — to the point where the list of flights for the opening competition grew to an extraordinary length. We must recognize the obstinacy with which Pelzner endlessly carried out repairs and climbed up again and again on new slopes in the snow, in order, in spite of all difficulties, to carry out flights of up to 42 seconds.

"Spalinger did not arrive until the 1st of March, with an unfinished monoplane with seat, and with the biplane glider which he had already used for years, and for which he had provided snow runners instead of wheels. Unfortunately the two planes were not finished until quite a time after the beginning of the competition, and the first damage incurred in take-off could not be repaired in time, so that the 'favourite' was eliminated.

"Mr. Schmid, who also had some experience in sailflying, suffered a more or less similar fate. His machine also was only ready towards the end of the competition, and the first trials finished in splintered wood, which could not be replaced in the short time remaining. Cuendet, one of our oldest and most experienced power pilots, was unfortunately only able to come from the Saturday to the Sunday, because of his work as a test pilot ; this is why he was unable to win the first prize, to which he certainly could have attained. The Thoune sailplane, starting off from quite high places, would doubtless have established amazing times.

"The phrase used in judging, 'total length of flights of more than 10 seconds', which was chosen for this first demonstration so that activity would be as intense as possible, gave the greatest chances of winning to the laborious competitors making short flights, as the transport of the machines to greater take-off heights, in snow reaching up to hip level, would have caused great loss of time. It is not surprising that the deep fresh snow caused serious difficulties to those gliders which hung on the pilots' backs, for as soon as one leg slipped free and plunged into the snow, a lower wing came into contact with the snow, which always led to a crash because of the launching speed.

"Although the deep fresh snow made trouble for the 'hang' gliders, as had been anticipated it facilitated the take-off of the sailplanes with seats, mounted on skis. Ski take-off permits simple sliding over fast slopes ; all that was necessary was an imperceptible pull on

Chardon on his way to the launching point.

Courtesy Paul Valentin

Well up with a non-human undercarriage.
Courtesy Paul Valentin

the joystick, and the machine rose above the ground.

"Though at first, for the reasons stated, the flights were few, their number increased astonishingly during the competition period. 137 flights and a total of 1,876.1 flying seconds is a heartening result for the first trial of motorless flying, if it is compared with the first performances abroad. The best performances are most certainly not to be compared with those which are at the moment being accomplished elsewhere.

"The winner of this competition was Francis Chardon, with 51 flights and a total of 617.2 flying seconds: average, 12.1 seconds".

And today ?

For some years, the Berne and Lausanne sections of the Swiss Aero Club have organized a soaring camp on the military aviation post at Saanen, near Gstaad, every summer. Pilots of motorless aircraft are still enthusiastic about the possibilities offered by this region, and they affirm that it is ideal for sailflying.

Instructor Pelzner shows how it should be done.
Courtesy Paul Valentin

Higher Altitudes Without Pressurization

WHEN Paul Bikle put up the international height record to 46,267 feet on 25th February, 1961, in California, it was generally assumed that he had reached the physiological limit of what could be achieved without a pressurised cabin or a pressure suit.

But there are still a few ways of lifting the limit to greater heights before resorting to pressurisation, and they have been set out in a recent research paper* by Dr. Bruno Balke, of Oklahoma, though he is concerned with cabin pressure failures in supersonic transports rather than height records in sailplanes. His methods are: (a) hyperventilation, (b) acclimatisation, and (c) pressurised oxygen.

HYPERVENTILATION.—In response to mental or other stress, pilots are apt to breathe faster without being aware of it, and thus reduce the normal ration of carbon dioxide in the lungs. This can bring on unpleasant symptoms such as dizziness, tingling, cramps, impaired vision and even unconsciousness. But people who fly under stress, like jet pilots, who often over-ventilate their lungs, do not get these symptoms, and Dr. Balke says they can be avoided by daily practice in forced breathing for 30 to 60 minutes during two weeks.

If a glider pilot cares to go to this trouble, a table of figures shows what advantage he can expect if he is of average constitution.

Breathing ordinary air, his normal altitude limit of 18,000 feet can be increased to 25,000 feet by deliberately over-ventilating to 3 times normal.

Breathing 100 per cent oxygen, which produces sea-level conditions at 34,000 feet, gives him a normal limit of 44,000 feet. Giving his lungs 2½ times their normal ventilation raises the limit above 44,000 feet, and 3 times normal ventilation raises it to 48,000 feet.

ACCLIMATISATION.—Living at 12,000 feet causes the body to adjust itself to that altitude, mainly by increasing the red haemoglobin content of the blood so that it can pick up more oxygen from the lungs. Full acclimatisation *plus* tolerance to hyperventilation produces the following results:

"Tolerable" level: 50,000 feet with four times normal lung ventilation.

"Critical" level (Loss of consciousness imminent): 52,000 feet with 5½ times normal ventilation.

BREATHING OXYGEN UNDER PRESSURE.—Although this gets more oxygen into the blood, it interferes with the mechanics of the blood circulation. Breathing in is an active process by which air is sucked into the lung, and then reduced pressure inside the chest helps to suck the blood from all parts of the body through the big collecting veins back into the heart. Oxygen delivered to the lungs under pressure interferes with this process, and if the positive pressure is as much as 30 mm. of mercury (1/25 of an atmosphere), the blood circulation is likely to stop completely. However, there is a remedy: immediately after each forced expiration, a short, vigorous inspiration is made: this, Dr. Balke says, enables the pilot to regain "a feeling of security".

Using this technique in addition to hyperventilation *and* acclimatisation, the limits are:—

"Tolerable": 58,000 feet; "critical": 64,000 feet.

So that is the absolute limit. If you insist on going beyond 64,000 feet, you really must do something about getting yourself pressurised.

A. E. S.

*"Human Tolerances", by Bruno Balke, M.D., Chief, Biodynamics Branch: Federal Aviation Agency, Aeronautical Center, Civil Aeromedical Research Institute, Oklahoma City, Oklahoma, U.S.A.; April, 1962.

Flying Skylark 165 in League 2

by Ian Strachan

League 2 Champion, 1962

Courtesy of "Flight"

MY last day's score in the 1961 Nationals had been a mere 9 per cent, so on 2nd June I was hoping for some improvement. The weather looked really cracking and the task was a 100-km. triangle. I was among the first away and had two strong thermals to be first round the turn at Burford. Unexpected Stratocu made me low on the second leg, but the turn at Wantage was completed after a decent climb north of Swindon, returning to this position to climb for final glide. Only five thermals, all strong, gave an average of 40 m.p.h. and 1,000 points.

The next day our task was Lasham and return, which I completed in the rather slow time of five hours. I made a tactical error in going round the edge of a large blue patch between Newbury and Lasham instead of pressing on through. At one time I was 15 miles off track south of Andover. Polaroid glasses might have helped me spot the dry thermals, and my detour dropped me to second place.

June 4th saw a 230-km. triangle set to airfields near Hereford and Stratford. The first leg I did in fine style, flying "Theoretical" speeds between thermals, leaving lift when it weakened, and not using weak stuff at all. This worked until Hereford, where I started an hour's scrape which took me at low altitude round the turn and ultimately to an all-time low of 300 ft. near Bromyard. Having somehow climbed away from this, I gave up all thoughts of speed flying and coasted round eventually at an average of 25 m.p.h. In fact, from Worcester onwards I was over-cautious as thermals on track were regular despite the late hour.

The following day was Free Distance as the Met. was not up to much, and the problem was to decide whether to go downwind to St. Davids, or cross-wind to either Anglesey or Cornwall. The latter gave the greatest possible distance so this was my choice, and I went away as soon as it was soarable. Bristol was not as good as expected but Taunton Vale was better, and after some straight and level flying in what was probably a sea breeze front to Great Torrington, I struck off into the blue on what I thought would be a final glide. However, a series of dry thermals took me as far as St. Eval. Five hours' flying and no less than 47 thermals, showing the shallow depth of convection. During the retrieve, which ended at 7 a.m., I mused on the announced policy that "long distances would not be set unless 300 km. was on". One consolation was 1,000 points and a good lead overall. Fortunately the next day did not boil up and League 2's task was cancelled.

June 7th saw a race to High Ercall, near Shrewsbury. I soared locally for 1½ hours before crossing the start line at 2 p.m., which time I judged to be best for strong thermals. As I had a good lead I tended to be a little over-cautious, taking too much height for the final glide.

The following day we had distance along a line through Yeovil, Lasham and Great Orme's Head. Once again I was away early, but it was difficult to know whether to fly for speed or just to coast round. I was low on several occasions after attempts to shake other gliders off my tail. My final thermal took me to 4,500 ft. over Newbury, but half an hour later three Skylarks had 1,000 ft. more in the same place and so flew a few miles further. The lead

increased to 1,100 points as Phil Jeffery, who had been flying his Sky brilliantly, came down on the second leg. One wonders in these circumstances just how much luck comes in to these matters, for I too could so easily have been down in the same place.

On 9th June we were set another 100-km. triangle, which I went round cautiously at 38 m p.h. I left the airfield early, which proved to be a bad decision as high cloud prevented really strong thermals on the first leg.

The final task was distance along a line round Andover to St. Just. League 2 was to be launched first, and with some Stratocu coming in, most pilots seemed to think it unsoarable. I advanced my take-off and was soon at cloudbase at 4,000 ft. and first round the turn. I led the field until Exeter, where I found very broken and unusable dry thermals, which brought me down. Most pilots found similar conditions, and the machines with a handicap bonus won the day, although they arrived an hour or so after the Skylarks. I maintained a good lead, however, and John Delafield with his Eagle moved into second place with Phil Jeffery third.

Tactics.—Even in League 2 it is essential to fly for speed if conditions are anything better than marginal. Weak thermals must be rejected and strong ones left as soon as they reduce in strength. My speeds between thermals were governed by the P.Z.L. "Speed-to-fly" ring, normally as follows:—

If the last thermal was, say, 6 knots (600 ft./min.), then I would set the "Speed-to-fly" arrow on 6 kt. down to 4,000 ft., on 4 kt. down to 3,000 ft., on 2 kt. down to 2,000 ft. and to zero below 1,000 ft. In practice before the Nationals we had several days of consistent and very strong thermals, and on these occasions I left the arrow on a high setting right down to 1,000 ft. On the average, however, I was using 1,500 ft. as my altitude for mentally "changing gear", and below this I accepted weaker lift. I found that the longer I could discipline myself to fly with wings level, even rejecting quite strong thermals, and the lower I was prepared to go in a search for good lift, the faster was my average speed. On distance tasks and the longer races I went away as early as I could, but on short races I waited until thermals were strong before crossing the line. Final glide calculations were done on a "G.J." calculator of my own design (send S.A.E. to me via B.G.A. for details if interested) and if it was possible I allowed for 5 kt. more headwind than forecast and glided in at the speed dictated by my last thermal. When the airfield was in sight, I used its position on the windscreen as a marker and changed speed as required in order to come over the finishing line at 20 ft. or so.

Instruments.—I made up my own panel and my varios were a Crossfell with Audio, and a P.Z.L. on "Burton" Total Energy. The Crossfell is the most sensitive vario that I have flown with, and whereas this very sensitivity makes it unsatisfactory on Total Energy, without T.E. it is the best instrument for scraping that I have met. I have flown some 70 hours with its "Audio" attachment and thoroughly recommend it as a most valuable aid in all sorts of circumstances, especially in crowded thermals and when trying to map-read

in weak lift and bad visibility. The P.Z.L. is an extremely fine Horn variometer, and its "Speed-to-fly" ring is quite invaluable. Units used: knots throughout.

Navigation.— I used Fablon-covered half and quarter million maps. The "quarter mill." is useful for approaching turning-points and for accurate checks on final glides, and the more standard "half mill." for everything else. Before take-off I marked in arcs from goals in 5-mile steps and checked the two scales of map against each other to ensure that no mistakes were made.

Radio.— Quite invaluable for crossing start lines, cutting down retrieve fumbles and keeping pilot and crew in a more relaxed state of mind.

Glider Trailers Blow Over!

DURING winter 1961/62 the insurance firm of Sedgwick, Collins & Co. have dealt with five claims around the country, where parked trailers have been moved or overturned by high winds, causing damage to both trailer and the aircraft therein, and they are aware of at least four other incidents in which they have not been professionally concerned. In several cases too, movement or the overturning of a trailer in a line of parked trailers has damaged one or more of its neighbours, and this inevitably leads to, at the least, recriminations and bad feeling.

There have been particularly high winds last winter, and inevitably with the increase of gliding and of syndicate ownership more and more trailers are being left out, the most sheltered corners get filled up, and trailers have to be parked in exposed positions. Certain precautions are taken at some sites, but these have on occasion proved inadequate; certainly the mere securing of the ball hitch to a stake or rail has proved by itself insufficient to prevent overturning.

This problem, the firm states, is proving to be a general one, and not confined to either hill sites or flat airfield sites, and they suggest that if trailers have to be left outside, then as a general rule they ought to be fully picketed down. One method might perhaps be to stake the ball hitch in the usual manner, to have the parking brake fully on (and working!), and then to run ropes or chains from the tops of the wheels outwards to stakes in line with the axle and a couple of feet out from the side of the trailer. An alternative method might be to pass strops right over the roof of the trailer — this is the custom at Camphill. The exercise of individual ingenuity by owners will, no doubt, provide many satisfactory solutions.

Returning Empties from the Milk Run

by George Collins

AT Perranporth the sky looked good on Saturday morning, 16th June, but the wind was N.W. about 12 knots, which a telephone call to St. Mawgan Met. confirmed and also added a dismal aside to the effect that cloud base would not go above 2,000 feet until well into the afternoon in Cornwall.

Dr. Pat Pearson said he would retrieve . . . the Tiger was out and Pip Phillips was ready to tow, so Lasham was decided. I cast off at 2,000 ft. a.s.l. slightly above cloud base, and to remain airborne was quite a tussle. Between 1,800 and 2,300 feet I slowly worked away to the north according to plan. Undoubtedly the sea breeze would rule out getting past Dartmoor on the southern side. The lift was weak and a few feet inside cloud was all that was given . . . the trailer had left . . . we hoped for better things to come!

Eventually, about 2¼ hours later at a point about 4 miles north of Okehamp-

ton, things did quite quickly improve and cloud base was obviously going higher. I found my next thermal much more lively, and to a snatch of "South Pacific"—"Once you have found her never let her go"—I hung on and watched it turn into 400 f.p.m., into cloud to the top at 4,900 feet. This was better, and I courageously worked out my ground speed, which was a miserable 24 m.p.h. I also gave an interested glance at the new Airway.

Passing near Winkleigh, things were still better and the smoke from a fire seemed to be curling up without much disturbance from any wind. Approaching Dunkeswell, we went easily into cloud again and made 5,300 feet, and soon after another cloud took us to 5,700 feet. Pressing on well to Yeovil our ground speed worked out at nearly 40 m.p.h., but the clouds showed signs of flattening and merging, so no height was given away and we floated gently on for about 25 minutes, when fortunately the sun broke through again and the cumulus quickly re-formed and were better than ever.

Salisbury ahead, Chilbolton with plenty of height, and then there was time to look lazily at the countryside for the first time and wonder how the crew had fared on the busy roads. The Skylark was now enjoying the liberty of being allowed to fly level.

We landed at Lasham after about six hours, and the reception was more than kind and extremely practical. My crew, Pat Pearson and Dennis Bolton, had really fought a nightmare battle with traffic jams in the usual places, so it was suggested that I be aero-towed back as far as Thruxton to meet the trailer *en route*. This was done, but it was still after 10 p.m. before they wearily drove into the aerodrome. Their retrieve is a story in itself, certainly a magnificent effort on a very hot day.

As for the flying, perhaps the barograph trace will tell most of the story. Undoubtedly there are good days to get out of Cornwall and this one was not the best . . . and yet it was good enough!

HONOUR FOR FRED SLINGSBY

The Royal Aeronautical Society's Silver Medal was presented to Mr. F. N. Slingsby at a ceremony held at the Royal Aeronautical Society on May 24th, 1962, in London, by the president of the Society, Mr. B. S. Shenstone.

The Silver Medal is awarded for the Advancement of Aeronautical Science, and was given to Mr. Slingsby for his "practical achievements in the design and construction of sailplanes". He has been building sailplanes for over thirty years, and, with the founding of the firm of Slingsby Sailplanes, began large-scale production and the development of many new and successful designs.

Must Gliding Mean Frustration?

by Derek Piggott

LEARNING to fly in a glider is usually a frustrating and time-absorbing business and it is not surprising that only a relatively small percentage of pupils persist long enough to become competent soaring pilots.

Apart from the delays caused by decrepit launching vehicles and bad weather, there is the fundamental difficulty that after each landing the glider must be manhandled back to the launching point ready for the next launch. This takes time and energy.

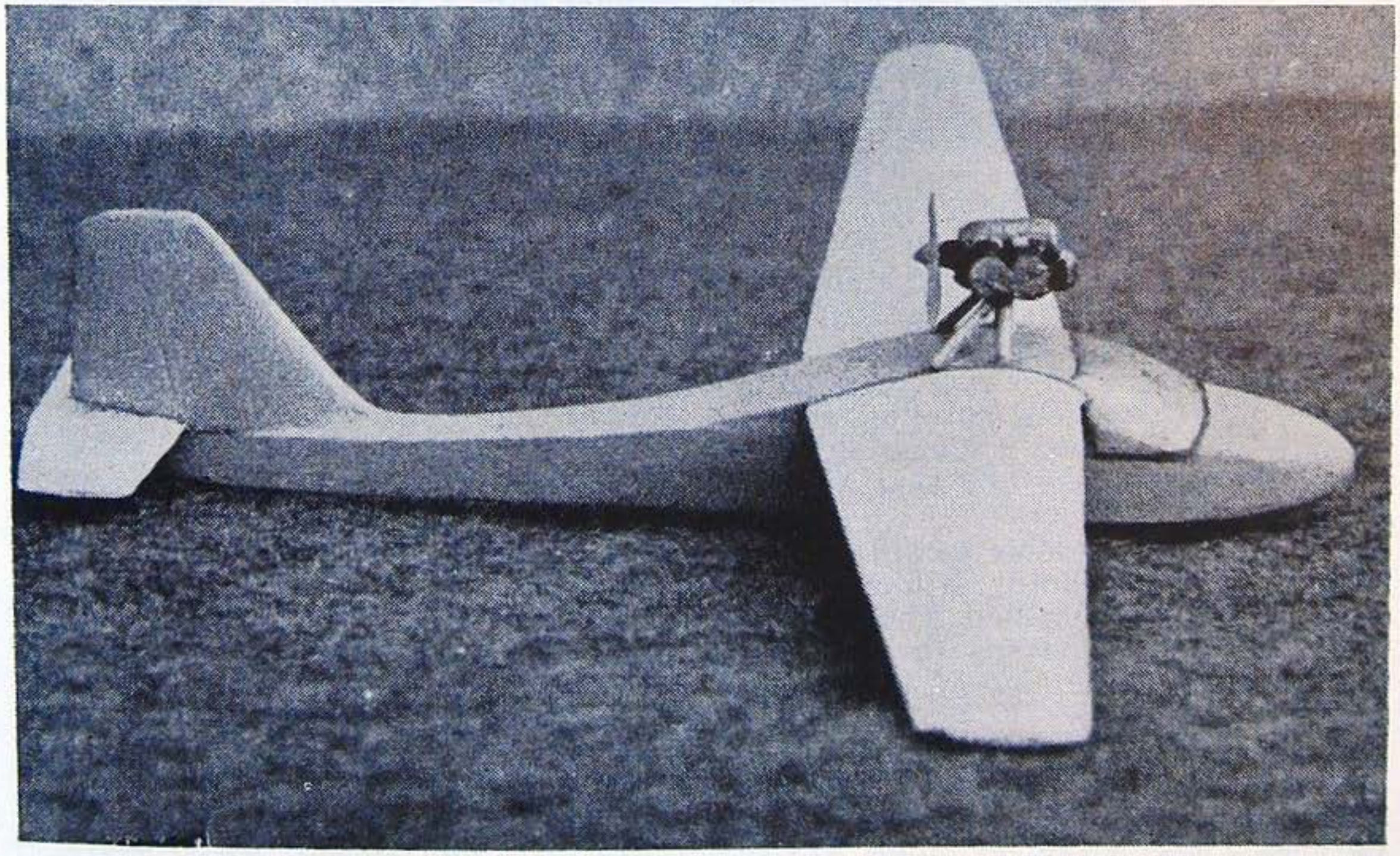
Unfortunately the maximum launching rate at most gliding sites is limited by the amount of room available for launching and landing. But in spite of the frustrations, more people are joining gliding clubs each year and it is becoming very difficult to provide enough training flights to satisfy their needs.

It is sometimes suggested that the answer is to use two-seater gliders of high performance and to launch them by aero-towing. This increases the duration of the flight and enables thermals to be used more frequently. However, it is difficult to provide the necessary pilots and serviceable tow-planes to operate continuously seven days a week, and the method does not really provide much cheaper and quicker training for the beginner.

A power-driven, self-launching two-seater trainer does provide this and would eliminate the wasted time and effort of ground handling. At the same time it would relieve the winch launching facilities of most of the instructional aircraft.

Numerous gliders have been fitted with small engines in the past, but the results were usually disappointing or expensive. Most of these machines were either low-performance solo gliders converted into rather under-powered light aeroplanes, or were attempts to maintain the original gliding performance by retracting the engine and propeller after use.

The possibilities of fitting a detachable power "egg" to standard two-seater gliders does not seem to have been fully



Derek Piggott adds a model motor to his model Capstan.
Photo by S. B. Wills

exploited. It would seem to offer a real hope of speeding up glider training.

The performance of both standard T-21B (Sedbergh) and the latest T-49 Capstan two-seater gliders has been estimated with the McCulloch 72 h.p. engine mounted externally above the wing. A comparison between the cost of operating these aircraft and gliders is also given. These show that for any kind of glider launch, the cost of a short training flight is about 6d. to 1s. per minute, or only slightly below that for a normal light aeroplane. In most clubs, the cost of some of these flights is subsidised by entrance fees and subscriptions.

The powered trainer also costs about 1s. per minute, but it could achieve more than twice the amount of flying than a glider launched by winch. This is particularly important if the cost of professional instruction has to be taken into account.

In order to appreciate the potentialities of this type of trainer, it is easiest to consider a converted T-21B or T-49 in use.

Look forward a few years and imagine the T-49 Capstan fitted with a 70 h.p. engine :—

The engine is mounted on struts above the wing and swings a pusher propeller of 45 inches diameter. The mounting struts pick up on the normal wing root fittings so that the engine can easily be removed for servicing or in order to use the aircraft as a normal glider. The power "egg", consisting of the engine, propeller and mounting, weighs about 100 lb. The fuel tank holds 6 gallons of petrol-oil mixture and is mounted in the fuselage near the centre of gravity.

There are three engine controls in the cockpit : the ignition switch, fuel cock and throttle lever. The throttle lever is gated to provide two settings, climbing power for the launch and slow running for the glide.

The only other visible modification to the glider is the addition of a small pair of wheels to the main skid. These project below the skid sufficiently to reduce the friction at the beginning of the take-off run.

The take-off from a standing start takes about 200-300 yards and the climb at 45 knots gives a climbing angle in still air of 1 in 7 and a rate of climb of over 600 ft. per minute. A firm backward pressure is needed on the stick to keep the correct climbing attitude, together with a small amount of rudder to overcome the yawing effect of the propeller and slipstream.

If the engine cuts, the nose must be lowered to get into the normal glide. On any normal-sized gliding site, an engine failure is no more hazard than a cable break on a glider, and it is dealt with in the same way by making an S-turn or circuit as necessary.

A great advantage is that the launch can be continued to whatever height the instructor desires. When practising the landing, a quick circuit can be made, climbing to about 500 or 600 ft. If the landing area is large enough, two attempts at the touch-down are possible before climbing up for another circuit.

At the top of the "launch", the throttle is closed to the gliding position, leaving the engine idling. This power setting is matched to produce the normal gliding angle of the T-49 glider and the performance and handling are almost identical. The airbrakes are used quite normally for the approach and landing, but must be closed before attempting to take off or climb away again. Providing that the machine is still moving when the decision is made to go round again, it leaves the ground after a very short run.

The engine is never stopped in flight except for instructor training. The rather high drag of the engine and mounting is, therefore, no serious disadvantage during descents, as it is always counteracted by the thrust of the propeller as the engine idles at about 1,200 r.p.m.

Very little strengthening of the fuselage has been necessary, as the traditional loads have been catered for by downgrading the powered T-49 to the Non-cloud-flying Category. Winch launching is permitted with the engine idling in order that instructional launches can be made without the need to remove the power plant when a two-seater glider is not available. A full power, never-exceed speed of 65 knots is necessary to prevent overspeeding of the engine and to keep the tailplane loads within the design limits.

The aircraft is regarded as a self-launching glider. Unlike a normal ultra-light aircraft, even if the engine stops altogether the gliding performance is little worse than the T-31 Tandem Tutor glider, and the powerful airbrakes enable

it to be landed in a very small space without difficulty.

The greatest advantage of this machine is that it curtails most of the tedious ground handling and the time wasted pushing the ordinary glider back to the launch point. Only one helper is necessary to hold the wing-tip for the first take-off of each training sortie. One powered T-49 does the work of at least two gliders, and the majority of the training can be done by this aircraft. Although it is intended mainly for *ab initio* instruction, soaring and map-reading exercises are also simplified.

The powered two-seater can be kept in a trailer and operated at a nearby flying club or disused airfield, as it fits in easily with normal light aircraft traffic and aero-tow launching, leaving the gliding site less congested and able to satisfy the launching needs of the solo gliders.

Self-launching Two-seater Trainers

	T-49	T-21B
Maximum all-up weight of glider	1,250 lb.	1,050 lb.
Estimated weight of engine, tank, controls and 6 gallons of fuel	150 lb.	150 lb.
Maximum all-up weight of powered machine	1,400 lb.	1,200 lb.
Maximum L/D of glider without engine	1 : 24	1 : 20
L/D with engine, propeller stopped	1 : 15	1 : 14
Climbing speed	47 knots	38 knots
Climbing angle in still air	1 : 7	1 : 5
Rate of climb	620 f.p.m.	810 f.p.m.
Stalling speed with engine idling	34 knots	30 knots

ENGINE: McCulloch, 4-cylinder two-stroke, 72 b.h.p., weight 75 lb. (approx.).

De-rated power for normal use	62 h.p.
Estimated propeller efficiency for climb	65%
Assumed drag of engine and mounting struts at normal climbing speeds	25 lb

Stalls and incipient spins permitted.
Non-aerobatic; spinning and cloud flying not permitted.
Winch-launching permitted with engine idling.

Comparison between the Cost of Gliding and Powered Trainer

ASSUMPTIONS.—Initial cost of T-49 £1,600, T-21B £1,000, Engine £400. Insurance 11% p.a.; depreciation 5% p.a.; servicing airframe 5%; winch operating cost 2s. per launch; aero-tow cost 15s. per launch; engine servicing 30s. per hour, fuel 10s. per hour. Average flight time: T-49 10 minutes, T-21B 6 minutes per launch. No allowance has been made for the salary of an instructor, tow pilot or winch driver.

Hours flown per year	*Type of Launch*	*Cost per hour* T-49	T-21B	*Approx. cost to Club Pilot*
300	Winch or	35s.	35s.	
500	Car	25s.	30s.	60s.
1,000	Unlikely to be achieved.			
300	Aero-tow	52s. 6d.	—	
500	Average flight of 30 minutes	44s.	—	45s. (subsidised by membership fees)
1,000		37s. 6d.	—	
300	Powered trainer	67s. 6d.	58s. 6d.	
500	Powered trainer	56s. 3d.	51s. 3d.	60s. to 65s. for approx. same profit
1,000	Powered trainer	47s. 6d.	45s.	

NOTE.—The manufacturers of both gliders and engine have not been consulted on these possible projects, which are intended only to show the advantages of the powered trainer.

East-West Relations

by A. H. Warminger

This flight is only the fourth in Britain to exceed 500 kilometres

OVER the last five years, with ten serious attempts behind me, including one flight of 258 miles to the fringe of Dartmoor, the early spring stand-by period was once again upon me. Would there be a chance this season for a flight to the south-west? 1961 was a poor Spring; the only real day was during the Nationals when lots of League 1 went on the day of the year from Lasham to Cornwall. Ena, my wife, had told me on the telephone how good it had been in Norfolk, too. Ah well, at least the run with the others had shown me the lie of the land and what Perranporth looked like from a sailplane — but to get to the story.

Saturday, 14th April, started off overcast but the wind was in the N.E. and fresh; at 08.00 hrs., when I finally started to do something about it, the strato-cu was 8/8 with little sign of loosening up or changing. Still, a N.E. was not to be ignored; too many times I had regretted an indecision caused by similar weather outlook. By 09.15 hrs., with Chris Delf duly collected, we were on our way.

Arriving at Swanton Morley, the strato-cu was changing character, opening up and beginning to street. Bill Reekie, our C.F.I., was already getting the Skylark 2 out with Peter Salmon; Taffy Rich, the Power C.F.I., forewarned, was attending to the Tug. By 10.30 all was ready — Bill came across and said, "Alf, the wind is marginal and Taffy says it's not on for his Tiger". Off to the Clubhouse — Taffy said, "Sorry Alf, it's too rough". "All right, I'll tug myself off", I said. He looked at me and grinned, "That should be worth watching — get into your cockpit, I'll be ready in five minutes".

And so off into the Wide Blue Yonder, upwind to Reepham Town for the cast-off, with the local police down below briefed to act as observers. In clear air at 2,500 ft. I pulled the plug and took a couple of shots with the camera (time, 10.25) — nothing like a bit of duplication just in case. That 8 miles upwind might well come in useful if the other end isn't quite reached. At 11.00 hrs. near Swanton Morley and down to 1,200 ft., a landing back seemed inevitable. On the boundary, however, the first lift arrived and at cloud base 2,300 ft. I set off down a street.

Fifteen minutes later I was in trouble again over N. Pickenham airfield — it certainly seemed the wrong day to have declared Perranporth; however, the arrival of lift in the order of 400-500 ft. per min. rather helped matters, and so off to the edge of the Fens around Feltwell. A thermal and a cloud street took me safely across and, with a rising cloud base, things progressively improved; by the time St. Neots was reached, I had decided to ignore lift less than 300 ft. per min., and with an estimated air speed of 48 m.p.h. for the first hour, pressed on on a course of 270° M. to compensate for the north in the wind. Bedford, Cranfield, Bicester, sailed merrily underneath, and a time check at Bicester suggested that 100 miles had been covered in the first two hours in spite of the initial difficulties. The thermals that had been bitty and difficult earlier were now strong and large, the wind rather less as progress was made to the S.W. Heights varied between 3,500 and 6,000 ft. with base around 4,500 ft. — no anxiety whatsoever. A glance down at Bicester with all the trailers on the ground and no gliders, suggested that the R.A.F. Rally had also ideas of Cornwall and had departed earlier — Brize Norton, Broadwell, South Cerney airfields all came and went, and on reaching the outskirts of Bristol my speed from Cranfield worked out at 60 m.p.h. — 123 miles, 123

minutes. On past the Cheddar Gorge to Bridgwater with the hills ahead giving good visual cloud developments. Being slightly south of track for most of my journey, I now eased a little more southwards to keep in from the coast — though the cloud was forming between me and the sea, so it should be safe.

As I approached Exmoor, conditions changed — clouds petered out, visibility deteriorated to 3-4 miles and the moor haze seemed to hang heavy in the sky; obviously I must adjust my tactics accordingly, so again just sufficiently in from the coast to stay clear of the sea breeze and not too far in to get involved in the clag, I slowed down and chased every little morsel of cloud that lay in the right direction. By 15.50 hrs. I pinpointed myself at Winkleigh, height still in the 3,000-4,000 ft. a.s.l. bracket but relatively high moorland underneath; with something like 66 miles to go and about 2 hours of probable thermal time left, the game was still well and truly on. Play safe seemed to be the thing. Bridgwater to Winkleigh airfield, a distance of 46 statute miles, had taken 1 hour.

Now I was getting tired and suffering a little from anxiety neurosis — I sat almost crouching, hardly daring to move except feet and hands, working lift of 100 ft. or so a minute. At last Davidstow Moor airfield came in sight and my pulse quickened as I realized I was in striking distance; but 2,000 ft. was no good, even if I did have 8 miles in hand by the tow upwind. Gradually the wind, which was blowing straight down the coast from behind the aircraft and probably a bit stronger because of the sea, took me to St. Mawgan airfield and Newquay and then, as the moors were left behind, so visibility cleared, clouds formed in a path along the coastline ahead and soon the 419 was lifting easily and gavotting up to 4,300 ft. Straightening out, we sailed effortlessly to Perranporth, hardly losing any height — arriving at 17.10 hrs.

Flying past in order to get up sun, I took photos of what to me will, in all probability, be the finest sight I shall ever see — my goal by the Atlantic, 320 miles and 6 hrs. 18 mins. after releasing from the tug with the North Sea in view.

Landing at 17.20 hrs., the familiar and excited faces of the Perranporthites gathered around; eager hands helped to take care of the 419. Bernard Warmington and George Collins were up from the village within minutes and insisted on my leaving the aircraft for their members to attend to. George literally brought out the fatted calf, but that's another story. Suffice to say that the hospitality, kindness and assistance given by our gliding friends in Cornwall made me feel very humble and very proud to be a colleague of theirs. One instance which I must quote, even if it does cause George embarrassment: the next morning I had eggs and bacon for breakfast, brought in by George and fried by him!

By 10.00 hrs. Chris arrived with Alan Pengelly of the Fenland Club. They had spent the night at Alan's home in Plymouth. And so back to Norwich, arriving home at 01.00 hrs. on Monday.

Forty Years Ago

by Wolfgang B. Klemperer

AVIATION, dream of mankind for thousands of years, which became reality and even commonplace during the present generation, has many facets. One of the most romantic of these is Soaring Flight. Vivid memories were evoked in me when, on 30th August, 1960, almost to the day forty years after my first glide of 2.2 km. from the Wasserkuppe in the Rhön Mountains, through the courtesy of Mr. Alex Schleicher of Poppenhausen, I was given an opportunity to make a short commemorative flight from the same spot. These memories go back to the very first Gliding Contest or Encampment of 1920, and to the heroic labours of the Academic Aeronautical Science Society of Aachen at Professor Theodor von Karman's Aerodynamic Institute which produced, under the stewardship of Dr. Paul Stock, the first cantilever monoplane glider; design and construction were pushed forward simultaneously, so as to arrive at the Wasserkuppe barely

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in time before the meet would close. It was with this ultra-light glider, despite its modest aspect ratio, that we were able to prove that soaring in a slope wind was not only possible but also exhilarating. Imagination was stirred and the continued encouragement of soaring flight trials by staging annual contests was assured. Take-off by rubber shock-cord on the windward slope was proven and accepted as a practical method, but the necessity of systematic pilot training in the handling of gliders was also brought home by various accidents.

In 1920, the Aachen glider "Black Devil", reflecting the emulation of Professor Junkers' cantilever monoplane prototype, was engineeringwise an advance over the gliders brought to the meet by the other participants, some of whom had power plane experience, while some did not; some were artisans, others students, some merely had fantastic ideas. Now, however, the seed was sown. Serious engineering efforts were applied by various groups, some of them organized at other colleges or institutes of technology.

Thus, in the second year, in the summer of 1921, a real contest among several competent teams came to take place during which the first notable performances of soaring flight were achieved and attracted wider attention.

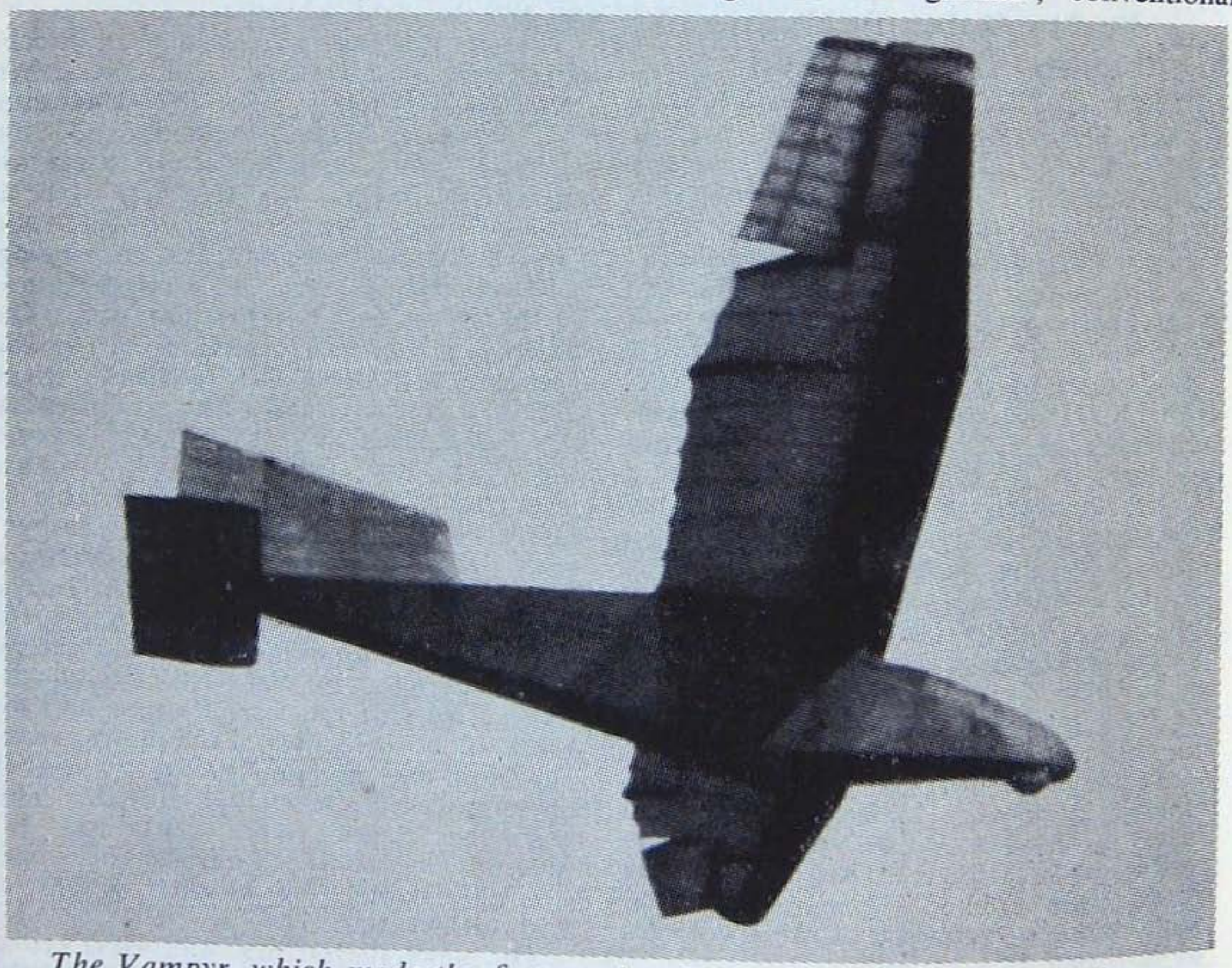
Many famous visitors came to the Wasserkuppe to watch the flying. Among them were Anthony Fokker, Dr. Lachmann, and Sir Frederick Handley Page; Professors Prandtl, von Karman and Hoff; Dr. Offerman, Dr. Madelung. Among the contestants were Lippisch, Brenner, Martens and Blume. Many new ideas were tried out. One of them was Koller's trial flights without a vertical tail fin (on the strength of the argument that the birds have none) and precarious direction control by split wingtip brakes, though the Munich group eventually, ruefully, returned to the conventional vertical fin and rudder system. Other innovations appeared on the scene: the tailless job of the "Weltensegler" group which unfortunately failed structurally in a dive, and variable incidence control of the wings instead of elevator and ailerons.

By far the most ingenious and technologically advanced sailplane then making its début was the Hannover "Vampyr". The fuselage and the forward wing structure were made of plywood, and it was the first stab at higher than conventional aspect ratio (10:1). Its performance was convincing. This was the year of long-stretched glides of several minutes duration. The Aachen group had been less daring and contented to bring the repaired "Black Devil", and a refined version of it called the "Blue Mouse" (the colour according to the hue of the fabric, the mouse after the shape of its nose). Unable to match the glide ratio of the "Vampyr" with the "Blue Mouse", I concentrated on the exploration of slope winds strong enough to stay aloft in soaring flight. The culmination of these efforts was my flight to Gersfeld around the north slopes of the Wasserkuppe and the Eube in a little over 13 minutes, overclimbing the take-off site by what then appeared as a spectacular altitude. This was the flight which surpassed the previous record of 9 minutes of slope-soaring attained by Orville Wright at Kitty Hawk in 1911.

The news of the first motorless cross-country flight prompted L. Beach, the

organizer of the Air Show in Omaha, Nebraska, to cable us to pack up immediately and to come to America, all expenses paid, and demonstrate the sailplane in flight on this forthcoming occasion. Unfortunately we were in no condition to accept this invitation within the time available. Instead, we concentrated on new designs: one was the very sleek gull-winged "Rheinland", which, unfortunately, was plagued by elevator flutter; the other was a two-seater, side-by-side, very daring Canard type with slotted ailerons and with an arrangement to bank the front wing in lieu of rudder action (which, however, proved too sluggish). These troubles handicapped our team. My recollection of the chronological sequence of events of the years 1922 and 1923 is not quite so clear, perhaps because we occasionally went to the Wasserkuppe for flight trials in the spring, between contests. This was indeed 40 years ago!

Of the 1922 contest events and the new faces and new designs I do remember the following: Prince Heinrich (the brother of the last Kaiser) was a spectator much interested in technical details. Fokker brought a two-seater biplane from which the first motion pictures were taken in motorless flight by passenger Seekatz. Harth came over from the Heidelstein with his theretofore secret sailplane unconventionally controlled by varying the wing incidence and camber; Wolf Hirth and the Darmstadt group's "Geheimrat", also with individually variable incidence wings, which worked satisfactorily; Gottlob Espenlaub with a crudely carpentered 20:1 aspect ratio wing which eventually flew; Budig with a beautifully made twin-boom biplane Canard with many original features which he was, however, not courageous enough to commit to free flight; Zeise of Hamburg with a birdlike contraption which quickly came to grief, and von Lüttwitz with an even more fantastic bird imitation which, fortunately, did not get off the ground; conventional



The Vampyr, which made the first soaring flights of one, two and three hours.

types flown by E. Meyer and P. Brenner; Ferdinand Schulz flew his primitive broomstick contraption and several others. The Hannover group brought its much improved "Vampyr" and a new exceedingly smooth-looking but aerodynamically disappointing "Greif". It was with the Vampyr that Martens and Hentzen made the famous first one-hour and three-hour flights cruising in the slope wind over the N.W. escarpment to the enthusiastic applause of the many spectators.

These flights, exactly 40 years ago, established beyond a doubt that slope wind soaring was a sport worth practising and that the endurance possibilities were practically unlimited. They constituted the next milestone in the history of soaring. In the years to follow, there came a systematic succession of developments, namely soaring from hillside to hillside; cross-country; the tackling of fronts and thunderstorms; and eventually the discovery of thermal soaring and wave soaring. It was also at that time, 40 years ago, I believe, that interest in soaring as a sport and as a scientific pursuit began to be aroused in other countries, particularly in England and France, but soon all over the globe. It is gratifying to observe that a bond of friendship has grown to pervade the fraternity of soaring flight enthusiasts of all nations.

South Africa Spoils

by J. K. White
Yorkshire Gliding Club

HOW can you be spoilt in three short weekends? Try visiting the Soaring Centre at the Johannesburg Light Plane Club. Keep your nose to the grindstone for six days of the week with barely a peep at the magnificent daily displays of regular blue sky daubed with cumulus based at 12.000 feet, then beg a lift out to the Club on the Saturday afternoon. Walk out to the launching point and you'll find them all there — Boet Dommisse, Eddie Lehmann, Tim Biggs, Pat Beatty and all the names you've read so often. I suppose you could do the same thing anywhere in the world and come across the local people you already know but have never met. Such is the nature of gliding and long may it remain so.

Hang around for a while and have a look at their selection of "birds" — but don't expose your snow-white skin to the sun at 5.800 feet (aerodrome height) for more than half an hour at a time or you'll blister like new paint. You'll probably be offered a ride in their Schweizer 2-22, an all-metal two-seater which takes an awfully long time to aero-tow to 1,000 feet, and then a trip in one of the solo machines.

Or you can stroll back to the Club-house and, if you are really energetic, play tennis or squash and finish off with a dip in the swimming pool. One of the native boys will be pleased to bring you a drink. You'll be told — if you need to be — that the weather is monotonously superb. In the summer, day after day of bright sunshine with the occasional humdinging thunderstorm, warm in the evenings — ideal for drinks on the lawn and late night swimming under the Southern Cross. In the winter it is even dryer and in the evenings cooler, but good thermals all the year round.

Don't forget to put a jacket or blazer

on later for your five-course six-shilling dinner in the Clubhouse. Shirt sleeves are breakfast only.

Now where has everyone got to — the bar? Yes, but no ladies allowed. They sit in the lounge and knit. But the talk in the bar won't be about knitting. You'll hear about the South African Nationals at Kimberley in January when about a dozen lucky men had a bill of fare that you should not attempt to describe when you get home. It would be too much like enthusing about oysters to a man who has lived on cockles and mussels. You'll find it easy to believe yourself, but don't attempt to recount, that one of the competitors with eight hours' gliding time prior to the meeting finished it with a Gold C and Diamond.

As the evening progresses you'll hear about Pat Beatty's bird, the BJ-2, designed seven years ago by a local German wizard and built by Pat himself. This really is a hot ship, but Pat — who became South African champion flying it at Kimberley — will tell you that the Fowler flaps give you the best of both worlds. The weight of the centre-section is 270 lb. You will earlier have admired the superb finish on this centre-section and Pat will calmly tell you that the ply skin is $\frac{3}{16}$ths thick — so you just don't get waviness.

More beer, but be careful — don't treat a bottle of the local cold Castle as a half-pint or you'll find yourself doing involuntary barobatics, and they have a special bar stool for such victims, with control column, rudder pedals and "aircraft" log book which you will be required to complete.

You may think that Pat is pure boffin and it is worthwhile trying to get him to intone the adventures of "Poor Little Angelina", a ditty of which he knows an apparent endless number of entrancing verses. But he is more likely to be talking to Tim or Boet about an improved BJ-2 — all-metal to avoid wood shrinkage in the hot sun? — full-span Fowler flaps instead of on centre section only? — who knows? Perhaps you'll understand why a Fowler flap which increases S by 25% can increase C_1S by nearly 100%. Anyway, make the most of your evening in the bar because the next time you go to the Club you may, as a gesture of gratitude for having been allowed to fly their birds, offer to go on a retrieve. And if you do you'll be delighted to discover that, superb though their gliding conditions are, spectacular though their achievements have been and brilliant though the design and construction of the BJ-2 is, they are as fallible as the worst of us in the matter of retrieves. Perhaps it's because they nearly always get back.

You now may be wondering if there is anyone in the bar sober enough to run you back to your hotel in Jo'burg, but, reluctant to leave with the prospect of another day's sport on the Sunday, you enquire about staying the night. This you will find is quite common and in no time at all you will be presented with a towel, soap and key to your rondavaal which is a semi-spherical building containing three bedrooms and a bathroom with shower.

And so with your head in the clouds the time comes to leave South Africa. You reflect on the many advantages of life in that country — low income tax, wonderful climate, no washing up, and a gliding club *par excellence*. Perhaps your route home will take you amongst giant cumulus with the Boeing pilot flying at 40,000 feet and still having to dodge the tops. Perhaps you'll stop at Leopoldville and witness a tropical thunderstorm at night with lightning flashes that would make the tail end of a Redstone rocket look dull by comparison. But one thing is certain, you'll be so spoilt that you'll either have to forget it all or put it down to an hallucination caused by too much exposure to the sun.

MORE CHAMPS' CHIPS

Don Snodgrass, after landing by Port Talbot on League 2's Free Distance day, saw an old tyre lying on the beach. Taking its purpose for granted, he appropriated it and placed it on his wing-tip.

Hugo Trotter, soaring at Lasham in a T-21 with a passenger on the first Sunday, suddenly saw the air around him fill with gliders, noticed some coloured strips on the ground below, concluded that Lasham was a turning-point for the Champs., and decided to hurry down out of the way. So he found a good 10 ft./sec. downcurrent and circled in it. To his surprise, three of the competitors immediately came and joined him.

Gliding Certificates

COMPLETE DIAMOND BADGES

No.	*Name*	*Club*	*Completed*
7	P. M. Scott	Bristol Gliding Club	17.1.62
8	A. H. Warminger	Norfolk & Norwich Aero Club	14.4.62

DIAMONDS FOR DISTANCE

No.	*Name*	*Club*	*Date*
1/11	P. M. Scott	Bristol Gliding Club	17.1.62
1/12	A. H. Warminger	Norfolk & Norwich Aero Club	14.4.62

DIAMOND FOR ALTITUDE

No.	*Name*	*Club*	*Date*
3/30	P. K. Ghose	Surrey Gliding Club	11.12.61

DIAMONDS FOR GOAL FLIGHT

No.	*Name*	*Club*	*Date*
2/101	J. V. Inglesby	Swindon Gliding Club	14.4.62
2/102	D. F. Holding	Fulmar Royal Naval Gliding Club	14.4.62
2/103	L. Cheeseman	Surrey Gliding Club	14.4.62
2/104	F. Collingsplat	London Gliding Club	14.6.62
2/105	Rika Harwood	Surrey Gliding Club	31.5.62
2/106	S. B. Mead	Laarbruch R.A.F. Gliding Club	1.6.62
2/107	P. D. Kevan	Fenland R.A.F. Gliding Club	1.6.62
2/108	R. H. Prestwich	Midland Gliding Club	17.5.62

GOLD C HEIGHT LEGS

Name	*Club*	*Date*
A. R. I. Cruickshank	Scottish Gliding Union	18.2.62
P. K. Ghose	Surrey Gliding Club	11.12.61
J. E. Duthie	Scottish Gliding Union	18.2.62

GOLD C DISTANCE LEGS

D. F. Holding	Fulmar R.N. Gliding Club	14.4.62
J. Argent	London Gliding Club	14.4.62
Rika Harwood	Surrey Gliding Club	31.5.62
S. B. Mead	Laarbruch R.A.F. Gliding Club	1.6.62
P. D. Kevan	Fenland R.A.F. Gliding Club	1.6.62

SILVER C CERTIFICATES

No.	*Name*	*Club*	*Completed*
1112	J. G. B. Daniell	Bristol Gliding Club	31.3.62
1113	C. D. Wales	Bristol Gliding Club	31.3.62
1114	G. P. McBroom	Bristol Gliding Club	1.3.62
1115	J. E. Baker	London Gliding Club	9.4.62
1116	R. Jones	Wessex R.A.F. Gliding Club	1.4.62
1117	L. S. Hood	Leighton Park School	13.4.62

1118	A. J. Nurse	Bristol Gliding Club	14.4.62
1119	F. R. Fleuret	Cambridge University Gliding Club	24.3.62
1120	G. F. Lloyd	Bristol Gliding Club	27.3.62
1121	A. G. Burne	Kent Gliding Club	14.4.62
1122	R. Neep	Coventry Gliding Club	22.4.62
1123	K. C. Morgan	Laarbruch R.A.F. Gliding Club	28.4.62
1124	J. W. L. Jarred	Windrushers R.A.F. Gliding Club	29.4.62
1125	R. G. Chubb	Devon and Somerset Gliding Club	14.4.62
1126	J. R. W. Kronfeld	Imperial College Gliding Club	29.4.62
1127	R. White	London Gliding Club	7.8.61
1128	G. A. Ross	Moonrakers R.A.F. Gliding Club	25.4.62
1129	D. M. Holliday	Scottish Gliding Union	20.5.62
1130	W. May	Coventry Gliding Club	20.5.62
1131	H. V. Jones	Moonrakers R.A.F. Gliding Club	24.3.62
1132	A. G. V. Blackburn	Bristol Gliding Club	12.5.62
1133	J. Bower	Yorkshire Gliding Club	18.5.62
1134	P. K. Ghose	Surrey Gliding Club	14.12.61
1135	J. S. Stuart-Menteth	Bristol Giding Club	12.5.62
1136	B. R. Waters	East Midland R.A.F. Gliding Club	20.5.62
1137	A. Chapman	Moonrakers R.A.F. Gliding Club	23.5.62
1138	K. Rylands	Midland Gliding Club	20.5.62
1139	P. W. Gardner	Surrey Gliding Club	30.5.62
1140	Anne E. Vince	Surrey Gliding Club	4.6.62

C CERTIFICATES

Name	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*
B. J. Hughes	Cornish	K. Morris	Suffolk	S. J. Barton	Windrushers
J. D. Greenhill	Bristol	P. J. Brittan	Empire Test Pilots	A. H. Cutt	Moonrakers
H. Orme	Fenland			R. W. Bullock	Cranwell
W. M. Smedley	Wessex	J. W. Barbeary	Portsmouth Naval	P. K. Fuller	B.E.A.
R. D. Brown	Wessex			M. M. Weeks	Cornish
J. Perry	631 G.S.	D. M. Alsop	South Wales	D. J. Harnden	East Midlands R.A.F.
D. McKelvey	631 G.S.	N. I. Lovie	Aberdeen		
J. M. Parkin	631 G.S.	D. C. Fothergill	615 G.S.	K. Green	B.E.A.
T. K. Taylor	Norfolk	M. E. Dry	Laarbruch	J. Stokes	Doncaster
V. D. Vanson	Southdown	J. Bonellie	Scottish	R. M. Molesworth	Surrey
J. D. A. Charteris	Crusaders	D. J. Mythen	622 G.S.	G. Hackett	633 G.S.
B. Quarman	613 G.S.	J. W. Hoyland	Nimbus	G. W. Goffin	Southdown
S. Hayes	Doncaster	J. E. Rooum	Cranwell	R. G. Collis	Essex
N. G. Thomas	E. Midlands	D. Viney	Moonrakers	C. W. Lyons	Laarbruch
K. W. Bruce	Norfolk	K. Blake	Laarbruch	W. T. Gartland	Kent
N. Hadden	White Rose	M. Fenton	Surrey	E. H. M. Alleyne	Oxford
B. C. Hockley	Essex	R. M. S. Harwood	Surrey	J. Abbott	London
W. D. G. Bennett	Coll. of Aeron.	I. R. Hammond	Portsmouth Naval	J. C. Foster	Wessex
D. A. N. Holland	Southdown			B. D. Baldry	Surrey
K. E. Gregory	Derbyshire & Lancashire	T. E. Cox	642 G.S.	P. I. Wilson	Portsmouth Naval
		P. E. D. Dunning	Surrey		
N. H. Duggan	Bristol	H. R. Phythian	Perkins	G. G. King	Coll. of Aeron.
D. W. G. Carter	Cambridge	B. Jones	642 G.S.	F. G. Fermor	613 G.S.
A. A. Bell	Fulmar	H. Appleyard	Doncaster	W. Foster	Fulmar
J. G. Smith	East Yorks.	P. A. Stirk (Willert)	Doncaster	J. G. F. Tebb	611 G.S.
G. H. Watts	Surrey	J. C. Large	Midland	K. Targ	Yorkshire
A. Pengelly	Fenland	G. A. E. Meader	Swindon	B. Kay	Clevelands
A. K. Hall	Windrushers	W. G. Illingworth	622 G.S.	W. C. Lombard	Clevelands
W. E. Sheppard	West Wales	A. K. Grayhurst	Swindon	E. P. Hodge	Kent
D. P. George	West Wales	J. W. Sharp	Surrey	J. F. Morris	Four Counties
D. M. Thomas-Ellam	Surrey	K. Zmitrowicz	White Rose	J. J. Manny	635 G.S.
		F. Darkins	Surrey	S. J. Terry	Surrey
L. C. Magnus	Lasham	J. C. Rieley	Imp. Coll. Cambridge	M. S. Armstrong	Derbyshire & Lancashire
G. Barrett	West Wales	G. R. Downing			
K. E. Michael	Nimbus	T. F. Kerry	Windrushers	T. A. Spurling	East Anglian
D. Hayhurst	Cambridge	P. J. Pratelli	Oxford	J. H. K. Clark	Yorkshire
E. C. Neighbour	Derbyshire & Lancashire	R. I. Simmonds	E. Anglian	C. E. Saunders	Crusaders
		B. C. G. Lockwood	Norfolk	C. V. Harvey	Kent
T. Webb	Scottish	D. W. Roberts	Crusaders	J. N. Baker	Bristol
B. G. Dix	Kent	K. E. J. Teison	Midland	J. F. Farley	Cranwell
M. J. Trasler	B.E.A.	G. M. Maclure	614 G.S.	J. G. Ferguson	Bristol

OBITUARIES

SIR FREDERICK HANDLEY PAGE

THE career of Sir Frederick Handley Page, C.B.E., both in aviation industry and in the early pioneering days, has been well described in many obituary notices of his death on 21st April at the age of 76. His interest in gliding evidently lasted as long as that in powered aviation, for he built an artificial hill for the use of gliders on his first flying ground near Barking in 1909. He was on the Gliding Committee of the Royal Aero Club from 1920 to 1923, a period which included the first British soaring competition. When gliding was revived in 1930 he used to come to the early meetings of the London Gliding Club near Tring, bringing his family, but I do not remember him ever taking a flight. He also appeared at an early auto-towing demonstration by C. H. Lowe-Wylde at Hanworth; he was riding a horse! More recently he came to the London Gliding Club to present the prizes at the 1958 Aerobatic Competition, making an amusing and provocative speech about the aviation industry.

Sir Frederick did much to encourage and help the Handley Page Gliding Club which operates on his firm's airfield at Radlett. The Secretary of the club, Mr. A. C. Wordsworth, writes as follows:

"The immediate thought that springs to mind was his personal gift to the club of our Skylark 3B and trailer on the firm's 50th anniversary, our first high-performance sailplane; this, we feel, was our transitional point from a circuits type club to a soaring club with the finest equipment available. Our other gliders, incidentally, were provided for us by the firm — of which he was Managing Director. In addition to this, he assisted the club in allowing us the use of the firm's hangars and airfield. He showed encouraging interest in the club, and we always felt that there was someone up top who looked sympathetically on our activities. Sir Frederick was President of the gliding club from its inception in 1946."

MAJOR H. A. PETRE

HENRY PETRE, who died on 24th April at the age of 77, was not only one of the earliest aviation pioneers, but came into gliding soon after its revival in 1930, and soon became a pillar of strength in the London Gliding Club, not only being its chairman from 1932 to 1935, but giving it much valuable legal advice, particularly in the difficult matter of acquiring its land.

One of the aeroplanes exhibited at the Olympia Show of 1910 was designed by himself, his brother, and Mr. Howard-Flanders (later the B.G.A.'s first Secretary). It had a movable main plane and a propeller behind the tail, on the advice of Sir Hiram Maxim. In those days Henry Petre was known as "Peter the Monk" and his brother as "Peter the Painter". In 1912 he went out to Australia with E. Harrison to help to start a School of Military Aviation, and can therefore be described as a founder of the Australian Air Force. After that he returned to England to become a solicitor.

On 12th September, 1961, the Royal Aero Club, on whose committee he had been for countless years, gave a dinner in honour of Major Petre's 50 years of flying, as he had gained the Club's Aviator's Certificate No. 128 on 12th September, 1911.

His A gliding Certificate was gained in November, 1930, and his C on 4th March, 1931. On 24th May, 1931, flying a Professor over Dunstable Downs, he put up a British duration record of 3 hours 28 min., just breaking the former world's duration record of 3 hrs. 21 mins. set up by a Frenchman, Alex Maneyrol, at the 1922 contest on the South Downs at Firle Beacon. He also put up a British gain-of-height record of 785 ft. on 27th September, 1931, in a Tern at Ingleby Greenhow in Yorkshire. At the London Club he was part owner of the Crested Wren for a time; he flew regularly throughout the pre-war years but never tried thermal soaring. In 1943 he became an A.T.C. gliding instructor; then he flew for the last time at the club just after the war. But he could not keep away, and continued to visit the club several times a year.

LT.-COL. A. OGILVIE, C.B.E.

READERS will remember the article "Golden Jubilee of Soaring" published in SAILPLANE AND GLIDING last December, which included extracts from the diaries of Alec Ogilvie and Orville Wright describing their expedition to Kitty Hawk in October, 1911, when Orville put up a world's soaring duration record of 9 mins. 45 secs., and Ogilvie made several similar flights, the longest of which were 59 secs. on the day after Orville's record, and 1 min. 5 secs. the following day. We regret that his death on 18th June, at the age of 80, has now been reported.

Alec Ogilvie was one of the earliest British aviation pioneers. He had, according to report, begun experimenting with gliders in 1901, and then, with the beginning of serious powered aviation in Europe in 1908, he decided to order a Wright aeroplane. But before it was delivered to him in October 1909, be began practising in a glider of similar design, which was illustrated in the December article mentioned above. He obtained No. 7 British Aviator's Certificate on 24th May, 1910, and thereafter remained faithful to the Wright design throughout his active flying career, which ended in 1914 — though he sometimes went up as a passenger in other types, and one of these occasions was a flying expedition up the Nile to Khartoum in a four-seater Short seaplane.

Col. Ogilvie continued his interest in the aviation world, and was one of the Stewards at the 1922 soaring competition at Firle Beacon on the South Downs. His prize of £50 for the longest British flight on the first day of the meeting, 16th October, was won by F. P. Raynham with a flight of 1 min. 58 secs. Next day Raynham flew for 1 hr. 53 mins., a duration which was only beaten on the last day by the Englishman, Sqdn.-Ldr. Gray, with 2 hours, and a Frenchman, Alex Maneyrol, with 3 hrs. 21 mins.

Col. Ogilvie kindly invited me to his house in 1954 to clear up some historical points about the 1911 soaring flights. It was a beautiful house in the middle of an estate in the New Forest, and the walls of the hall, staircase and landing were covered with old aviation prints and framed documents, many of them signed by famous figures of the early flying days.

A. E. SLATER.

Cockpit Insulation for Wave Flights

HEARING that 27,500 ft. a.s.l. had been reached in a wave to leeward of Pike's Peak in Colorado by Capt. Wally Leland of the U.S. Air Force Academy on 25th February, members of Kansas Soaring Association arranged an expedition to the region from 11th to 17th March. Writing in the *K.S.A. Newsletter* about their preparations, they say:

"There are several factors in wave flying which require careful preparation. Oxygen for at least two hours is a must. A strong ship, of course, with a tight cockpit and a double-span windshield to ward off frost. Radio is highly desirable, but not necessary. Warm clothing is a must, especially for the feet. Fleece-lined boots, period. In a snug cockpit the pilot will benefit from considerable solar heating except for the legs and feet, which are in shade.

"We insulated the Cherokee cockpit completely with one-half inch of Fibreglass in plastic-film bags. We also built a new and tightly weather-stripped canopy. The double pane was made by simply stretching a 10 by 15 inch sheet of Milar plastic across the inside of the windscreen and taping it securely in place. This left an air space approximately one-quarter inch deep, well sealed all around. The insulation and tight canopy not only keep the cockpit snug, but reduced noise to a minimum. With this treatment the Cherokee is almost silent at speeds up to 60 m.p.h."

the 1962 art exhibition and competition

THE fifth exhibition of aeronautical art to be organised at the Kronfeld Club will be opened on Wednesday evening, 14th November, at 8 p.m. by Lord Brabazon of Tara.

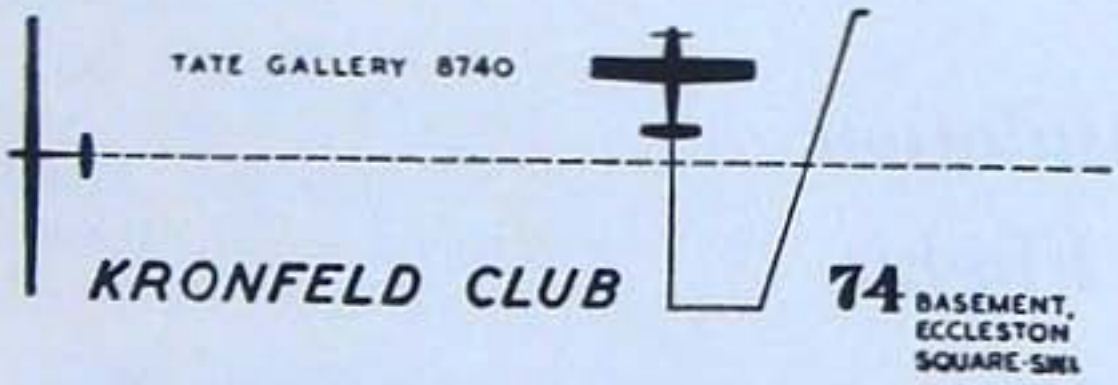
The competition for amateur artists, which is run in conjunction with the exhibition, will be judged by a panel from the Society of Aviation Artists.

Now is the time to start putting pen, pencil, charcoal or brush to paper/canvas, and he hope you will, as the competition is open to all amateurs and the subject can be gliders, aeroplanes or anything aeronautical. There are several prizes to be won, including a challenge trophy and a prize for the best first entry.

Needless to say we shall be glad to hear from professional artists who have something to exhibit.

Entry forms have to be in by 31st October, and these and the full rules may be obtained from Mrs. Yvonne Bonham, 14 Little Brownings, London, S.E.23 (Tel. Forest Hill 9390), or from the club.

Y.C.B.



DURING the summer the club has arranged a very full programme, and attendances have been well maintained except for the period of the National Gliding Championships, when most of the members were to be found either as competitors or crew members at Aston Down.

We hope at intervals of roughly every four months to introduce a well-known feature film into the programme, and the first of these was "Hell's Angels", which was so popular that three showings had to be arranged to accommodate the 122 club members who saw it. Another interesting film shown recently was Walt Disney's "Man in Space", which will be followed in September by another film in the same series.

The Annual Dinner-Dance has now been arranged and will be held on Friday 5th October at the Eccleston Hotel. The two principal guests are Group Captain Goodbody, R.A.F., and Colonel R. L. Preston, C.B.E., Secretary-General of the Royal Aero Club. Double tickets price £2 15s. and single tickets price £1 10s., which are available from the club and other ticket sellers, are slightly increased, but the menu will be much improved.

The Photographic Competition will be held between 5th and 12th October, and the rules and regulations were published in the May issue of the *Kronfeld Kronicle*. Jill Walker is in charge of this particular matter, and any further information can be obtained from her at the club on any Wednesday evening.

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

Aug. 1. "Gliders used in the Invasion of Europe", by Derek Wallace.
„ 8. "Gliding Miscellany." Talks, films and slides of topical interest. Anyone with anything to say or slides or films to show is invited to come along.
„ 15. "The Fighting Lady," a colour film record of an aircraft carrier's routine.
„ 22. "The Guild of Air Pilots and Navigators," by Vivian Varcoe.
„ 29. Mobil Oil and BOAC films.
Sept. 5. Walt Disney film, "Man in Flight".
„ 12. Championship Flying, by Capt. Nicholas Goodhart.
„ 19. "More Diving in the Med.", by F. Irving and D. Tomkin.

Gliding and Public Relations

by F. D. Storrs, Publicity Officer, British Gliding Association

THE very phrase Public Relations often seems to arouse a host of distasteful misconceptions, so before considering what it could mean when applied to the gliding movement in this country, let us define what we are talking about. Publicity alone, good or bad, is not Public Relations; although it can be an important part of them, the same can be said of advertising. Public Relations is what it says, relations with the public, either the general public or the public relevant to an individual, a commercial enterprise, a governmental authority, an amateur organisation or what have you. It is thus essentially a communications system — and this implies a two-way flow of information — between a body and its appropriate public. In the case of an organisation they can be both internal and external. It needs little imagination to see the difference between the public of, say, a film starlet, a company producing horizonal jig borers, and a national association of coffin nail platers. Equally the methods of serving and servicing such audiences differ immensely, and the methods used vary from the most important matter of personal contact to sophisticated and complex mechanical techniques of print and every sort of visual presentation.

From this brief definition of what public relations is, let us now examine what possible good might be found in applying some professional P.R. practice to the gliding movement. First, partly to satisfy those who will cavil even at the title of this piece, let us put some questions. Is the movement as healthy as it could be? Are there clubs looking for members, money, sites? Is gliding unnecessarily restricted, or is it going to become so in the next few years by the powerful interests of commercial, business and private aviation, all of which are growing fast? Are the running and policy of the British Gliding Association understood by the clubs, the responsible governing authorities, and are such policies adequately presented? Is safety understood? Do local authorities and interests understand what is involved and required when clubs seek new sites? Do clubs have a necessary interchange of technical organisations and financial knowledge? Is the technical excellence of this country's glider industry widely enough known? There are other questions all relevant. Let us not suggest that the answers to these questions at the moment are necessarily pessimistic, but a major reason that they are not is merely the enthusiasm and stalwart energy of a few individuals. In a sport in which 5,000 people are actively involved, in which this country is expert both technically and in its flying, it is surely not only unfair, but ridiculously shortsighted to rely entirely on the individual, both to the person and to the sport. In a movement where there is probably no equal gathering of individualists, such a statement may not be popular, but it is true.

What, then, can be done to improve these lines of communication and to make sure that those who glide obtain a fair hearing of their interests? Viewing firstly the external requirement, one task is to ensure that the image of gliding as a good safe sport, run responsibly and effectively, is put over both to the general public and to the relevant national and local authorities in whose control the life of the movement ultimately lies. If this can be done, the growth and support of gliding from the general public — members and money — will be assisted and the life and health of the movement — freedom of the air, ability to set up new sites — assured. The B.G.A.'s part in projecting this picture is most important, and steps are

being taken to reorganise the information services available and to enter a phase of press liaison and promotion of the key aspects of the sport.

However, the clubs too have a necessary part to play in keeping the B.G.A. informed of any happenings in their own sphere either detrimental to the movement — when help can and will be given — or when opportunities occur locally for good national publicity, and also in ensuring that their own public relations is of a high standard. To take a facile example — if a local paper should misreport a landing as a crash landing, an annoyed letter or telephone call to the editor pointing out the utter ignorance of his ways and of his newspaper will produce nothing but ill will. A courteous letter or, better still, a visit, explaining the whole business and offering him or his correspondent a visit to the club and a trip, may well result in a feature and will certainly ensure a good press at some later date when the club may need its interests properly presented.

The whole question of internal communications is more open. There are already certain lines in existence — the B.G.A. Council meetings and SAILPLANE AND GLIDING — which do valuable and creditable jobs. Still, it does seem that clubs — and the B.G.A. — could gain from a greater and perhaps more specific crossflow of information of all sorts, not only in publicity, but also of accidents, technical information (aircraft, winches, etc.), financial (methods of financing clubs, sites, hangars, camps, etc.), and we are considering setting up a regular two-way newsletter on these sort of subjects.

These are a few of the thoughts on how Public Relations can help the gliding movement. The subject is long and reasonably complex, and this piece has merely brushed the surface. The object of printing it is to set people thinking and to make them aware of the subject as a subject. There are many gliding and Public Relations experts who may read it. Both from those and from the tyros we expect ideas, suggestions and advice, because we honestly feel that if gliding in Great Britain is to have a future, then it is essential that we all take steps to assure it.

The Dutch National Championships

by W. Adriaansen

THE Dutch National Gliding Championships were held at Terlet from 19th May to 2nd June inclusive. Out of 32 competitors — all possible candidates for Argentina — flying a Skylark 2, 27-year-old Ed van Bree, Pilot Officer R.N.A.F., gained the victory.

On the first contest day, MAY 20TH, a race was set to the new Dutch gliding site at Witten, near Assen, a distance of 112 km. Because of a strong cross-wind only two pilots succeeded in reaching this goal, J. C. Bernsen (Skylark 2) and G. J. Ordelman (Sagitta), the latter in the shortest time.

No contest on MAY 21ST; race to Borkenberge set.

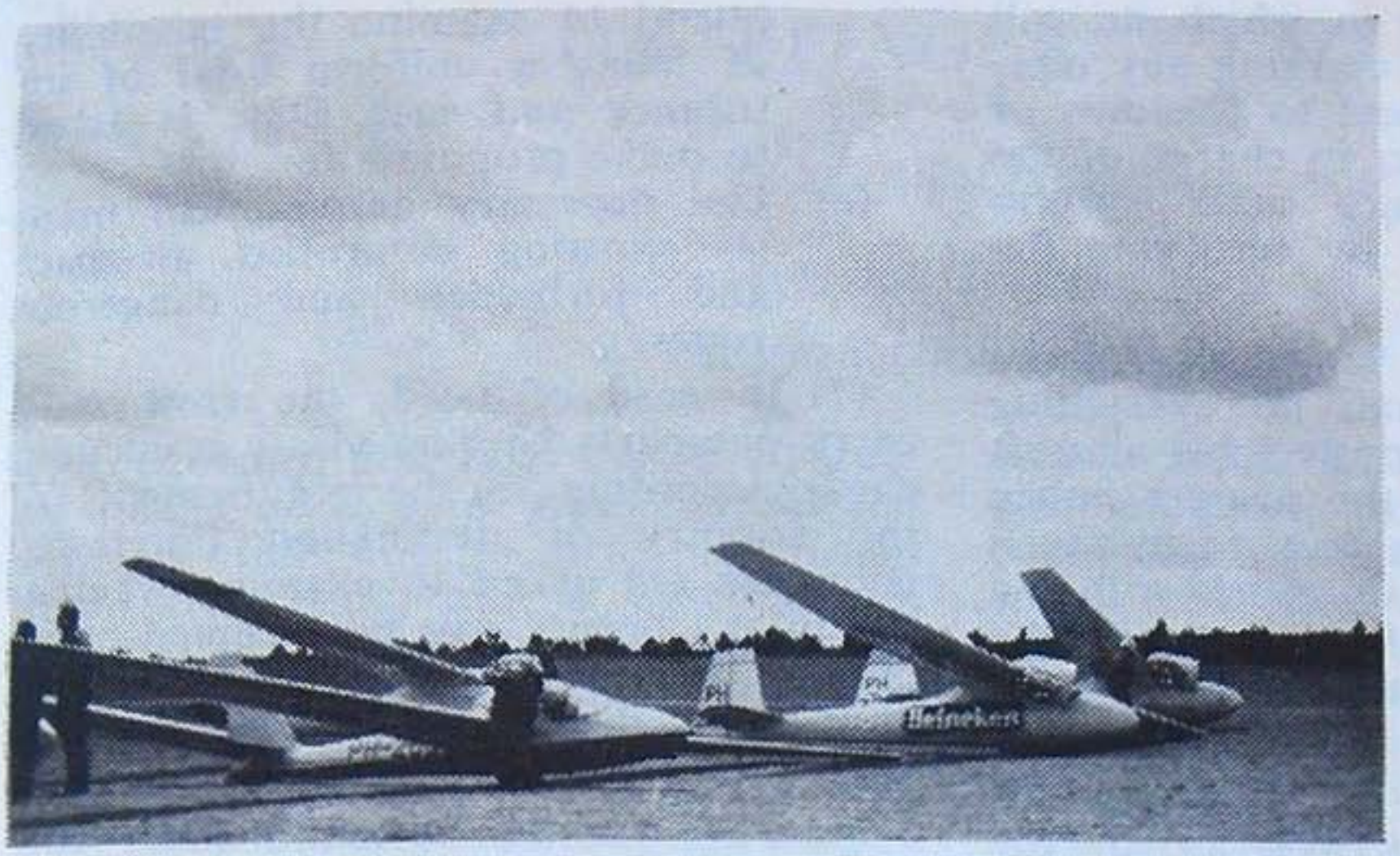
A race to Oerlinghausen (190 km.) on MAY 23RD became a victory for Pim Sierks (Skylark 2), who completed this task after 2.22 hours' flying. Thirteen other pilots landed at Oerlinghausen in almost the same time, among them Ordelman, van Bree and Bernsen.

MAY 24TH.—Task: out-and-return flight to Winterswijk (162 km.). In spite of a strong cross-wind and weak thermals, one pilot, John van Melzen (KA-6) completed this task after 3½ hours' flying. Second was our English guest, E. Lusted from Laarbruch Air Force base, who landed only 20 km. short of Terlet. Because of the bad weather no task was set on May 25th and 26th.

A 190-km. triangle on SUNDAY 27TH was completed by two pilots, John van Melzen and Ed van Bree. Most pilots were forced by a big thunderstorm to land in the neighbourhood of the second turning-point.

MAY 28TH.—*Task*: free distance, but as no pilot succeeded in flying 50 km. there was no contest.

On MAY 29TH again a race was set to Borkenberge (99 km.). Nine pilots reached this airfield. Fastest was Terlet Instructor Jos Krols.



A promising sky at Terlet.
Photo W. Adriaansen

MAY 30TH.—Task: free distance. The greatest distance was flown by van Bree, who landed near Himbergen (345 km.); two other pilots flew more than 300 km. The 31st was a rest day for return transport. Terlet Instructor Groeneveld used this day to make a 300-km. goal flight to complete his Gold "C".

On JUNE 1ST the weather changed under the influence of an area of high pressure over Denmark. The wind became N.E., and so goals were declared in France. Cloud base 4,000 ft., good thermals. On this day of days five pilots landed at their goal and J. Jungblut completed his Gold Badge with three Diamonds (F.A.I. No. 235). Five pilots flew more than 500 km., three of them even more than 600. The greatest distance was flown by John van Melzen (KA-6), who landed after nearly 10 hours' flying 650 km. from Terlet.

Leading final positions :

Pilot	*Sailplane*	*Points*
1. E. F. van Bree	Skylark 2	5,460
2. G. J. Ordelman	Sagitta	5,138
3. J. van Melzen	KA-6	4,902
4. J. H. G. Selen	Skylark 2	4,900
5. J. C. H. Bernsen	Skylark 2	4,897
6. H. H. Fernhout	KA-6	4,761
7. R. A. Breunissen	Skylark 2	4,460
8. J. Krols	Skylark 2	4,436
9. H. van der Salm	Skylark 2	4,362
10. H. Sierks	Skylark 2	4,300
11. A. Scheffer	Skylark 3	4,296
12. J. Jungblut	Sagitta	4,191
13. A. Breunissen	Skylark 2	4,068
14. J. D. Brouwer	Skylark 2	3,847
15. J. Mölling	KA-7	3,743

GLIDER FLIGHTS ACROSS FRONTIERS

A CONFERENCE "for the purpose of finding means of simplifying the formalities for international flights by gliders", when they land on airfields other than Customs aerodromes, was organised by the Fédération Aéronautique Internationale at Berne in 1961. Countries represented were Austria, Western Germany, France, Great Britain, Holland, Yugoslavia, Sweden and Switzerland.

The report of the Conference, now issued, states that the participating countries agreed to recommend the following procedure :

(1) The obligation to take off from or land on a Customs aerodrome to be suppressed.

(2) Before taking off the pilot must confirm, in writing, that he is taking with him only personal articles, food and the necessary instruments for air traffic control and safety in flight (barograph, parachute, radio, etc.) and no articles which are subject to Customs duty or other taxes in the country of destination.

(3) For each flight in which it is intended to land abroad, the pilot shall

complete a pass form in which he will confirm that he is not carrying any merchandise which is subject to Customs or other duties. The officer in charge of the aerodrome of departure shall confirm the pilot's declaration by certifying the pass form.

(4) As soon as he lands on foreign territory, the pilot shall do everything which is necessary to protect his aircraft and must then go to the nearest police station and submit his pass form for a visa. He must also get in touch with the nearest Customs authorities, if the National Regulations require this to be done.

(5) The triptique or the Customs carnet for the gliders, as well as for the towing vehicle and trailer necessary to return the glider to its country of origin, to be suppressed.

(6) Whenever required, the pilot must be able to present:

(a) the pass form in duplicate;
(b) a valid pilot's licence;
(c) the airworthiness and registration certificates for the glider (for gliders from Great Britain instead of a registration certificate, a document proving ownership).
(d) A certificate of insurance for the glider covering third party liabilities (participating countries intend to examine the possibility of fixing a uniform total of insurance and each State is asked to make proposals for this).
(e) The necessary aeronautical maps — showing controlled air-space and forbidden and dangerous zones.

(7) In case of need, the crew must carry passports bearing visas, or identity cards according to the requirements of the country of destination (interested countries are asked to examine whether the pilot's licence can be accepted as an identity document).

(8) The gliders must bear the identification marks of their country.

(9) Flights must be made under conditions of visibility. Any departures from this rule must depend upon the regulations of each State.

(10) If the glider is towed back to its country of origin the return journey can start only after the necessary Customs formalities have been completed.

(11) Photographic or other recording apparatus shall not be authorised except by permission of the competent authorities.

(12) The authorities of each country are requested to give every assistance to the holder of a pass in order to complete his mission.

ON BEING A YO-YO

(Without Oxygen)

by Andrew J. Thorburn

Scottish Gliding Union

BY Monday, 3rd July, No. 5 Instruction Course had gradually slowed down to full stop — after the usual winch frustration, and a howling wet gale that day. On Tuesday, however, the oscillation of the T-21 UP and down to great heights was the stuff dreams are made of.

By mid-morning the sky developed copy-book lines of wave clouds lying across the north-west wind of about 25-30 knots, and the flight from cable drop at 1,000 ft. to the hill lift on Benarty, one mile across Loch Leven's storm-lashed surface, presented moments of doubt, which had to be concealed from the greatly impressed pupil. On arrival, however, the bowl produced the usual supply of strong UP, and after half-an-hour, another simple soul was deposited back on Portmoak, firmly convinced that soaring is the Sport of the Age.

The next two pupils, both lightweights, had to be satisfied with extended circuits over the Loch and back as we just couldn't make it to the hill in the strong wind. When pupil number four squeezed into the T-21 the nose bit the dust as his 15½ stone, wrapped up in 6 feet 4 inches of brawn and muscle, reduced my share of the cockpit to something less than the breathing space generally allotted to a tame mouse. With a jolly quip about midgets, and an inward sigh of resignation, I prepared to float the load as gently as possible upwards on our very tender launching cables.

At 800 ft. (200 less than the 1,000 ft. usually needed for the over-loch trip to Benarty), I thankfully dropped the cable still intact, and started off on a high-speed short circuit. Over the loch, however, we still had green on the vario and it soon became apparent that our increased cruising speed, due to great weight, was not producing the plunging downward flight I had anticipated. Either we had with us a hydrogen producer plant in operation, or some unusual form of lift had to come to our aid. Reaching out for the slopes of Benarty, we quickly climbed to 3,000 ft. in the best patches of lift, and I then decided to investigate the possibilities of wave lift out over the water.

As we slowly drew away from the hill into wind, the coarse texture of the air changed to the classical silky smoothness we have become accustomed to in past flights of this kind, and with a slick grin I suggested to my companion that we might manage to transport ourselves upwards even unto ten angels. From his grunt of response, I gathered that he obviously did not believe me — so I shrivelled further into my small corner and manipulated the controls gently as one must on such occasions. In a matter of minutes the green ball was at the top of the scale and indicated steady unbroken lift of more than 20 ft. p.s. so as the altimeter hands started to chase each other rapidly around the dial the astonishment of my passenger changed to enthusiasm. We floated up past the forming edge of the wave cloud above and behind Benarty and soon, at 8,000 ft., looked down upon its crests.

By 10,000 ft. my triumph was complete and the panorama of waves was easy to see for miles beyond the

Grampians and south to the Cheviots. The lift was still just under 20 ft. per second, and as we neared 13,000 I asked my friend what effect he expected high altitude to have on him. He answered by saying he spent weeks at a time above 10,000 ft. in the Alps every year. At 14,000 ft. he assured me that if I passed out he would be able to get me down. At 14,500 I thought: this is a lark, higher than all other S.G.U. efforts in a b----y two-seater with a ten-ton passenger! At 15,000 ft. I thought: Hell! — no barograph — still, it's fun — FUN! ? 15,200 ft. — No BARO-GRAPH ? The grin on my companion's face disappeared as I reached for the spoilers, pushed down the nose, and reduced climb to a mere 3 ft. per sec. Gradually we progressed into the down-draught in the lee of the cloud ahead, and soon the red ball was jazzing around the 20 mark.

As we came back to land at Port-moak we noted that the time in the air from start to finish was 61 minutes. This will give a very clear idea of the power of the lift encountered.

Two more circuits with another pupil and then back to Benarty with a new customer. This time the lift on the hill was partly cancelled out by the down from the lee of the wave cloud just ahead, but after a struggle to 3,000 ft., progress ahead was made, and once more over the loch the altimeter started its wind-up.

Pleased to be able to make fresh contact for my pupil's sake, but appalled when I thought of the Skylark and barograph down below, I suggested that 7,000 ft. would be enough. The look of scorn in his eyes sent me back to the best lift, and at 10,000 I suggested that the scene would not improve with height. " But I might not get back here again ", he said, so I dutifully took him higher until at 12,250 ft. my hand firmly clutched the spoiler lever, and down we went once more. This time the trip took 1 hr. 12 min. (We had dawdled quite a bit on the hill searching for the lift).

This was too much to bear — so I pleaded with the Course to release me for an hour. They did! Out came the Skylark 2 and we were off. In the mean-time the red Oly, which had been nosing around at 2,500 ft. all morning with various pilots, was still in the air.

Back on the hill, I worked the lift to 3,000 ft. and set off once again over the water to pick up the lower levels of the wave. Almost immediately contact was made and as I climbed rapidly at the usual 20 up, the other sailplanes disappeared below.

Words cannot express the ease with which it all took place — the only effort required was to decide when to come down. At 14,000 ft. the sense of well-being developed as before, and by 15,000 deep breathing and heightened pulse rate came as a warning that old men of 51 are more susceptible to altitude than the younger members of the species.

Southwards lay wave after wave and a following wind of about 40 knots. A nice day to do a Nick Goodhart trip in reverse. What of Course No. 5 ? Poor devils! Not another instructor available — paid cash for the week, too. 15,700 ft., still going up at 15-20 ft. per sec. — 16,000 ft. focusing my eyes became a distinct effort. Seems funny — better get down — sense of respon-sibility wins the day — or was it fear? Out came the spoilers at 16,200 ft., nose down to 65 — into the sink area, and so rapidly back to Portmoak — all in 65 minutes. Barograph trace is perfect, and shows maximum of 16,200 ft.; gain of height 15,000 at least. Gold C height — three times in one day! Highest solo, and highest T-21b in the S.G.U.

Blimey! Must ask Santa for an oxygen bottle this year.

For the Eggheads

Leuchars met. conditions on 4.7.61 at 12.00 hrs.

WINDS:

Feet	*Direction*	*Knots*
2,000	330	22
3,000	330	25
5,000	340	26
7,000	340	29
10,000	340	36
14,000	330	44
18,000	330	49

LAPSE RATE:

Dry adiabatic up to 5,500 ft. Isothermal up to 6,500 ft. Rather less than saturated adiabatic at 16,000 ft. Lower air mass: cold with slight inver-sion at about 8,000 ft.

Correspondence

BIRDS SOARING IN WAVES

The following letter was published in "Soaring".

Dear Sir,

Until recently we believed Phil Wills on his statement (reference "Where No Birds Fly") that "For some unexplained reason birds do not fly in waves". Today we got proof to the contrary. The best part is that Paul Bikle also seems to agree with him!

The story goes like this. On 7th January, here in the San Francisco Bay area, we had our customary north-east wind that develops a fair-size wave almost over our field, Sky Sailing Airport, where Les Arnold has his school. Since I help Les on week-ends, I had the chance to spend over six hours giving instruction on wave-soaring in seven flights that took us from 2,500 ft. at release to 10,000 ft. at top. Well, aside from the fun of seeing the towplane (Jim Freese at the controls) out-climb (with prop stopped) my student in the TG-3A, we encountered the wave-soaring birds. The birds in question were . . . seagulls. They flew parallel with us, facing always into the wind and almost at our rate of climb (800 f.p.m.). Our head-wind was about 40 m.p.h. and it seemed that their "penetration" was not the best, because they were sacrificing their better minimum sinking speed in order to keep station in the wave. They were not flapping their wings or circling . . . they were wave-soaring.

Other fellows flying the wave that day also reported seeing the birds. I saw them from about 4,000 to 8,000 ft. above the terrain on almost every flight.

Around our field, since it is almost touching the bay, we have a great many seagulls. These birds replace the dust devils to mark the thermals, and they are much cleaner.

Santa Clara, Calif. PAT PAGE

BIRDS, WAVE-SOARING AND ANTI-COLLISION RULES

Dear Sir,

With reference to the interesting letter from C. J. Pennycuick about John Barlee's observations of gannets *circling* in wave lift behind Little Skellig, Bass Rock and Ailsa Craig, has anyone ever met birds making intelligent use of wave lift above cloud? I have met gulls wave soaring on several occasions at about 2,000 ft. above Camphill, but only when the wave lay directly over the slope and never above the lowest cloud level.

At Dunstable, on an east-wind soaring day in late 1953, I watched a flock of gulls flapping from the north-west under a 500-ft. layer of haze and cloud. On entering wave lift they squawked with excitement, started thermal-circling and quickly drifted into the wave sink. They flapped into wind again and the same sequence repeated itself. On the third pass through the same wave over the same flat field, they carried straight on and turned south in sink just short of the Downs, although wave lift parallel to their track lay only two to three hundred yards behind them. This flock quite clearly misunderstood wave lift and tried to treat it as thermal lift.

I do not imply that gannets, by circling in waves, show that they do not under-stand them. Obviously they flew eccentric circles in order to remain in the wave lift, and there was no possibility of mistaking the nature of the lift in this case. Circling appears to be preferred to a very short beat consisting of nothing more than continuous "S" turns because the collision hazards are less in circling. It is my impression that gannets observe a strict slope-soaring rule when conditions are difficult with a narrow band of lift and an oblique wind. Those on the upwind beat have right of way to the best lift and must turn outwards at the end of their beat. The downwind beat is flown in the sink just upwind of the lift zone and an inward turn is made into the lift—note that the latter conflicts with human slope-soaring rules. This is in effect an eccentric circle with one-way traffic rather than the human

figure-of-eight plan with inevitable crossing flight paths. Thus the obliqueness of the short wave would indicate the direction of the circle.

It would be interesting to hear whether Pennycuick and Barlee would agree with this hypothesis, and also whether their observations of gannets and possibly starlings can confirm that these birds actually use the newly-proposed Calvert/Hollingdale collision avoidance manoeuvres.

Derbyshire & Lancashire Gliding Club.

O. W. NEUMARK

THE BLACK LINE: AN EXAMPLE OF A REFRACTIVE INVERSION

Dear Sir,

M. Landi, of the French gliding centre at St. Auban, has taken some very interesting photographs during wave flights at that site. They are in colour and show a very sharp thin black horizontal line, level with the horizon. The altitude (about 15,000-20,000 ft.) and the absence of light-scattering rules out the possibility of smoke or dust, so that the phenomenon must be some variety of optical stria. Putting in the values of a fairly standard ascent into Biot and Arago's formula, it will be seen that with increasing altitude the refractive index of air falls at first fairly rapidly, then, between about 15,000 and 30,000 ft., fairly slowly, then in the stratosphere fairly steadily falls again. It will appear likely, then, that a layer of moist or cold air in the zone 15,000-25,000 ft. could produce a refractive inversion, i.e., a layer of low refractive index sandwiched between two layers of slightly higher refractive index. If this zone is sufficiently thin (as it will inevitably become by diffusion and conduction), an observer situated in this layer will see a dense black horizontal line on the horizon, since horizontal beams of light will be refracted upwards or downwards into zones of greater optical density. This is presumably what Landi saw.

The phenomenon is too rare for one to plan a project to take refractive index readings while flying through the altitude in question; however, if any soaring pilot observes the phenomenon I would be grateful for details of time and place so that the altitude of the black line can be compared to the relevant meteorological ascent data.

Cherry Orchard, Marlow Common, Bucks.

D. BRENNIG JAMES

BRITISH SAILPLANES OVERSEAS

Dear Sir,

We read from time to time of the excellence of British sailplanes and of their success abroad. We are also given to understand that a large number are exported. Jolly good.

I was lucky enough to visit three countries last year and contacted some of the gliding clubs. I found in Holland that the gliding movement is taking delivery of a considerable number of Ka-7 and Ka-6 machines. The Dutch had long been customers for British gliders.

In Egypt, although they said British gliders were preferred, they explained that, because of high cost and difficult foreign exchange, they were buying gliders from East Germany. They already have many West German gliders.

In New Zealand I found several clubs with the "Rhönlerche" for training and the talk was of Ka-6's whenever an import licence could be obtained. Many people I spoke to were very interested in the promising new British 15m machine. Neither they, nor the local agent, can extract any information from the manufacturers. Letters go unanswered. A colleague brought back exactly the same sad story from Rhodesia.

We read of the generosity of the Argentine Government in organising the Internationals next year. They have thirty Ka-6's for competitors and two Skylarks. The Argentine was another traditional U.K. market for gliders.

In this country there are two good European high-performance two-seaters available, at considerably lower prices than the British-built counterpart. This is

even when transport and import duty are taken into account.

The conclusion I come to is that our gliders are too expensive and that we are losing, or have already lost, many overseas markets to foreign manufacturers. Is there a brighter side?

Camberley, Surrey.

ROY G. PROCTER

SLINGSBY SAILPLANES writes: We have concentrated in the first place on modern replacements for the two-seater (which we were advised was the most urgently required by the British movement) and a thorough-going redesign in the 18-metre class, where we have had so wide a national and international success.

Our exports in the 18-metre field have continued satisfactorily, and indications are that they will continue to do so: we have a long list of outstanding orders to take up our prospective production for some months ahead. The same is the case with the T-49 two-seater.

Since we could not do everything at once, we left the 15-metre machine for the time being to competitors; we expect to tackle this problem next, but two new machines in 1962 are a formidable design and development commitment for a single firm to undertake. But don't forget the 13-metre Swallow—we delivered four last month!

As regards correspondence, we could show Mr. Procter convincing evidence that this complaint does not apply to us. Regarding price, quality must also be considered. Bracketing the two, we are clearly competitive, else we should not be here. We try and get the market of those who are prepared to pay a little more to get a little (or a lot) better machines. So far we have succeeded.

New Zealand orders would be forthcoming tomorrow, but no currency whatever is available from the New Zealand Government for the time being.

Please don't blame us if countries like Egypt can find zlotys but not Sterling: shops in Kirby won't supply goods to our staff against the former, and they must eat!

CONTEST MARKING

Dear Sir,

I was very interested in Max Bacon's criticism of the present "*X*" rule and Lorne Welch's comments thereon (SAILPLANE AND GLIDING, June 1962, p. 168).

There are other serious objections to the present "*X*" rule, often accentuated at Regional Competitions, when the number of competitors is usually fairly small, the standard of the pilots more variable, and launching is often by winch. As Lorne Welch points out, a short *X* of, say, 10 miles (nearly doubling the gliding distance from the top of a winch launch in still air or with light wind) can produce a ridiculous position of having a contest day when the longest flight is about 12 miles. This very nearly occurred at the Midland G.C. Easter Competitions when the longest flight was, in fact, 12 miles and the fourth best was 9.8 miles: *X* was 10 miles. Had a long *X* been given in such conditions, say 20 or 30 miles, an equally ridiculous position might well arise if 20 per cent exceed *X* by a few miles whilst competitors who just failed to exceed *X* failed to score, thus bringing about the very situation that Lorne Welch rightly wishes to avoid, *viz*, a very large difference in marks for a very small difference in performance.

A further example of the unfairness of this rule was seen in the 1961 Nationals in League 1 on the day of the Free Distance after rounding Benson airfield. *X* was 20 miles and the leg to Benson was almost dead into wind. As a result, a pilot had to fly a distance through still air of probably 40 or more miles before starting to score marks. Pilots rounding Benson then flew downwind covering the miles to count at probably twice the speed they were flying through still air. The penalty for failing to round Benson was clearly unfairly severe.

Lorne Welch's suggested improvement to the present rule is undoubtedly sound, but I would prefer to see the *X* symbol completely divorced from the distance required to be flown by 20 per cent of competitors to constitute a Contest Day, and a new symbol introduced — let's call it "*Q*".

In marginal days a large *Q* could then be given, say 30 miles, whilst *X* could be reduced to the minimum compatible with it, beyond gliding distance from the top of the launch. If winch launching was being used, this might well be as little as five or six miles.

If something on the above lines were adopted, I feel sure that the many and genuine objections to the present rule would be overcome.

G. BENSON.

Midland Gliding Club.

CONTEST MARKING

Dear Sir,

In the April, 1962, issue of SAILPLANE AND GLIDING there appeared a potent piece by Boris Cijan entitled "Outstanding Problems of Soaring Flight".

Reference was made therein to certain factors, S for soaring, M for meteorological and A for aerodynamic, which it is necessary to know for the purpose of evaluating the performance of any given sailplane or, more accurately, the performance of any given combination of pilot and sailplane.

Before the illusions and disillusions left by Aston Down 1962 slip too far below the level of conscious memory, I would like to make the request, Sir, that you commission some knowledgeable person to analyse the performances of the sailplane types there represented and publish these results in SAILPLANE AND GLIDING. The less erudite amongst us will then be better placed to decide whether the shattering performances, good or bad, of Pilots X, Y and Z were in fact due to:

(a) the favour of the taskmasters,
(b) the Hand of the Lord in the shape of thermals not vouchsafed to others,
(c) secret devices not vouchsafed to others,
(d) superlatively good (or bad) sailplane design — Factor A,
(e) superlatively good (or bad) flight planning — Factor S,
(f) any of the possible combinations of (d) and (e),
(g) meteorological conditions which favoured machine A but not machine B — Factor M,
(h) pilot fatigue, or the absence of it,
(j) team management, or the absence of it,
(k) luck, or the absence of it.

Having regard to the present fashion for closed-circuit flying, it is perhaps permissible for an unprejudiced observer to remark that an "Out-and-Return" is two goal flights in one, and a "Triangle" is three goal flights in one. Failure to complete this pair or trio of goal flights, as the case may be, carries a penalty of lost marks for speed which would seem to enhance out of all proportion the value of the A factor postulated by Cijan, since of two machines, one of which completes a closed-circuit task while the other fails by 100 yards to do so, the mark-down of the second pilot/machine combination is grossly disproportionate to the performance given. If the successful machine in fact succeeds by virtue of superior design features, then the marks given by the taskmasters must surely constitute an assessment of aircraft performance, whereas the unenlightened observer has always believed that the function of Championship task-setting was to assess pilot performance.

There is a catch in this somewhere, but where?

From the taskmasters' point of view there are, no doubt, certain virtues in setting closed-circuit tasks which, by back-pegging those pilots who are not 100% successful in completing the tasks, give a wide scatter of marks, but whether or not this kind of Musical Chairs is as effective a pilot assessment as non-return tasks is a question on which more information would be invaluable.

Perhaps the services of the knowledgeable person previously requested could be extended to evaluate the marks-scatter for each of the tasks set at Aston Down?

Derbyshire & Lancashire Gliding Club.

C. A. KAYE.

[We suggest Mr. Kaye should accept the commission.—ED.]

PILOT RATING FOR NATIONAL CHAMPIONSHIPS

Dear Sir,

I note with interest that the Pilot Rating scheme is to be reviewed at the end of this year. I would like to congratulate the Committee on producing an excellent first shot.

As someone who is high up on the present list and who has always flown large-span gliders, may I make a plea for those who choose to fly Standard Class? They badly need encouragement.

I need not go into the arguments for smaller gliders — these are obvious — quite apart from the cost. May I suggest that the gliding movement must broaden the base of the pyramid and thereby improve even further the standard of pilot who emerges at the top.

The argument that the more expensive gliders just need a few more in the syndicate to buy and to operate them does not hold water. Even less "flying" gliding per pilot is then going on. This is particularly serious in England when not every day can be guaranteed as soarable.

The present scheme to award a cup for the winning Standard Class pilot is an attempt to give some encouragement to this class. But having painfully(?) reached this standard of pilot skill, who is going to be content with a second-best pot for second-best marks; particularly when he might have won in a big glider?

I suggest it is better to award the Standard Class entry in League I an additional weighting, which gives the pilot the number of points he might have earned in a big glider. One method of arriving at this weighting might be to compare the results of *all* Standard Class gliders when competing with Open Class gliders on the same task. The last time when this was done (in my own experience) was in Poland in 1958. I understand that if the top two-thirds of results were taken (to cut out the fluke entry or sheer bad luck) the difference between Open and Standard Class at this meeting was about $7\frac{1}{2}$ per cent overall. It also shows just how good modern Standard Class gliders really are when flown by top-class pilots.

May I suggest that some such figure be used for 1963? It would give hope and encouragement to surprising numbers of excellent pilots who at present cannot face the costs involved of buying and operating Open Class gliders. In a few years, this should have an appreciable effect on pilot quality.

I agree with our B.G.A. Chairman when he says that the price of getting to the top can be considerable, and not everybody will have the resources to attempt it. But, for goodness' sake, let us all keep a sense of proportion, or else we will price ourselves out of existence.

TONY DEANE-DRUMMOND.

MINIMUM SCORING DISTANCE AND PILOT-SELECTED GOAL

Dear Sir,

The principal object of the minimum scoring distance is presumably to eliminate the effects of a glide-out from launch-height in marginal conditions. Although I agree that it should not be possible to score unless a minimum distance (X) has been covered, I believe that this distance should not be subtracted from the marks. If $X = 20$, it is palpably absurd that the pilot who goes 22 miles should score double the marks of the pilot who goes 21 miles. In relative skill the ratio of 22:21 is much nearer than 22:11.

In the case of Pilot-Selected Goal (still, in my view, one of the most delightfully tantalising tasks in the book), the X situation is even more anomalous. A pilot who flies 23 miles to a selected goal need only over-fly one more mile to begin scoring again (if $X = 20$).

I would therefore propose that X should remain a minimum scoring distance but should not be deducted from the miles flown when calculating the marks for any task.

There are two possible further refinements:

The factor of 1.3 by which the marks of a Pilot-Selected Goal task are multiplied if the goal is reached might be variable by the task-setters, so as to

put greater emphasis on reaching the goal in certain weather conditions or topographical circumstances.

The second modification (suggested by Bill Wills and others) is that *X* might vary with glider performance. Presumably *X* would then be the distance any particular type of glider can be expected to reach from launch height, modified by the wind direction along the first leg of the course, or by considerations of airfield height. Thus the basic *X* figure for each glider (which might be based on the glider's handicap) would be varied by a percentage declared by the task-setters at briefing. If this figure had no longer to be deducted from the distance flown in calculating the marks, no additional load would be placed on the long-suffering calculators.

The Wildfowl Trust, Slimbridge, Glos. PETER SCOTT.

ACCIDENT ANALYSIS

Dear Sir,

In any flying organisation, surely the criterion for judging the accident rate is the amount of flying done, compared with the number of accidents. Air Commodore Paul, however excellent are his tables, has always seemed to miss this point.

In my enclosed table, I have ignored costs and shown purely the accident rate per hour and launch. I think you will agree that the results are interesting. Throughout the last five years we have had a steadily improving rate; in fact, it is probably safe to say that 1961 was the best ever. It is interesting to note that the best year contained the most Categorised Instructors, but that the next best year (as far as hours are concerned) had the least number. This leads one to think that quality is equally as good as quantity.

Please don't think that I am decrying Air Commodore Paul's efforts. I think his presentation of the accidents is excellent, and without his data I would not have been able to compile my table. I think he goes astray in trying to measure accident rates by cost alone. In the Affluent Society costs will always increase, due to circumstances beyond our control.

How would I reduce the accident rate still further ? By improving the standard of solo-supervision and by using two-seaters for more frequent checking of solo pilots at regular intervals up to at least Silver C standard. I would also insist on a proper course for all new instructors.

How would I reduce the costs ? If I knew the answer to that I would be the next Chancellor of the Exchequer! We could, of course, always try to build cheaper gliders.

Woking, Surrey. ROGER A. NEAVES.

Avoidable Accident Rate from 1957 to 1961

Year	*Total Hours*	*Total Launches*	*Avoidable Flying Accidents*	*Number of Launches per Accident*	*Number of Hours per Accident*	*Number of B.G.A. Categorised Instructors*
1961	24,564	139,826	54	2,589	454	146
1960	19,094	122,557	72	1,703	265	98
1959	22,937	121,196	73	1,661	314	85
1958	17,808	99,448	70	1,392	249	96
1957	17,996	96,139	97	991	186	97

A.T.C. and Service not included. Accurate figures of avoidable accidents in 1957 and 1958 are not known, therefore an average has been used.

AIR COMMODORE G. J. C. PAUL replies:— Your correspondent introduces a new factor when he refers to "Avoidable flying accidents". His analysis on that basis is excellent; but the aim of my work is the prevention of all accidents, whether flying, to trailers, or in the hangar; consequently statistics relating to all accidents are relevant to my work; and since their cost, wherever they occur, affects everybody's pocket, largely through insurance rates, cost is also relevant,

not only statistically, but as the most effective means of indicating to each and every member of the gliding movement their own personal stake in eliminating accidents of all sorts. If everybody was as well informed and alert as your correspondent, my job would become unnecessary. Unfortunately the continuing waste of money through things like gliders and trailers blowing away indicates that many people are still unaware that accident prevention concerns everybody.

BOOK REVIEW

50 Moderne Segelflugzeuge. Published 1961 by Luftfahrt-Verlag Walter Zuerl, München 19, Landshuter Allee 49, W. Germany. Price DM 3.50.

This neat little booklet, 10 x 15 cm., gives a good selection of the most modern and interesting sailplanes of many countries, most of them having been flown in World Championships. Each machine has a page of principal data, facing a photograph of it on the ground. Skylarks 1 and 3 and Eagle are included. At the end is a table of principal data of 71 other types, including Olympia 402, Sky and Swallow.

A.E.S.

HE BEAT THE PANEL

MR. LAURIE BITTLESTONE, the Assistant County Commissioner, Air Scouts, for Hampshire, whose home is at 56 Grove Road, Basingstoke, beat the panel on BBC's TV programme "What's My Line?" on Sunday evening. His occupation, which they failed to find, was—Gliding Instructor (Air Scouts). He received a certificate noting his success.—*Hants and Berks Gazette.*

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"THE GLIDING KIWI" — Illustrated quarterly journal of the New Zealand Gliding Association. Annual subscription 8/– sterling or $1 United States or Canada. Write the Business Manager, 4 Barlow Street, Ilam, Christchurch, New Zealand.

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

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Pilot Signposted.—" Giles Bulmer had a 'practice run' to Sudbury and landed near a place which bears his name. The retrieving crew were rather astonished when they found a neatly painted signpost saying 'BULMER — 1 MILE'."—*Cambridge University Gliding Club Newsletter.*

PEN PALS WANTED

Mr. G. P. Kesan, of 39, Car Street, Madras 5, India, would like to correspond with people interested in Gliding. He is aged 26, and is a B.Sc. (Geography and Mathematics) of Madras University. A gliding wing is being started by Madras Flying Club.

CLUB AND ASSOCIATION NEWS

AS usual this issue reports the activities of those who were not lucky enough to be at Aston Down. All mention of the Nationals has unavoidably had to be cut since the event is already fully reported elsewhere in the magazine.

We are also pleased to see several pages of news from distant parts and particularly from Brian Masters in Odessa, Texas. Overseas clubs please note, we are always interested in reports of your activities.

In this issue for the first time we welcome the Ouse Gliding Club, who operate from Rufforth, Yorks.

The last date for copy for inclusion in the October issue to reach me (at 14 Little Brownings, London, S.E.23) is Wednesday, 22nd August.

By the way, apologies to those of you who did not get a reminder for this issue, due to my annual holiday.

YVONNE BONHAM,
Club and Association News Editor.

ABERDEEN

THE arrival of the Tiger has increased our activities and our C.F.I. Angus Macaulay and Duncan Ross have been kept busy as tug pilots. On the publicity side, our Chairman, Gordon Whitehead, appeared on ITV from the local Grampian Studios in connection with a programme which presents local topics and sporting activities.

After a 20-minute tow behind the Tiger, the north face of Benachie was successfully soared by Gordon in the club Swallow, staying airborne for 2 hrs. 20 mins., until the trailer was seen arriving at the foot of the hill. Since then, he has carried out two cross-countries in the Syndicate Weihe.

Mention must also be made of a 1-hour flight in the Swallow performed recently by Robin McGregor, while all other aircraft slid earthwards.

Congratulations to Iain McDonald and Paddy Kelly on their solo flights.

The Olympia Syndicate have been getting in plenty of practice in their new craft and several soaring flights have now been logged. Charlie Lawson managed to disappear into a late snow shower which descended upon him, but managed to find the field O.K.

A party of club members are going to the S.G.U. at Portmoak for one week in July again this year, and we hope to see one or two 5-hour legs logged at last.

Our nine Summer Courses are now well filled, and the Robert Perfect Trophy has now arrived and each of the instructors' wives are, in turn, having the pleasure of keeping it polished.

F.C.M.

BLACKPOOL AND FYLDE

WE are very satisfied indeed with our new and additional gliding site at Samlesbury Airfield, which lies alongside the Preston-Blackburn main road. Although still not very far away from the open sea, it is most certainly a great improvement — so far as soaring is

concerned — compared with our Home Site at Blackpool (Squires Gate) Airport, which is practically on the sea shore.

Unfortunately for us, Blackpool Airport is becoming busier than ever these days, and on April 1 the airport was handed over by the Ministry of Aviation to Blackpool Corporation, which immediately resulted in many economy measures. It is, however, still an ideal site for dual training and first solo flights on account of the spacious and smooth grass areas alongside the four very long runways.

It would be remiss to conclude these notes without mentioning our sincere thanks to our President, Herbert J. Liver, for his continued support in all flying matters. Also our grateful thanks to Tony Kemsley and John Gibson for building the excellent trailer for our Olympia 2B.

J.S.A.

BRISTOL

APART from the excitement of the Comps. (including the roaring party held at Nympsfield on the Saturday), in which our teams performed reasonably well but with no great distinction this time, the only noteworthy events have been the following flights:

Silver height: Roy Owen, Mike Coram, Pete Fuller;
Five hours: John Ferguson;
Distance (Silver C): Alan Blackburn.

Jane Warter did her Silver distance and probably had enough height to complete her Silver C in a flight to Lasham on June 16th, the first female member to do so at Nympsfield. On June 16th Ted Chubb in the Skylark 2c flew Nympsfield-Lasham out-and-return and back again to complete his Gold C with a Goal Diamond. Tony Glaze flew to Chelveston in the KA-6 via Norwich on an out-and-return attempt, but was 100 km. short of the 500.

Earlier in June, Peter Scott and George Burton each completed a 200-km. triangle Stratford-Didcot-Nympsfield.

On the social side two of our newer members, Thelma Caldicott and Rodney Barrett, were married on June 9, and your correspondent Alf Samuels married the typist of these notes, Liz Williams, on May 19.

A.L.S.

CAMBRIDGE

THE characteristic feature of our activities this year has been a refreshing eagerness to fly cross-country. Quite typical was the day of departure of the club meet for the June Camp at the Long Mynd, when several pilots had themselves launched into an unpromising, cloudless sky in an attempt to reach the Mynd by air. John Brenner managed 90 miles to Lichfield in the Sky, and Colin Mitchell 50 miles in the Skylark 2.

The most outstanding performance from Cambridge was John Brenner's 201-mile goal flight to Winkleigh in the Olympia on 14th April, which started from a 700-ft. cable break. Another meritorious effort was John Firth's attempt at an oscillatory Gold C course, Cambridge-Rugby-Cambridge-Rugby, of which he covered 155 miles in the Sky on 4th June.

Ten of the flights from Cambridge were closed circuits of an average of 45 miles, most of them by John Firth and Ralph Ismail, who have become experts in "triangulation".

Silver C distances were flown by David Clark, Giles Bulmer, Harry Boal, Ray Haddon and Douglas Heyhurst. The last two pilots have meanwhile completed their Silver C's.

On one of our two days of great climbs, 24th May, Graham Pratt and John Firth reached 14,000 ft. and gained their Gold C height legs.

The Eagle went both to the Swanton Morley Easter Rally and the National Championships, where it was joined by the Olympia 460, the latest addition to our fleet of club-operated aircraft. The progress of the pilots at these two events has been reported elsewhere. However, it remains to be said that the teams had a most enjoyable time and were very impressed by the efficiency with which both contests were run. At the Nationals, the club's two entries shared 68 hours' flying and about 1,100 cross-country miles.

A valuable addition to our membership is R. L. Fortescue, who was elected Chairman of the Committee at the Annual General Meeting in June to succeed Wing Commander J. E. P. Thompson, who has left Cambridge after four years with the club. R. L. Fortescue learned to fly with the Cambridge

University Air Squadron on Avro 504's, before the days of the Tiger Moth. He is a lecturer in Engineering.

As the tenth instructor of the club, Maurice Pleasance was granted a Full B.G.A. Instructor's Category.

G.S.N.

CORNISH

CONGRATULATIONS to Alf Warminger on his fine 500-km. flight from Swanton Morley to Perranporth on 14th April. He arrived with so much time and height in hand that he flew on westwards and came back to land later in the afternoon. Those of us on the airfield that day not only enjoyed good local soaring but had the pleasure of welcoming two other pilots from distant places, C.P.O. Holding from Bicester and L. Cheesman from Lasham, who rather had their thunder stolen by Alf.

Another very welcome visitor on the Lasham-Perranporth "milk run" was Rika Harwood, who arrived on 31st May after a 5¾-hour journey.

Our C.F.I., George Collins, has been a very busy man this season. He has made a pretty extensive tour of the clubs in the South of England, competed in the Nationals and Lasham Spring Rally, but this has not been enough. This business of the Gold C "milk run" being an exclusively east-west trip has irked him for some time now, but on 16th June he could no longer tolerate it. Needless to say, when the news came through from Lasham that George had arrived there, thus completing his Gold C and gaining his second Diamond, we felt that he had added to the club's prestige, and our congratulations to him are of a very patriotic kind.

Pip Phillips, Dave Pentecost and Alan Brook have also been active, taking the Meise and Avia on tour, and the Kite 1 also spent a pleasant day at Dunkeswell.

Club operations from Davidstow and Newlyn have been very worthwhile, and we are looking forward to more days there. On the home front, at Perranporth Bernard Broughton and David Langhorne have gained their A and B's, David's being flown on his 16th birthday.

J.E.K.

COVENTRY

THE last two months have given us a fair amount of soaring; several members gained A, B and C certificates, and one a complete Silver C, by Ken Owen. Reg Neep, Bill May, Doc Hearn and Phill Winkley all made cross-countries to finish their Silvers.

In addition to these we have had three 5-hour legs, flown by Bert Jenner, Norman Marriot and Mike Bagnall, when a party from the club went to the Long Mynd for a week's course, taking the club Prefect with them. This sortie also yielded a lot of flying and a C for John Large. The normal course of club flying has also led to a crop of Silver heights.

Apart from the Nationals there have been other flights worthy of mention. Lou Glover took the Viking on a goal ride to Reasby and Vic Carr did a rapid run to Edgehill and back as a practice for the Nationals.

At the East Midlands Gliding Club competition Mike Smith made an outstanding flight which unfortunately did not score as no one else made any progress. However, the next day Doug Sadler came second.

The Tiger Moth and our band of tug pilots have been very busy and have just established a new record by doing 38 tows in one day. At the same time experiments proceed with a view to converting the winches to use piano wire, so that we can cut costs and increase our flying still further.

C.D.D.-J.

DERBYSHIRE AND LANCS.

THE first cross-country of the year was an attempt on a Silver C by Steve Osborne, who fell short near Mansfield, in early April. Mick Kaye then set a high standard by flying to Nympsfield on 29th April in the T-42.

The 20th May produced a west wind, with a resulting crop of 5-hour aspirants; the successful ones were John Riddle and Eric Boyle, who also attained his Silver C height. Austin Wood tested the bottom field after two hours when the wind backed to south-west. Richard Hare, our new winch-master, flew his Olympia to Stocksbridge and landed after inspecting the marshalling yards.

Saturday 16th June saw John Riddle

and Jeff Harrison off on Silver C cross-country attempts, both successfully, John landing at Spitalgate, 55 miles, and Jeff at Boston, 75 miles.

The competition spirit still burning brightly after the Nationals saw a two-league task being set on Sunday 17th June. League one was set a 100-km. triangle, Bolsover-Ashbourne-Camphill, and League two a race to Sutton Bank. The forecast proved wrong and a fresh south-easter and spreading cloud felled League one, Mick Kay landing at the second turning point, John Tweedy turned the first and came home, Ken Blake landed at Dronfield on the first leg. League two task was completed by Paul Newmark in the club Skylark 2.

Work has now started on improving and repairing the old workshop building, and the new workshop in the hangar is nearing completion. The high level of enthusiasm amongst members and the improved facilities augers well for the future and we look forward to a highly successful year.

K.B.

DONCASTER

THE cross-country season was opened this year on Good Friday by Wilf Coulsey taking the T-31 to the race-course (½ mile). This record stood until Easter Tuesday, when Jack Tarr mis-timed the tea break at the local power station and landed at Sprotborough (3 miles).

Spurred on by this, Jack Bowers took the 3F to Husbands Bosworth, 80 miles, and this was followed by Jack Tarr again with 112 miles to Bassingbourne. Johnson has taken the Buzzard for its annual outing with 52 miles to Withern-sea, reported to have crossed the Hum-ber, landed and said, "Je suis un aviateur Anglais". Peter Grime took the dark horse Skylark 1 to Newton upwind (38 miles), and the club Olympia has done Cresswell (15 miles), Lees (28 miles) and Lincoln (30 miles) in the hands of Fisher, Plane and Usherwood respect-ively.

After the most difficult period of a club's life — the first three years — Hughie Haswell has handed over the job of C.F.I. to Mike Usherwood. Our grateful thanks for all Hughie has done, and all he has taught us.

A.W.O.W.

DUMFRIES AND DISTRICT

WE have been operating from the runways of the old aerodrome at Dumfries for the last two months and even using the Wild winch; the number of launches is very much better than we ever achieved at Thornhill. Wear on the runway has caused far too many cable breaks, and we hope auto-towing will be the answer.

Between the runways a crop of barley is being raised, and it is difficult to prevent the end of the cable from falling across it — especially on cable breaks. We may therefore have to move back to Thornhill until it is harvested.

Good progress has been made with training, and Bill Irving got away solo. The Tutor and Prefect have both done some thermalling, but we have no cross-countries to report yet.

G.J.K.

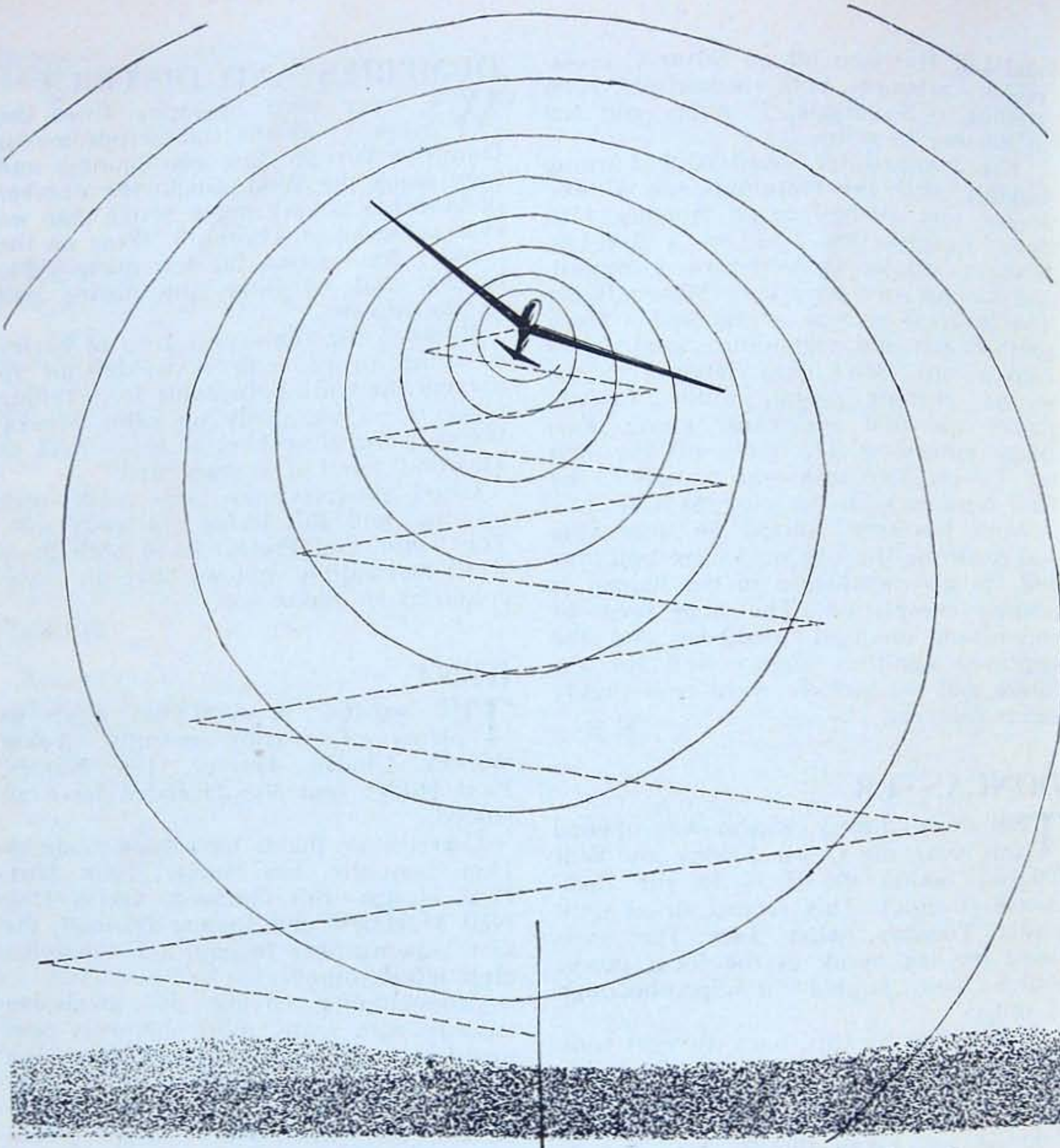
KENT

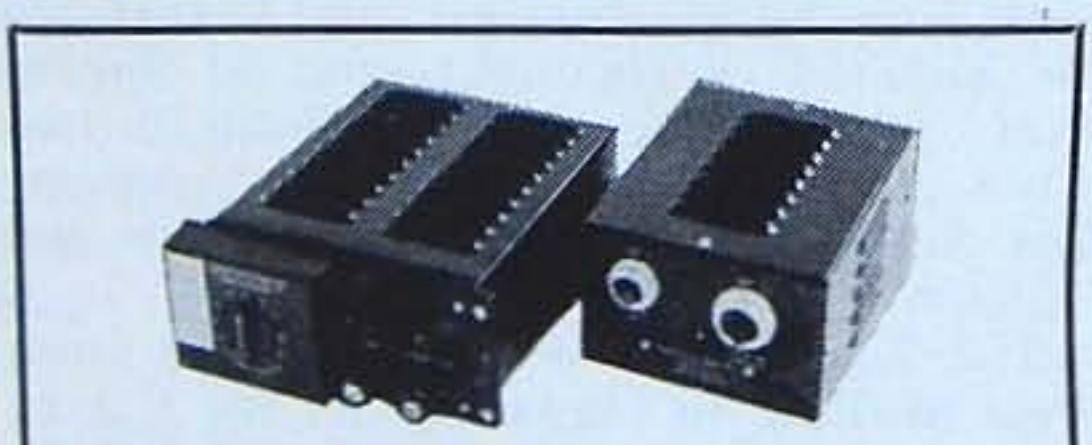
THE weather in Kent has given us plenty of soaring recently. Robin Wilson, Charlie Harvey, Ian Napier, Paul Hodge and Vic Ovenden have all soloed.

C certificate flights have been made by Don Connolly, Ian Napier, John Burt, Paul Hodge, Bill Garland, Gavin Dix, Neil McHarrie and Joanna Dannatt, the first lady member to gain a C since the club left Lympne.

Cross-country flying is increasing steadily with many more members now qualified to go away and good soaring conditions to encourage them. Tug Burne flew the Syndicate Skylark 2 to Firle Beacon on 14th April, a flight which gave him Silver distance, and completed his Silver C a fortnight later at Tiben-ham. During the same expedition two other members of the Skylark syndicate flew Silver C distance, Denis Crabb and Gordon Crabb.

The Skylark has also been flown from West Malling to Hawkinge by the C.F.I., Roy Hubble, to Little Chart, near Ash-ford, by Philippa Buckley, and to Thrux-ton by Denis Crabb. Glyn Richards also landed the club Olympia not far from Ashford the same day. Ron Cousins made the first cross-country in the blue and white Olympia to Stone Street, near Hythe, on 16th June. Glyn also had a try for the duration on 8th April, but





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was very unlucky in having to land after he had soared on the ridge at Detling for four hours.

Sunday 6th May and Sunday 13th May were spent by club members at the new site at Charing, picking up tree trunks, rocks, etc., preparatory to the sowing of grass.

The club's social activities have not been neglected amidst all this flying; the sixth birthday party was held at West Malling on Sunday 28th April, and was voted a great success by all who attended. The birthday cake was made by Joanna Dannatt, the social secretary, and cut by the Hon. Chairman, Hugh Gardiner, who also made a speech.

P.B.

LAKES

DURING the winter months our efforts were concentrated on overhauling equipment, and we are now beginning to see results in the shape of increased flying activity.

J. Paley and D. Millett have each made flights of over an hour in the Olympia, and one fortunate pupil has had a flight of 50 minutes in the two-seater. Other notable performances have been put up by E. Dodd and G. Wilson in the Kite, and H. Woods in the Tutor.

On Whit-Monday we succeeded in getting four of our fleet airborne at the same time, a feat rarely accomplished in the past, but one which we hope to repeat or exceed in the future. R.F.

LASHAM

AFTER a disappointing May the weather picked up in time to allow a few days' practice flying for the Nationals: a number of competitors in fact arrived at Aston Down by glider.

Rika Harwood got her Gold C distance and Gold Diamond with a flight to Perranporth, while Pat Garnett and Phil Gardner completed their Silver C's.

Good use was also made of the fine weather during the Nationals week by those lucky enough to find themselves in one of the few gliders left at Lasham. Silver C's were completed by Anne Vince with a flight to Old Sarum, and by Ron Walker, who started gliding in 1937, with a flight to his home town, Yeovil.

The month's prototype was the exotic Polish Foka, which was unfortunately damaged early on in the comps. New gliders delivered recently have been Skylark 4's for Frank Irving's and Roger Mann's syndicates, the Polish Club's Mucha Standard, Anita Schmitt's Olympia 463, in which Derek Piggott scored highest marks in the Standard Class, and a Swallow for the School. The B.G.A. Capstan is also at Lasham starting its career of instructor training.

J.N.C.

MIDLAND

WHEN compared with last year, our cross-country efforts show a considerable improvement.

Ric Prestwich gained his second Diamond with a quick trip to Great Yarmouth in his Skylark 3. Mike Randle was unlucky to come down at Craven Arms on the return leg of an out-and-return to Aston Down.

Silver C distance has been flown by Louis Rotter, Ken Rylands, Natalie Hodgson, Bobby Neill and Tony Caveen. Bobby had an aero-tow retrieve and we hope to use this civilised way of retrieving more in the future. Tony, who had an aero-tow from nearby Condover, reached his goal at Rhyl on a day when there were very few soaring flights from the Mynd.

Jack Minshall and John Knotts pulled out all the stops on a recent course and achieved 138 winch launches in a day. This is a splendid effort with one single-drum winch.

Among the visitors whom we have been pleased to welcome to the Mynd recently are the Cambridge Club for the usual fortnight in June, an Olympia syndicate from Camphill and a Skylark 3 from Sutton Bank.

The club hopes to support the August contest at Camphill with a club machine and two private machines. K.R.M.

NEWCASTLE

THE second quarter of 1962 has brought a major step forward in the activities of the club. The hangar was completed and occupied in May and has ample room for all club and privately owned aircraft.

On 29th April the Olympia did 10½

hours' flying in one day to gain 5-hour legs for Adam Dodds and Andy Hardie. On this day Messrs. Lilburn and Taylor went solo in the Tutor.

May 13th was almost a carbon copy of the above with Bob Martindale in the Tutor and Albert Newbury in the Swallow completing their 5-hour flights and Tom Shepherd and Ron Donaldson going solo and gaining their B certificates.

On 15th April a new ridge was soared in a north-east wind which produced wave lift to 6,000 ft a.s.l. after passing through cloud tops at 3,500 ft. a.s.l. To reach this ridge a crosswind flight of two miles was required with little chance of return if not soarable.

Maurice Wood was persuaded to make the attempt, and after carfeul preparations he set off. From a 1,200 ft. winch launch he lost very little height and on arriving at his goal he gained height rapidly to 2,000 ft. The T-21 quickly joined him and several hours' soaring were achieved.

A members' course was held during the week ending Easter Sunday. A fair amount of hill and thermal soaring was done over Easter.

The R.A.F.G.S.A. at Leeming visited us over Easter with an Olympia and at the end of their stay Alec Glover took a launch to 1,000 ft. in a south-east wind and was last seen heading for Leeming with little loss of height. He landed six miles short of Leeming after finding a lee-wave which produced reduced sink.

The June course coincided with the National Championships and excellent thermal conditions prevailed throughout the week with gains of height up to 5,500 ft. a.s.l. Silver C height was attained by Albert Newbury. Barry Brighton and Peter Lloyd soloed in the Tutor.

A visit by a Tyne Tees Television camera crew gave the club a five-minute spot on the local Independent Television sports programme.

A.P.

NORFOLK AND NORWICH (Swanton Morley)

DURING the last few months Swanton Morley has become one of the busiest gliding airfields in the country. On Saturdays and Sundays our five sailplanes are joined by those of the Fenland Club and No. 611 Gliding School. During the week No. 1 Gliding Centre use the airfield to train cadets and instructors. In addition, a great amount of power flying is carried out.

Our Easter Rally was very successful; we were blessed with much better weather than last year. As most people in the gliding world know, Alfred Warminger made a magnificent flight to Perranporth the week-end before the Rally. Our airfield is ideally suited for long flights in a north-east or south-east wind, and we hope for more good efforts this year. Scilly Isles next stop! We have two full-time flying instructors available to give aero-tows together with a ground engineer and assistant.

Peter Smith, Ted Jenness and Jerry Harrington have all gone solo, and the latter two are flying the Olympia. Ted and Peter have both been trained entirely by aero-towing, Peter having won a gliding scholarship given by our Chairman, Norman Brett. The Syndicate Skylark 2 is now available to club members who have the necessary experience.

On May 20, Chris Delf took the Olympia to Seething for the Waveney Flying Group's Rally. There is a great deal of interest in gliding throughout Norfolk and Suffolk, and we are often asked to give displays.

C.R.D.

NORTHAMPTONSHIRE

THE period under review started badly with strong cold winds on most week-ends; however, conditions have recently improved and some successes have been achieved.

R. Harding and D. Wilcox have gained their C certificates and at the end of April J. Baker completed his Silver C with a duration flight of 5¼ hours at Dunstable in a Grunau Baby.

Cross-country flights have been attempted whenever conditions permitted and on Easter Sunday deputy C.F.I. Harvey Britten reached Horsham St. Faith in the Skylark. Other flights have been made in the Swallow and W. Mason took it up to Upwood, F. Rowell to Biggleswade and W. Petch to Rearsby.

We were pleased to meet K. Owen from the Coventry Gliding Club, who

flew in on 16th June to complete his Silver C distance.

P. Pozerskis entered his Eagle at the Swanton Morley Easter Rally and was quite successful.

The Whit competitions mentioned in the last issue were unfortunately spoilt by poor weather and practically no lift at all.

Some members under the direction of Harvey Britten have formed a syndicate and purchased a Tiger Moth. We are now once again assured of aero-tows.

R.N.W.K.

OUSE (Rufforth, Yorks.)

THIS is the first letter you have had from the Ouse Gliding Club, chiefly because we have felt that our achievements in our one T-31B, proud though we are of them ourselves, were hardly of the sort to create a stir in gliding circles. Our first public meeting was held last August, after months and months of work, setbacks and successes, and we were delighted to find that despite the prognostications of the experts, 80 people were willing to pay a six months' subscription "on spec". Of these 80 only about 10 had ever been airborne before, and of the 10 only three or four had been in gliders. However, on 12th November, in pouring rain, we flight tested the T-31B with Chris Riddell in the "hot seat". All went well, so the next week-end flying was available to members, and all through the winter, in rain, hail, snow and ice, members queued enthusiastically for their turn, ably instructed by C.F.I. Johnnie Mawson, Malcolm Hall, Stan Walton, Brian Dalby, Mike O'Toole and Chris Riddell, who all suffered agonies of cold and misery to teach members to fly. Their reward is the fact that 15 members have gone solo, so now we have a second aircraft, the Tutor, for solo flights, and a tremendous enthusiasm amongst all our members for the club and gliding as a whole.

It is difficult to single out from among the many people who have helped the club to start those whom we most wish to thank, but we would like to express our deep appreciation to the Air Ministry, the Royal Air Force, and in particular the Commanding Officer, of R.A.F. Linton on Ouse, for allowing us to use their magnificent airfield at Rufforth, and for letting us put our equipment in their equally magnificent hangar, as well as for help in other ways; also to Mr. Slingsby and Slingsby Sailplanes Ltd. for untiring assistance, advice and financial support; to Chris Riddell and John Reussner, and many other members of the Yorkshire Gliding Club for assistance in innumerable ways, and last but certainly not least to Johnnie Mawson and his staff for teaching us to glide.

P.A.C.

PERKINS

THE last few months have been fairly eventful for us. In February we held our Annual Dinner-Dance, which was organised by Terry Sismore and enjoyed by everyone. A less happy occurrence was the bending of our T-21 when blown over in a high wind in April. However, we now have it back from John Hulme and are going ahead with training again.

On Easter Monday we received a visit from seven competitors, including Anne Burns and Peter Scott, flying in the Swanton Morley Easter Rally, who were using Westwood Aerodrome as their goal in a race.

Three of our members have flown their 5-hour legs from Westwood in the space of two week-ends. On Saturday, 9th June, Roy Taylor completed over five hours; on the Saturday following, Tony Casbon managed his duration leg, and the following day Chris Falkinbridge flew the Olympia locally for 5 hours 2 minutes. Another Silver C was completed during May when Stan Hickson drove south along the A1 to land 50 miles away in a field next to R.A.F. Henlow.

C.C.D.

SCOTTISH

OUR various sub-committees are showing considerable activity, and among these is noted the building of an annexe to the clubhouse to house the staff. On the airfield, work is proceeding on the clearing of the recently acquired 8 acres at the S.W. end, and this area should be in service in the next few weeks.

Winch facilities have not been at the usual level of efficiency, and the eagerly-

awaited new winch from the Benny-Lawson-Milne-Rozycki stable has now appeared and is undergoing trials; this winch has been named "Bloody Mary" and must be seen to be appreciated, since it sets a new standard in winch design.

The expected increase in flying activities has brought on a spate of promotions, and the new Swallow (No. 2) has greatly eased the loading on Swallow (No. 1).

The Club Championship Table is in a very healthy state with a number of new names appearing among the top positions, a recent leader in this being Flt. Lt. D. M. Holliday, but a posting to foreign parts has put paid to his chances for the next few months.

Cross-country flights in the past month have increased in number, and retrieve crews have had an easy time due to pilots picking airfields for an aero-tow retrieve. The most popular of these has been R.N.A.S. Arbroath.

On Sunday 17th June two Olympias managed to get away from the pack, the syndicate Olympia from London completing 78 miles to a point south of Aberdeen. A later start by an S.G.U. Olympia made a flight of 55 miles with a landing at Fordoun Aerodrome for aero-tow retrieve.

Visitors during this period have included Basil and Queenie Meads, Lionel Tate (Newcastle), J. Diamant (Israel) and two syndicate Olympias and crews from Dunstable.

W.A.S.

SOUTHDOWN

APRIL produced our best flying figures for several years with 101 hours' flying. Tim Tucker gained his 5-hours mainly in thermals and timed his flight carefully so that it fell between milking times on his farm. Mike Squires converted to the Olympia and Tony Wraight re-soloed on the Tutor. Val inadvertently made his first cross-country by landing out after attempting his five hours on the ridge. Flying was attempted on one day from a narrow strip on our old field, launching towards the Beacon in a north-westerly wind. It was good to fly off the old field again, and the latest news is that we should be able to have the use of it next year.

The "away" Olympia has recently been re-instrumented and now includes an artificial horizon with the Walker transistorised inverter system and a Cook vario. This latter really does show you what is going on in a thermal and has proved a revelation to most pilots.

Expeditions with the club's hireable Olympia have proved even more popular than last year and expeditions have already been made to Edgehill, Tibbenham and Shoreham aerodrome. A further trip is being planned to explore the cliff soaring near Beachy Head in a south-west wind.

Apart from the Nationals, when Ray Marshall represented us, competitions have been giving our pilots valuable experience, and teams were entered for the Lasham Spring Rally and Swanton Morley Easter Rally.

P.W.

SOUTH WALES

THINGS are starting to move now that we are operating a two-seater and a single-seater. Eight members took the G.B. to the Mynd in the first week of May. Ivor Shattock assisted with the instructing and C's were gained by Don Prout, John Hughes, Danny Roberts and Derek Alsop. All except Derek did their first solos earlier in the week, John getting as many as 29 solo flights before the week ended.

The G.B. has been a great success at the site, with 21 flights over 20 minutes since the return from the Mynd. Denis Bryan-Jones and Alfie Williams have gone solo and on 10th June Don Prout did his Silver C height without a barograph. On the next flight, Adrian Thomas made sure and reached 4,800 ft. for the club's first Silver C leg on the site. He was followed to 4,000 ft. by the 31 with Ivor Shattock and pupil Norman Evans.

D.E.F.

WEST WALES

MEMBERSHIP is still increasing steadily — we now number 96 — and our few instructors are kept fully occupied, with little time for fooling around in the high-performance aircraft. Lloyd Edwards, our Chairman, is now a U/T instructor, as is Wynn Davies, and we hope they will be categorised very soon. Alec King, Gomer Phillips

and Owaine Davies have soloed, and Pat James, Howard Jones and Rhoda Partridge have gained their C's, Rhoda taking hers whilst on holiday at the Mynd. We have made 1,365 launches in the last three months and the Tugmaster has provided 154 aero-tows in the same period.

Gil Phillips and Peter Wulff made their epic flight to Holland and towed back the Sky. Needless to say, the Sky has proved a very welcome addition to our fleet and came into its own when a party of five members went to nearby Templeton airfield, which is out of range of the sea breeze front that sometimes damps the thermals at Withybush.

We held our first Open Day on Easter Monday, which proved very popular with the public and is likely to be repeated. David Benton came down from the Mynd to help out with the aero-tows and we're most grateful to him. At the moment we have a standing engagement with the Tenby Round Table to provide a periodical aerobatic display, the first of which was most creditably done by Bill Nicholas in the Swallow and was filmed and shown on TV. After landing on a section of the beach, the Swallow was exhibited to a very interested public who paid for the privilege, the proceeds going to Round Table charities. Our own raffle of a holiday for two in Switzerland or Majorca is also in full swing and doing very nicely. May we send you a ticket?

H.J.

YORKSHIRE

AT Sutton Bank many marked changes have recently taken place. The most conspicuous is the steady progress of our new clubhouse, which started life looking very much like a gas-holder, is now taking on the form of a most desirable residence. We hope it will be ready for use by the end of the summer.

Our annual dinner was the opportunity for our C.F.I. to stand up and tell club pilots it was high time they did some cross-country flying. This has resulted in a most gratifying number of cross-countries, and during the week from 11th to 17th June, five Silver C's were completed by Harold Salisbury, Jim Hodsman, John Iceton, Brian Hartness and Tony Smallwood. We have also seen the first solos of Bob Nicholson, Grahem Keighley and our architect, David Leckenby.

Although there was no Yorkshire Club entrant in the Nationals this year, our C.F.I., Chris Riddell, took his Skylark 3 to Switzerland to compete in the Swiss Nationals, and came back with very stimulating reports of soaring the mountains over there.

This year we have had the opportunity to aero-tow with the syndicate Tiger Moth, and this has proved to be most satisfactory. Most of the towing has taken place from Wombledon airfield, but it has been possible in certain conditions to tow out to Sutton Bank without much difficulty. The opportunity for aero-towing has shown clearly that the scope of gliding at Sutton is going to be increased considerably, and we are working on tentative plans for a wave project for the Pennine waves, which occur very frequently, and they rise often to great heights.

Two aircraft will be taking part in the Northern Championships at Camphill — the club Skylark 2 is entered and also the new syndicate Skylark 4. This was flown for the first time on Sunday 17th June, and we are certain that Slingsbys have got a very fine sailplane here.

J.C.R.

Service News

BANNERDOWN (Colerne)

THERE has been nothing spring-like about spring. In consequence our activity, although respectable, was way below plan with 488 launches for 68½ hours. There were no flights of real note, though Vince Griffith found a decent thermal on a visit to Bicester and recorded Silver height.

The A.G.M. went well; all members of the present committee were re-elected with, in addition, Equipment Member F/Lt. M. Lanng and Deputy Technical Member Corporal M. Channon. Brian Campbell was presented with the Bannerdown Trophy and it was certainly good to see *esprit and* hard work so rewarded.

Recently your Scribe had to be in Stockholm for a few days, and met up with the local gliding club. Much information and gliding talk was exchanged and a smart lesson in conditions experienced. By 11.30 a.m. on the appointed day nicely building Cu produced visions of Gold legs and other glittering baubles; by 12.00 the sky was absolutely clear and the Baltic sea breeze front was 10 miles inland. A 7-minute kite-like aero-tow in a Bergfalke was followed by a 7-minute descent in anything up to 20 down, but the experience was well worth it, and it was noticeable that aircraft already up and away were all back home smartly without incident.

The smartest retrieving story we heard is the one where Max Bacon landed at a wealthy farm. After a swim and a few pints of beer he thought that this was real gliding, but the trailer didn't arrive till midnight with a distraught crew having fixed a damaged tyre and an elusive short in the electrics. The de-rig and departure were so quick that the underpants which had served as a swimsuit were forgotten and now presumably adorn the farmhouse as a trophy.

P.H.

CLEVELANDS (R.A.F. Leeming)

THREE members, namely Mike Baker, Alex Glover and Ron Pledge, spent a most pleasant Easter week-end with the club Olympia at Carlton, home of the Newcastle G.C. The weather was unexciting but the wintry conditions were more than offset by the warmth and hospitality of the Newcastle members. Alex attempted to fly back to Leeming on Easter Monday evening in practically stable conditions — there was evidence of wave — but he failed to contact and finally landed at Brompton, four miles short.

Our R.A.F. members have dwindled somewhat in number in recent months due to postings, latest departure being Bruce Coutts, to whom we wish the best of luck and hope that he will continue to get some gliding in.

Our Chipmunk has returned after "tugging" at the Nationals, and we hope to have a Skylark 3B within the next fortnight.

R.F.P.

EAST ANGLIAN (R.A.F. Duxford)

WE are pleased to report increased success in the cross-country attempts this month. Pete Dawson earns top honours with a flight of 204 miles to Usworth, near Newcastle, giving him a Gold distance and Diamond goal. Pete's wife, Maureen, flew 60 miles to Boston in Lincs., thus getting Silver distance. Jim Morris and Paddy Hogg both obtained Silver height and distance with flights to Clacton and Ipswich respectively; many congratulations all round. Pete Brown and Ed Edwards both soloed in the Tutor, and gained A and B cert. Jock Frame took the Tutor to 6,000 ft. (with a barograph this time) and got a well-earned Silver height.

We are experimenting with the "shuttle launching" idea of the Irish club, and we hope it will serve to increase our overall efficiency.

Chris "Microbe" Morris has left us to go to Cosford, and we wish him the best of luck with his future gliding.

A.H.W.

FENLAND (Swanton Morley)

AS reported elsewhere in this issue, Ian Strachan managed to win League 2 of the Nationals. Meanwhile, Pete Kevan did a Goal Diamond flight to Yeovilton in the Olympia, and will be making a great effort to increase his B.G.A. Rating points by entering contests this summer.

We now have the 17-metre Olympia 403 at Swanton and hope that we will be able to utilise it.

Al Pengelly has completed his Silver distance and height, Terry Donegan his height, and C certificates have been gained by Norman Pealing, Rick Atkinson and Roger Hodgson.

I.W.S.

PORTSMOUTH NAVAL

IT is some time since news of our activities appeared. At the A.G.M. our secretary, Peter Davies, resigned, and was presented with an engraved tankard in appreciation of his work for the club. He was also awarded the Goodhart Trophy for the club member who had done most for the club during the previous year. Leslie Vine is the new

secretary. He will have the assistance of Peter Davies, who is combining the duties of treasurer and assistant secretary. The new Committee is John Limb, Keith Morton, John Townsend, Alan Williams and Peter Wilson.

Soaring conditions at Lee-on-the-Solent have been somewhat better than last year, and already we have had several C certificates.

Trevor Thomas, our ground engineer, recently completed his Silver C with a flight to Lewes, and Keith Morton achieved Silver C height.

Several pilots have converted to the Skylark, and the other solo pilots, now flying a Tutor, are awaiting delivery of an Olympia 2.

L.D.V.

WINDRUSHERS AND R.A.F.G.S.A. CENTRE (Bicester)

THE activities of the club and centre have largely been in abeyance during the last month because most of the more active members have been at Aston Down, not only in the limelight as competitors but also crewing, flying Tug aircraft and working in the background in every other capacity. Some of our club aircraft went to Aston Down and helped form the R.A.F.G.S.A. Staff Flight which provided local soaring for non-competitors, and the T-21s were used to give soaring and aero-tow experience to pilots at an earlier stage of training. The Staff Flight achieved several Silver C legs while at Aston Down, including a duration gained by Group Captain Goodbody, local soaring in the Olympia over Stroud. Group Captain Goodbody has since completed his Silver C by flying from Bicester to Pershore.

We are presently dealing with the aftermath of the Nationals and having to cope with minor repairs and overdue maintenance to aircraft, trailers and vehicles.

R.P.S.

Overseas News

CENTRAL AFRICA

THE Association consists of all gliding clubs in Northern and Southern Rhodesia. This year the Association will hold its first championship since 1956. It is certainly hoped to be the largest ever held in the Federation, as gliding has progressed rapidly in the last few years. The latest clubs in action are Bindura and Marandellas. They have started the hard way with winch launching and vintage Kranichs and Grunaus from Sweden. Bindura's progress has been incredible, as the town is relatively small to support a flourishing club. In little over a year they have purchased or rebuilt a Grunau, Kranich, Tutor (the only truly indigenous aircraft in Africa), H-17, Skylark 2 and a Swallow.

Kitwe Gliding Club now have probably the highest performance aircraft in the Air 100. Their aircraft are in splendid condition and Kitwe should prove formidable opposition in the competitions. They also have a very interesting aircraft in the gull-winged H-28. Vic Brieley, the Chief Flying Instructor, gave the whole movement a considerable boost with his record climb in a Grunau Baby 3. Were it not for the bush, Kitwe would also be to the fore in distance flying.

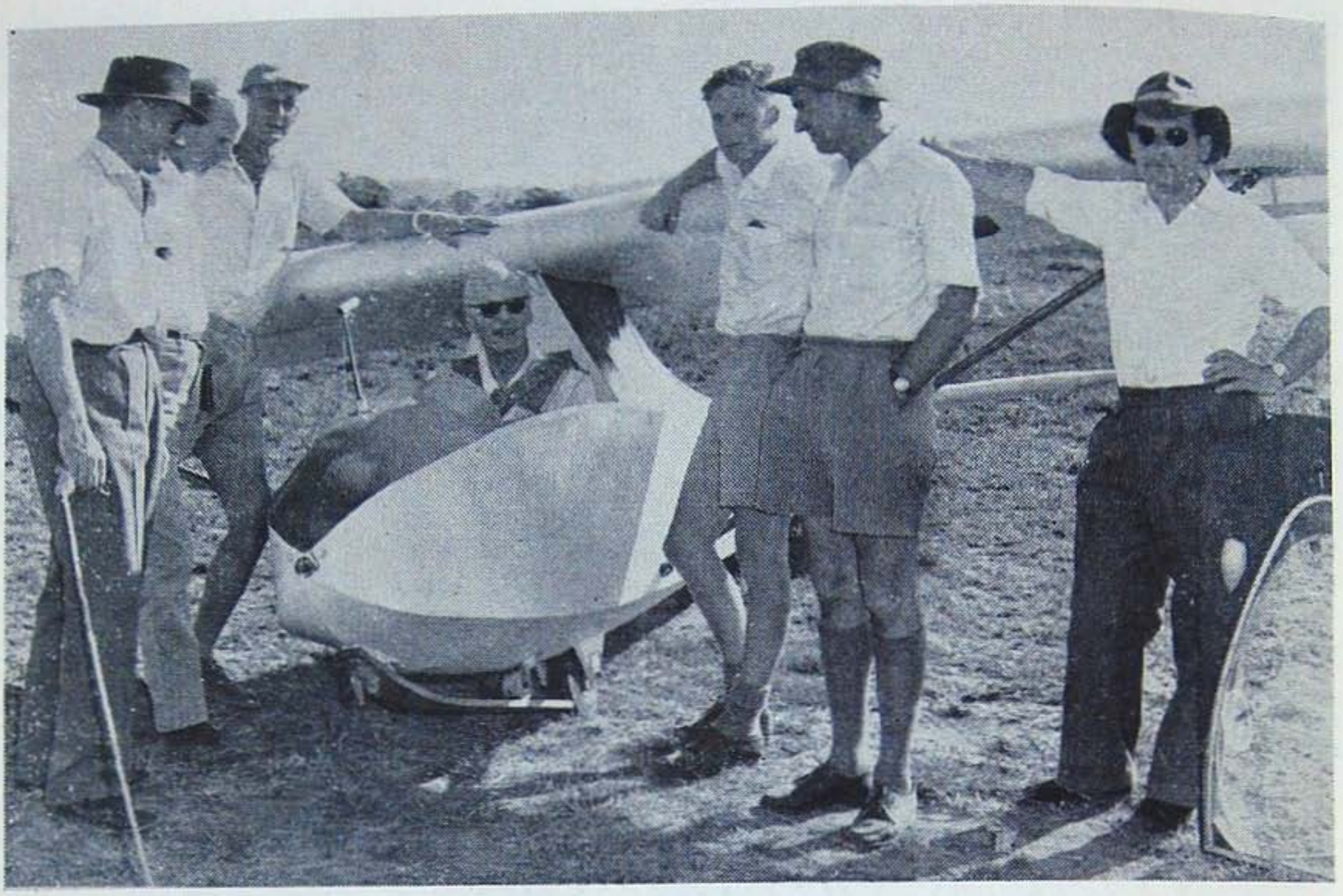
Salisbury Gliding Club have also increased their number of aircraft, and two K-6's from Germany are on order, but will not be here until next year. They have another two Gold C pilots — Jimmy Arnott and John Sanders. The latter two pilots both competed in the South African Nationals.

Bulawayo has purchased a Goevier from Holland and is now recovering from a run of bad luck. Two-seater training has recommenced and towing facilities have been arranged on a more permanent basis.

Midlands Gliding Club have struggled very hard to build a strong club and are looking now for a single-seater to augment the T-31. They have a very good field and well placed for cross-country flying.

Que Que is hoping to start a club and Umtali are in the process of repairing a T-31 and may start operations again in the near future.

Vic Brierley, C.F.I. of Copperbelt, recently took off in a standard Grunau Baby club machine in an attempt on



Philip Wills with members of the Salisbury Gliding Club, he takes off in a Grunau to sample a bush fire.

either the world gain of height record or the Diamond C gain of height. He was towed to a height of approximately 5,660 ft. a.s.l. (Nkana Airfield is 4,160 ft. a.s.l.) and reached 35,560 ft. a.s.l.

After release in indifferent conditions, during which he lost about 500 ft., Vic encountered light lift, and this was exploited up to about 12,000 ft. a.s.l. He flew on for about one and a half hours waiting for the expected storm cloud to develop from an area of roughly 4 square miles in which the mass of air was ascending at a fairly steady rate of 1 ft./sec. and the area "felt" unstable. His patience was rewarded when at last a "cu-nim" started to form with a flat base and a rising billowing crown.

From here Vic Brierley takes over in his own words: "I entered the cloud at about 11,600 ft. a.s.l. at a rate of 2 ft./sec. for about another 1,000 ft. Then the real lift started with my variometer climbing to 20 ft./sec. and sticking there for the remainder of my flight in this cloud. (In fact the baragraph recorded up to 35 ft./sec. rate of climb.)

"My air speed indicator became iced-up at 18,000 ft. a.s.l. and, although worried at first, I found that I could fly at the correct speed by ear. I was now using oxygen from my cylinders and would have felt really cold had I not had to work so hard at keeping the Grunau Baby on an even keel. I was being buffeted by the extreme turbulence and ice started forming on the wings and canopy. Big lumps of snow and ice pounded the machine and the perspex canopy bent visibly under the strain. Lightning was flashing all round me and the glider became very stiff on the controls and nose-heavy. I assume that the ice build-up changed the centre of lift."

So things look very bright for our sport in the Federation and we hope to give a full report later on our Championships, which will also decide our participants in the World Championships in the Argentine. G.H.

HOLLAND

AFTER a very bad start to the soaring season the weather improved at the end of April. On the 28th the first Gold C distance was flown by A. Kelderman. Two days later was a great day:

Rob Vulling flew from Teuge to behind Châteauroux in a Skylark 2, covering a distance of about 700 km. in 8 hrs. 42 mins. This is a new Dutch record, about 140 km. better than the previous one of 561 km., achieved on 27th May, 1957, by Wim Toutenhoofd. The same day the two-seater distance record of 201 km. was improved upon twice, first by A. Szabo and F. Brackel on Rhönlerche (255 km.) and later in the day by our new National Champion, Ed van Bree, who flew 287 km. with his wife Henny on a Ka-7 from Woensdrecht to Dieppe. Their original plan to cross the Channel westbound from Calais proved to be impossible.

Two Gold C flights were recorded also on this Queen's-Birthday-Holiday: Jan Franken, who completed his with a flight of 346 km. in a Sagitta, and J. Mölling, who flew from Venlo to Fontainebleau, 418 km. The Nationals brought some good weather again and a number of Diamonds for Goal and Distance was the result.

On 5th May the R.N.A.F. Gliding Club at Woensdrecht celebrated its 10th anniversary with a one-day contest. The 114-km. triangle task proved a bit too heavy for the weather, so only Ordelman on a Sagitta completed it.

After the Nationals the good weather persisted, and it was on 6th June that Jack van Eck flew a Skylark 2 from Terlet to Abbeville, 350 km.

J.Th.v.E.

CRUSADERS, CYPRUS

DURING March very little soaring was done, but early in April conditions improved slightly and the club record was raised to 1 hr. 55 mins. by Con Greaves in the Swallow. Soaring was then to be had at some period of every week-end, but usually consisted of a small early morning sea breeze front or a late afternoon thermal. In March Gerry Kemp went to Bicester and got a B cat.; he is now back with us.

Our Easter week-end was the most successful public holiday yet, during which we amassed a total of 350 launches over a four-day period.

A deep depression hung over Akrotiri late in March when we learnt of the death of our Treasurer, Fg. Off. Andy Marshall, in an air accident. Andy had been with the club about 12 months, during which time he had organised the Treasury down to the last letter. He had many friends both in and out of the club and he will be greatly missed by all.

On 10th May we were honoured by a visit from Air Commodore Walker, the Director of Movements, who we are grateful to for indulging most of our equipment out here.

The summer weather is now settling in and we are still open any week-end to a visit from any gliding type passing through Cyprus. Contact Flt. Lt. J. Hay, Officers' Mess, R.A.F. Akrotiri, Cyprus, B.F.P.O. 53, then we will be expecting you.

Since the departure of Roy Salmon, changes have been made in the committee, and Jock Hay is now Officer i/c cum chairman with Brian Clisby as secretary/treasurer.

During May we moved on to the nearby salt flats to test their suitability for gliding. The first attempt proved very encouraging and over Whitsun a camp was held which was very successful from the operating side due to our being uninterrupted by aircraft movements at Akrotiri.

We now have a further four A's and B's off, one of them, Sadie Saunders, being our first lady member to fly solo, and two C certificates. Recent conversions to the Swallow include Mick Hollis, Jan Zapasnek and Tim Sullivan.

The end of May saw the return of our founder C.F.I., Bill Owens.

The latest experiment to be tried is mixed towing with auto and winch. This proved all right as long as the cables remained in good serviceability, but the wear on an auto-tow cable along a runway is terrific — it was suggested we used barbed wire as it possesses legs which would keep the main cable clear of the runway!

G.L.K.

U.S.A.

FIVE Diamond altitude flights were made in April at Tehachapi, California, using Schweizer 1-26 sailplanes rented from the Holiday Soaring School. The lift used was provided by a wave system that persisted for several days, the same wave used by Paul Bikle in setting the world soaring altitude records

a year ago. The three flights made on the Saturday were with the same sailplane, averaging 1¾ hours each. A sixth Diamond altitude gain was made on the Sunday, but the Peravia barograph aboard ran out of paper before the gain was recorded. As the wave weakened on Sunday a seventh pilot was able to achieve a 12,800 ft. gain for Gold altitude. The Diamond flights achieved heights of from 29,000 to 31,200 ft. with gains of from 17,000 to 23,500 ft. The airport elevation is 4,000 ft. and release altitudes were from 9,000 to 12,000 ft. a.s.l. The flight with the best gain had a low point after release of 7,400 ft. a.s.l. or 3,400 ft. above the airport. There was no roll cloud present and no turbulence encountered on any of the flights. Peak altitudes were attained just under a large lenticular cloud.

The Soaring Society of America is inaugurating a new soaring training programme in June of 1962, which will feature the A, B and C badges as achievement awards. The programme will be implemented by specially qualified instructors with the various clubs and commercial soaring schools who will be designated SSA instructors. The basic requirements for each of the badges will be for the A solo, for the B the earning of the F.A.A. private glider pilot certificate (qualification to carry passengers) and for the C soaring and demonstration of spot landing proficiency in preparation for cross-country flights. L.M.L.

WEST TEXAS

Our visitors from England have included ALAN YATES, who did two cross-country flights of 132 and 160 miles in a Shweizer 1-26 in very poor weather conditions.

PETER MILLS, an old pupil of mine from Lasham way back in 1957. Over here to study oil wells for six months. He got his American private glider licence and a "C" award.

JOHN LOWENSTEIN, ex-London Club, spent a few days with us in the early part of the year.

Sgt. VAN DER SALM, Dutch Air Force, who missed his Gold "C" gain by a few feet.

I myself missed my Diamond gain by 900 ft., got up to 19,500 ft. in the 1.23H. The first week in June I tried for my 500-km., did 210 miles in four hours, landing at Childress Airport, Texas. Forced down by a tornado line and heavy rain on a 50-mile front. A week before that ALEC ALDOTT did the same flight, 265 miles, and had the same weather conditions.

AL PARKER has now his Gold "C" award; did it all in a 222C trainer 18-1 G. Ratio.

In May we have had five Gold "C" gains. Most pilots got to 17,000 ft. in clear blue air. B.M.

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BRITAIN AT ITS BEST

Gliding: a Slingsby Skylark 3F over Hampshire

FROM 60 launching points in all parts of Britain, some 6,500 enthusiasts take to the air to enjoy what is perhaps the most solitary of modern sports—gliding. But peaceful as it may seem to the onlooker, gliding nevertheless has its thrills and if the glider suddenly loses its 'lift' a quick search for an uncluttered field may be called for. Under the very best conditions, however, a really skilful pilot can make the most remarkable heights and distances. The British National Gliding records, for example, are 37,050 feet and 462 miles.

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