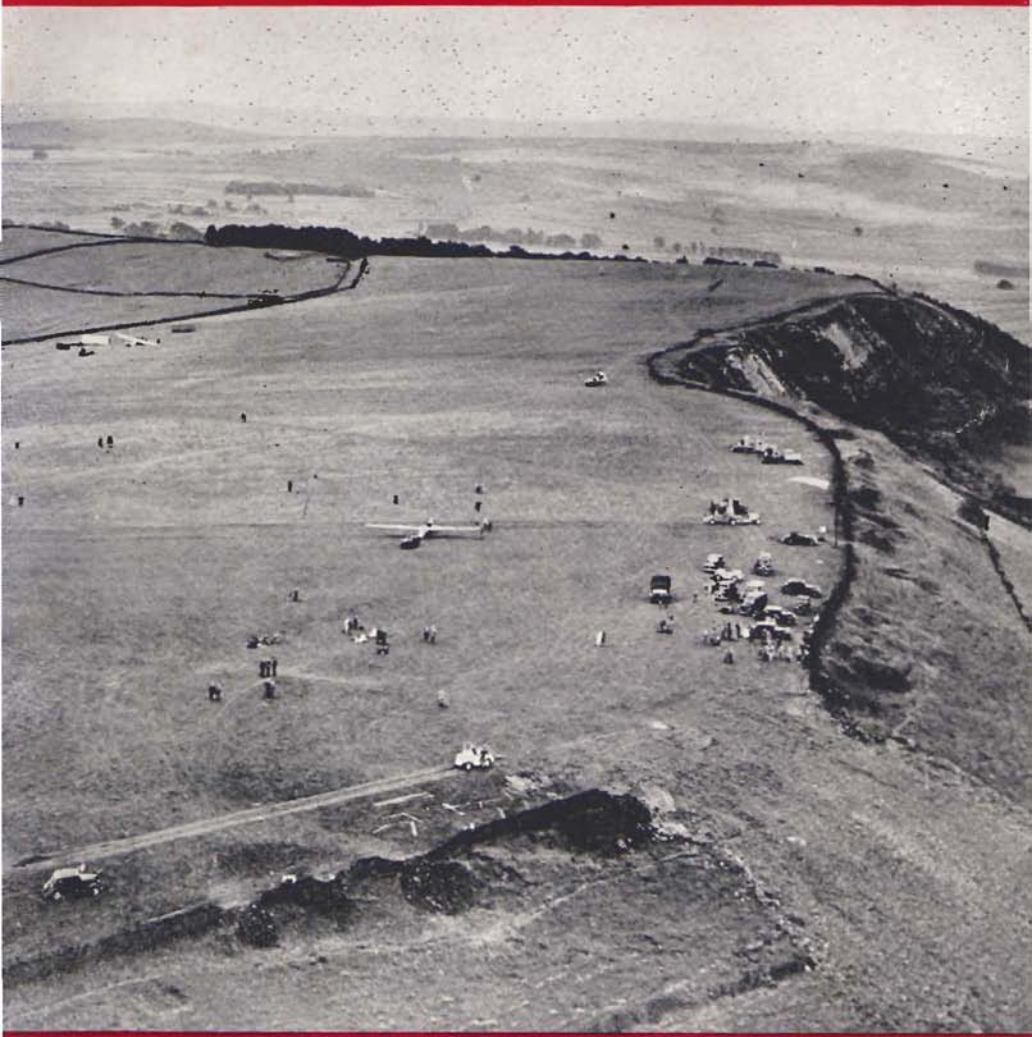
GLIDING

Vol. 4 No. 3 AUTUMN 1953



QUARTERLY 2/6

GLIDING

Edited by Alan E. Slater, M.A., F.R.Met.S.
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Directors : Philip Wills, C.B.E., Ann Welch, M.B.E., Jacques Cocheme, A.F.C., Charles Ellis.
OFFICIAL ORGAN OF THE BRITISH GLIDING ASSOCIATION
LONDONDERRY HOUSE, 19 PARK LANE, W.1

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Cover Photograph.—Camphill, Derbyshire, where the World Championships will be held next year: showing the flying field, the South Slope beyond it and part of the West Slope on the right.

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World Championship Notes and News

WHAT do we believe are the special advantages we have to offer to our International visitors to Camphill next year? Two most important things.

First and foremost, with anything like the run of weather we have had at the 1951 and 1953 Nationals, we hope to show that first-class performances can be put up in weather conditions that most countries do not yet realise are suitable for gliding at all. At Camphill, providing the wind is blowing up one of the slopes, and the cloud is not down on the hill, sailplanes in the hands of competent pilots seem to be able to produce startling results almost every day. We really believe that this is a lesson of the first importance.

Second, living on the site in a fleet of caravans, we hope there will be more social contact between gliding enthusiasts of all nations than ever before.

On the debit side, the nature of the site is such that, in other than good weather conditions, the rate of launching is likely to be slowed down to avoid dangerous congestion on the slope. This may react adversely on the daily fortune of some pilots, but over the full period of the contests it is hoped that such individual strokes of ill-luck will cancel out.

In the comparatively good road conditions and short distances of our country, it is the exception rather than the rule for any pilot not to be back at base by 11 p.m. even without radio, which is far less important a requirement than it was in Spain. Thus, flying nearly every day without undue fatigue becomes possible. In the 1953 Nationals we had flying on 9 days out of 10, and few pilots were unduly exhausted. Thus we hope to be able to provide 8 full contest days for both single and two-seater classes in the 14 days of the contests—more than ever before. But British weather is even more unreliable than that of any other land, so we can only hope.

But although we talk of short distances, the number of really long flights carried out in previous World Championships have been surprisingly few, and we believe Stephenson's Diamond goal-flight from Camphill this year (Camphill-Lympne 193 miles) is as good an individual performance as has been achieved in any of them.

* * * *

A review of the estimated number of countries we hope to see here shows that, in view of the F.A.I. desire to limit total numbers of entries to an optimum number of 40 aircraft, it is very likely that for the first time it will be necessary to restrict the number of National entries to below the previous maximum of 5 aircraft per country. It certainly seems probable that single-seater entries may have to be reduced to 2 per nation. This will provide difficult problems for the organising country, but is certainly a sign of increasing world-wide interest in motorless flight. The British Gliding Association will be sending out definite advice on this in October.

* * * *

The British Gliding Association expects to send to all interested nations the first part of the basic rules, covering entries, costs, etc., early in October. The second part, including marking system, will go out in February, 1954.

* * * *

We ascribed much of our success in Spain in 1952 to our arriving in time for some preliminary practice. We strongly advise all participants that this will be even more important in 1954, since the likely weather and site conditions at Camphill are somewhat unusual for pilots accustomed to flying from flat aerodromes in fine weather. We do not say they are difficult—they are not—but they are different.

B.G.A. News

Women's Records

ON the recommendation of the Flying Committee, the Council of the British Gliding Association has homologated the following Women's Records:—

U.K. LOCAL AND NATIONAL DISTANCE RECORD.—Mrs. Barbara Alexander, 65 miles from the Long Mynd to Desford Aerodrome, Leicester, in a Prefect on 7th April, 1953.

NATIONAL ABSOLUTE ALTITUDE AND GAIN OF HEIGHT RECORDS.—Mrs. Barbara Alexander at Pont St. Vincent in a N.1300 on 5th August, 1952: absolute altitude 7,217 feet, gain of height 6,233 feet.

BRITISH NATIONAL DURATION RECORD.—Miss D. Carena Bell, from B.A.O.R. Gliding Club site at Potzen, near Hameln, in a Weihe on 23rd August, 1953: 8 hours 18 minutes.

The required documentation for records is described in "F.A.I. Regulations and Records in Gliding", obtainable from the Association for 2s.

Gliding Stamps

Full of ideas, as usual, the B.G.A. has produced a set of Gliding Stamps, with the aim of increasing public knowledge and enthusiasm for our movement. These are what is called Poster Stamps, and inserted in this copy of GLIDING you will find a form with a sample attached.

In the United States, Poster Stamps are of even more interest to collectors than are ordinary postage stamps, but so far in this country little use has been made of this method of propaganda. Readers will realise that if sufficient interest can be created to get people collecting full sets of Poster Stamps, much good may come to our movement. Accordingly it is suggested that everyone should buy a set of these stamps and attach them to their Christmas letters. Once the craze has been started, it is possible that a snowball effect might be achieved, which would be of great value to all of us in many ways.

Please do your best, dear reader: complete the enclosed form and send it with a postal order to the B.G.A.

Telephone Number

This has been changed to: **Hyde Park 3341.**

MARRIAGES

MRS. Ann Douglas, Vice-Chairman of the British Gliding Association, and Mr. Lorne Welch were married on 24th June.

Lady Alexandra Kinloch, Secretary of the B.G.A., and Mr. Cuthbert Orde were married on 17th August.

We know our readers throughout the world will wish us to record on their behalf the congratulations and best wishes of the whole gliding movement.

Review

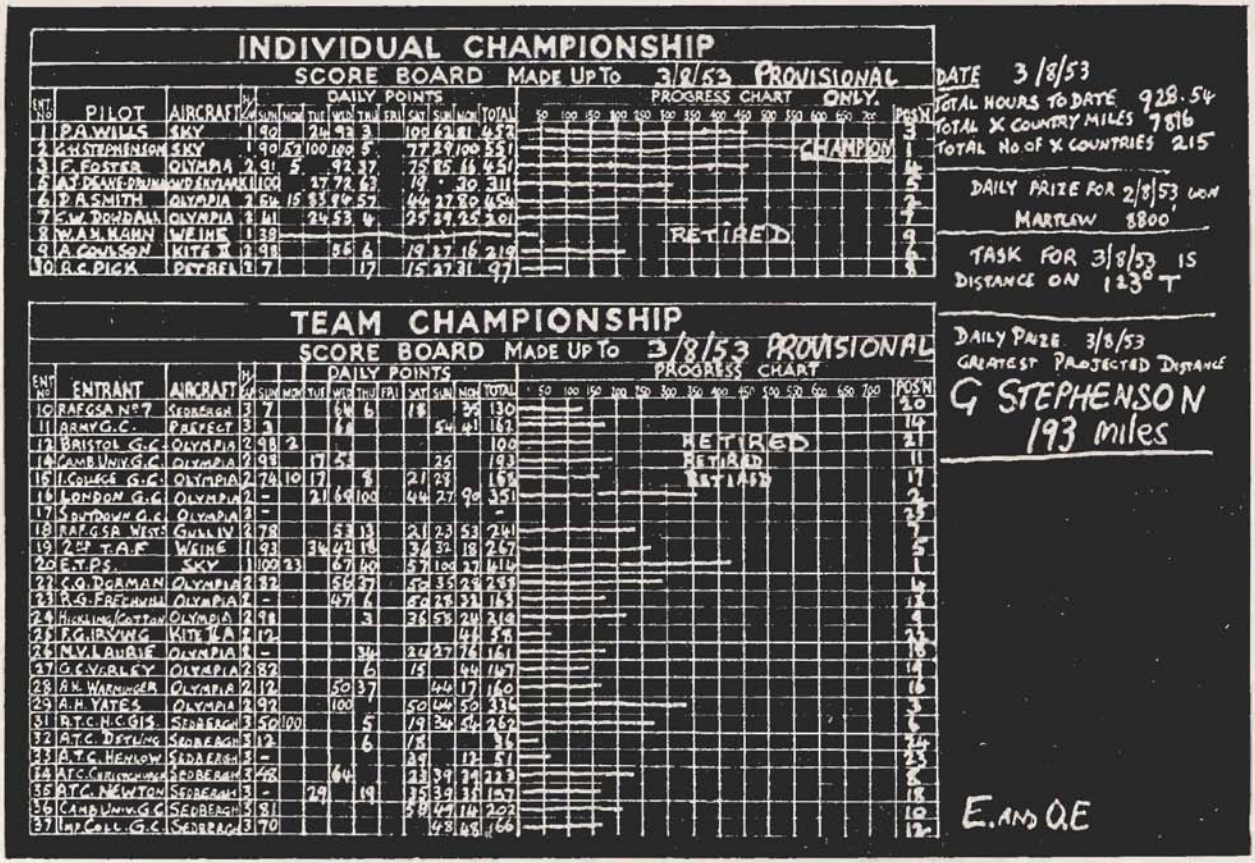
On being a Bird : by PHILIP WILLS. Published by Max Parrish, London, 1953. Price 15s. 6d.

It is hardly necessary to give a long account of the contents of this book, seeing that nearly every reader of GLIDING will have either bought a copy or read somebody else's by now.

Since its avowed object is "to paint a picture of the air as it seems to the man or woman who approaches it in silent flight," one does not expect a textbook, though in many respects it can serve as one. The accounts of flights include some old friends, but several shed new light on past history. There are the sailplane trials along the south coast in 1940, to find out whether invading gliders could be detected by radar. There is the uncontrollable spin on a test flight which nearly ended disastrously. And there is a memorable account of the flight from Samedan down to Lake Como during the 1948 internationals, on the day that Donald Greig and Kit Nicholson came to grief in the same region.

It is just twenty years since Philip Wills came into British gliding in earnest, when a few British pilots were at last discovering how to use thermals and liberate themselves from hills. But he found himself in the thick of another liberation movement—no less than that of the recapture of the B.G.A. by the real British gliding people. To this, also the author lent all his skill, with results from which we now benefit; but that particular inside story is hardly printable yet.

A.E.S.



DATE 3/8/53
TOTAL HOURS TO DATE 928.54
TOTAL X COUNTRY MILES 7816
TOTAL No. OF X COUNTRIES 215

DAILY PRIZE FOR 2/8/53 WON MARTLEW 8800'

TASK FOR 3/8/53 IS DISTANCE ON 123° T

DAILY PRIZE 3/8/53
GREATEST PROJECTED DISTANCE
G STEPHENSON
193 miles

E. AND O.E

A photograph by Lawrence Wright of the score board outside the control room on the last day of the Championships.

1953 National Gliding Championships

25th July—3rd August

Results

DAY-BY-DAY scores are shown in the photograph of the blackboard reproduced on the previous page. Only two adjustments to those provisional figures have had to be made: Frank Foster earned 67 points on the last day, bringing his total score to 452, so that he tied with Philip Wills for 3rd place. No. 35, the Sedbergh from A.T.C. Newton, scored 30, not 35, on the Saturday, making a total score of 152, but retains its position in the Team Class.

Individual Class

No.	*Type*	*Pilot*	*Points*
2	Sky	G. H. Stephenson	553
6	Olympia	D. A. Smith	454
1	Sky	P. A. Wills	452
3	Meise	F. Foster	452
5	Skylark	A. J. Deane-Drummond	311
9	Kite II	A. Coulson	222
7	Olympia	C. W. Dowdall	201
30	Petrel	R. C. Pick	97
8	Weihe	W. A. H. Kahn	38

Team Class

No.	*Type*	*Entrant*	*Pilots*	*Points*
20	Sky	Empire Test Pilots School	P. L. Bisgood, E. C. Rigg	414
16	Olympia	London G.C.	C. A. P. Ellis, G. H. Lee	351
29	Olympia	A. H. Yates	A. H. Yates, G. H. Nixon	336
22	Olympia	C. G. Dorman	C. G. Dorman, S. Morison	288
19	Weihe	Assoc. of 2nd T.A.F. G.C.'s	I. R. Hinde, J. P. Brennan	267
31	Sedbergh	A.T.C. Gliding Inst. School	A. D. Piggott, E. J. Meddings	262
18	Gull IV	R.A.F.G.S.A., Cosford	R. H. Pelling, T. Page	241
34	Sedbergh	A.T.C. No. 89 G.S., Christchurch	F. R. E. Hayter, J. C. Allan	223
24	Olympia	Hickling/Cotton	J. H. Hickling, J. L. Cotton	219
36	Sedbergh	Cambridge Univ. G.C.	A. L. L. Alexander, G. S. Neumann, J. P. W. Gaskell	202
14	Olympia	Cambridge Univ. G.C.	G. R. Whitfield, J. Grantham, A. R. I. Austin	193
37	Sedbergh	Imperial College G.C.	R. A. B. Macfie, P. Murden	166
23	Olympia	R. G. Frecheville	R. D. Dickson, R. G. Frecheville	163
11	Prefect	Army G.C.	D. L. Martlew, J. S. Williamson, P. Wenham	162
26	Olympia	M. V. Laurie	J. C. Neilan, M. V. Laurie	161
28	Olympia	A. H. Warminger	A. H. Warminger, B. Gould	160
15	Olympia	Imperial College G.C.	W. N. Tonkyn, A. G. Oram	158
35	Sedbergh	A.T.C. No. 49 G.S., Newton	W. D. Champion, B. Longstaff	152
27	Olympia	G. C. Varley	G. C. Varley, R. C. Stafford-Allen, R. M. H. Goodhall	147
10	Sedbergh	R.A.F.G.S.A., Middleton St. George	L. Simpson, G. Bacon	130
12	Olympia	Bristol G.C.	J. D. Jones, M. J. Hodgson, G. E. Miller, J. M. Hahn	100
25	Kite IIA	F. G. Irving	F. G. Irving, L. J. W. Hall	58
33	Sedbergh	A.T.C. No. 106 G.S., Henlow	S. R. Dodd, F. E. Allen	51
32	Sedbergh	A.T.C. No. 168 G.S., Detling	K. W. O'Riley, H. G. How	36
17	Olympia	Southdown G.C.	W. F. Jordan, J. F. Godley, D. C. Snodgrass	0

Trophies Awarded

LONDONDERRY CUP to G. H. Stephenson, winner of Individual Championship.

L. DU GARDE PEACH TROPHY to Empire Test Pilots' School, winners of Team Championship.

KEMSLEY CUP to Club earning highest score in the Team Class : award not yet decided.

FIRTH VICKERS TROPHY to G. H. Stephenson for best performance in British designed and built glider.

EON CUP to D. A. Smith for highest score in an Eon Olympia.

FURLONG TROPHY to A.T.C. Gliding Instructors' School for entrant of two-seater with highest score.

SLINGSBY TROPHY to Flt.-Lt. A. D. Piggott, pilot of the same, for the most meritorious flight in a Sedbergh.

Cash Prizes

INDIVIDUAL CLASS—London Gliding Club (Sky flown by G. H. Stephenson), £10; D. A. Smith, £7 10s.; P. A. Wills and F. Foster, £2 10s. each.

TEAM CLASS—Empire Test Pilots' School (Sky flown by P. L. Bisgood and E. C. Rigg), £10; London Gliding Club (Olympia flown by C. A. P. Ellis and G. H. Lee), £7 10s.; A. H. Yates (Olympia flown by him and G. H. Nixon), £5.

Daily Prizes

25th July: Pilot Off. J. C. Allan (A.T.C. Christchurch), longest duration.

26th July: Lt.-Col. A. J. Deane-Drummond and P. L. Bisgood (E.T.P.S.) jointly, for highest score of the day.

27th July: Flt.-Lt. A. D. Piggott (A.T.C. Instructors' School), for greatest height.

28th July: D. A. Smith for slowest speed in race to Boston (goal reached by two pilots).

29th July: D. A. Smith for greatest height.

30th July: A. H. Warminger for best speed.

31st July: M. V. Laurie for longest duration.

1st August: P. A. Wills for slowest speed to Rearsby and back (only pilot to complete the course).

2nd August: D. L. Martlew (Army G.C.) for greatest height.

3rd August: G. H. Stephenson for longest distance.

Prizes were Sheffield pocket knives and £2 10s. cash.

Other Prizes

CELLON PRIZE (dope) to London Gliding Club for leading club entry (Olympia).

LADIES' PRIZE (£5) to P. A. Wills for most meritorious flight (Rearsby and back, 1st August).

LORD MAYOR OF SHEFFIELD'S PRIZE to G. H. Lee for best performance by a pilot not earning a major award (goal flight to Marham, 30th July).

Flying Statistics

There were 577 launches, 916 hours, 7,956 miles in 215 cross-country flights. Figures for 1951: 456, 809, 7,208 and 171 respectively.

Handicap Categories according to aspect ratio: (1) Sky, Skylark and Weihe, "scratch"; (2) Olympia and Meise, Kite II, Petrel, Gull IV, 10% bonus; (3) Sedbergh, Prefect, 33⅓% bonus.

In the Individual Class, entrants were the pilots except in the case of: No. 2, London Gliding Club; No. 5, F. N. Slingsby; Nos. 7 and 8, Surrey Gliding Club; No. 30, Yorkshire Soaring Syndicate.

No. 30 was transferred to Individual Class as two of the three pilots dropped out.

Mr. C. E. Wallington, of the Meteorological Office, who gave the meteorological briefings during the contest. When not attending gliding meetings, he is a Forecaster at Northolt.

Championship Weather

by C. E. Wallington.

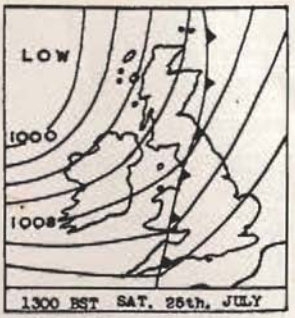
DESPITE the aggravating spreading-out of cumulus early in the week and the difficulty of getting away, weather for the Championships was not unkind to the Camphill competitors.

SATURDAY (25th) with its belt of rain creeping so very slowly across the country, seemed to foreshadow a gloomy start to the competitions; but during the late afternoon an acceleration was obvious and the associated cold front cleared Camphill during the evening.

SUNDAY (26th) welcomed the official opening with a fresh, unstable southwesterly airstream which produced good hill and thermal lift over most of England. Plenty of Cu from about 4,000 ft. to 9,000 ft. and a 5,000-ft. wind of 240 degrees 30 knots helped most competitors on their way.

MONDAY (27th) brought many heavy showers and a few thunderstorms to complicate the difficulties of getting away. There appeared to be only a few strong but narrow thermals underneath the cloud base which varied from 500 ft. to 2,500 ft. above the site. Some Cu-nimb tops probably reached about 20,000 ft. and the few pilots who managed to climb into such clouds got the benefit of a 270-degree 28-knot wind but probably wished that the air temperature hadn't dropped to zero as low as 7,000 ft.

TUESDAY (28th) looked a promising day but the early spreading-out of Cu damped down the thermals, although a 20-knot tailwind did help the struggle towards Boston.

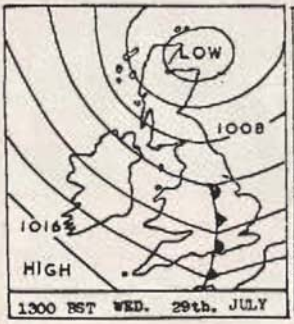


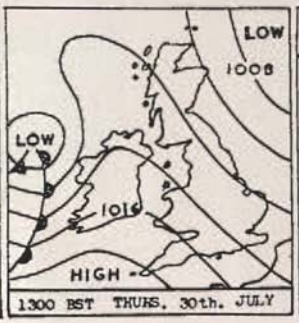
WEDNESDAY (29th). Still no major change in the airstream. Even a weak occlusion across the Midlands failed to modify the Camphill tephigram and once again the spreading-out of Cu meant that all marks gained had to be well and truly earned.

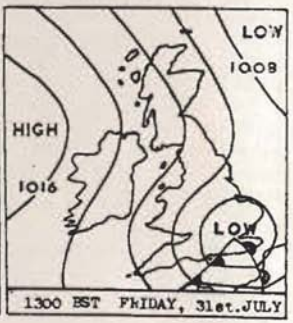
THURSDAY (30th) showed promise of at least an easier afternoon. And sure enough, as the wind gradually veered to northwest, bright sunshine began to pour through widening gaps between the Cu and Strato-cu. The fair weather Cu between 4,500 ft. and 7,500 ft. plus a wind of 300 degrees 20 knots made several good afternoon flights possible.

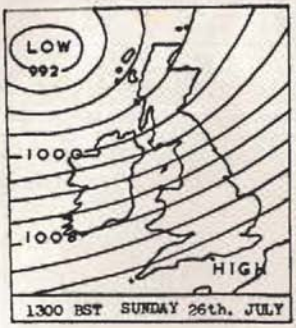
FRIDAY (31st) introduced the only north-easterly wind of the week, thus ruling out slope-soaring for the day. As the depression with its broad rain-belt, which had only just missed Camphill, receded southeastwards the upper cloud cleared and everyone enjoyed a fair, sunny afternoon.

SATURDAY (1st) marked a return to northwesterly winds and fair-weather Cu. Thermals associated with the Cu between 4,000 ft. and 6,000 ft. were good, but the 5,000-ft. wind, being 300 degrees 20 knots

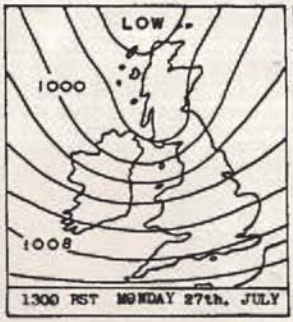




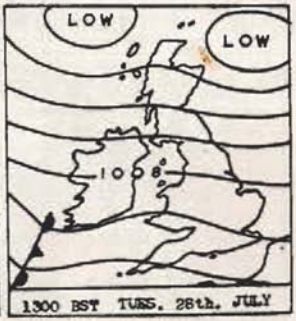




1300 BST SUNDAY 26th. JULY



1300 BST MONDAY 27th. JULY



1300 BST TUES. 28th. JULY

instead of the predicted 290/14, made the return from Rearsby almost impossible.

SUNDAY (2nd) saw the anticyclone still close to Northern Ireland. Bright sunshine and scattered Cu from 4,000 ft. to 9,000 ft. prevailed over much of the 100 km. triangular route, but the 5,000-ft. wind of 320 degrees 15 knots was still not light enough to allow an easy return. There proved to be a more important snag than this, however, in that the surface wind near Bolsover and on the Bolsover-Ashbourne leg was so light that almost stagnant smoke haze made pin-pointing difficult. Many competitors were forced to lose valuable height in order to identify Bolsover Castle, and slope-soaring between thermals on the second leg was impossible.

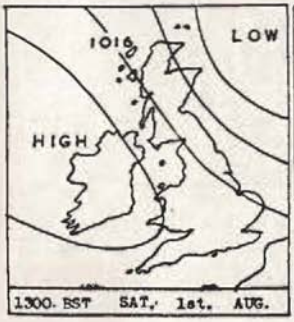
MONDAY (3rd) was the last day to be affected by the anticyclone which was now moving quickly south to make way for a depression approaching from the Atlantic. Fair-weather Cu from 4,500 ft. to 9,000 ft. in the 320-degree 15-knot airstream accompanied good but scattered thermals.

And so ended this Championship weather, conveniently sandwiched between the cold front of Saturday (25th) and the new frontal system now approaching from the west.

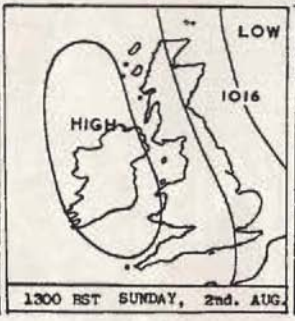
This year's arrangements were noteworthy in that, at the request of the British Gliding Association, the Meteorological Office, Air Ministry provided a small forecasting unit on the spot. The normal supply of basic data by teleprinter proving impracticable, specially prepared synotic charts and other data were transmitted by radio from the Central Forecasting Office, Dunstable for reception at Camphill on MUFAX (facsimile) equipment. In addition, the daily upper air temperature ascents normally made by a Spitfire climb over Worcester were diverted to the Camphill locality in order to provide tephigrams for Camphill itself.

These arrangements made it possible to provide forecasts in the form of pictorial cross-sections to all pilots.

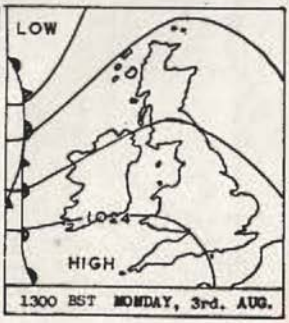
As forecaster for the Championships I found the ten days a fascinating and, thanks to the co-operation of all at Camphill, a most useful experience.



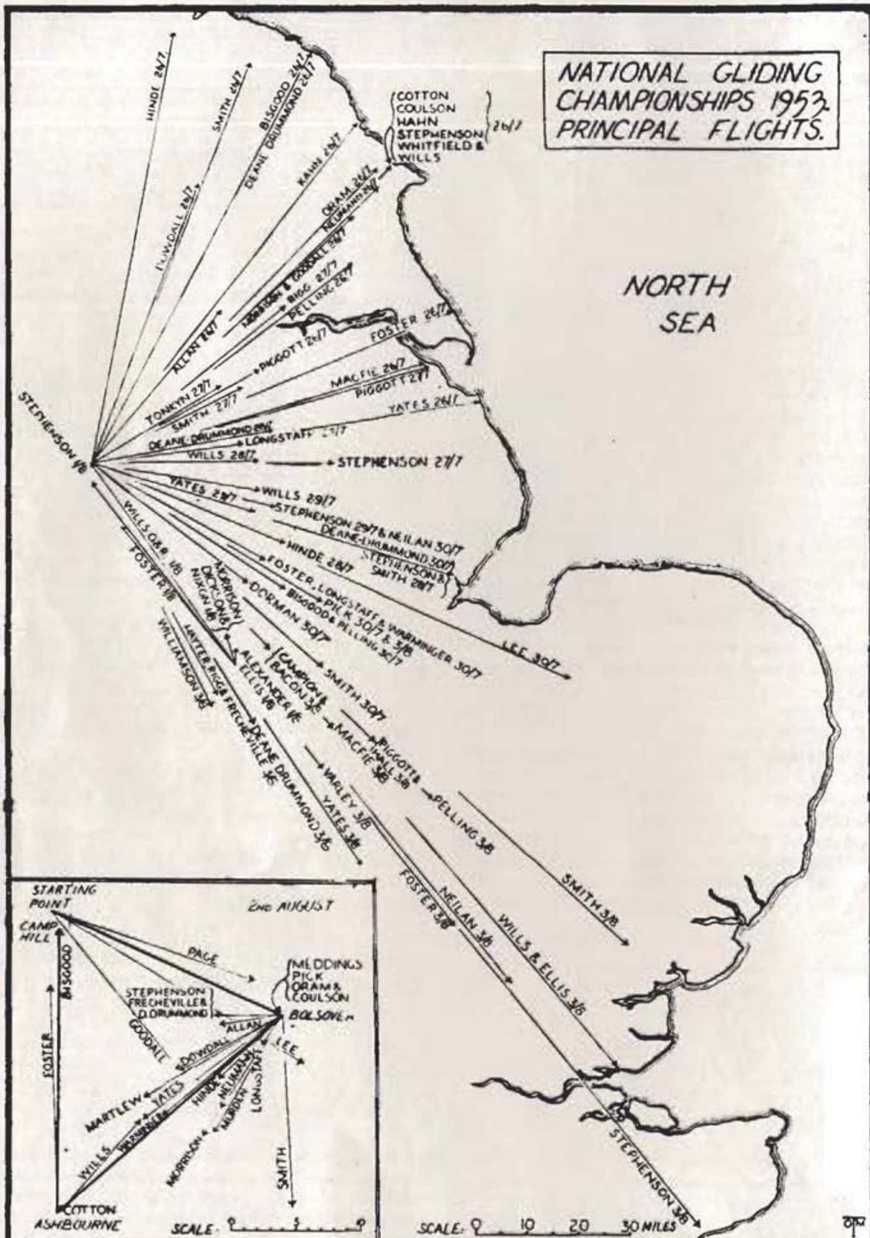
1300 BST SAT., 1st. AUG.



1300 BST SUNDAY, 2nd. AUG.



1300 BST MONDAY, 3rd. AUG.


NATIONAL GLIDING CHAMPIONSHIPS 1953.
PRINCIPAL FLIGHTS.
NORTH SEA
COTTON
COULSON
HAHN
STEPHENSON
WHITFIELD &
WILLS
26/7
HINDE 26/7
SMITH 26/7
BISGOOD 26/7
DEANE DRUMMOND 26/7
KAHN 26/7
DOWDALL 28/7
ORAM 26/7
BIGG 27/7
PELLING 26/7
FOSTER 26/7
ALLAN 26/7
PIGGOTT 26/7
MACFIE 26/7
PIGGOTT 27/7
YATES 26/7
TONKYN 27/7
SMITH 27/7
DEANE-DRUMMOND 29/7
LONGSTAFF
WILLS 28/7
STEPHENSON 27/7
STEPHENSON 1/8
YATES 29/7
WILLS 29/7
STEPHENSON 29/7 & NEILAN 30/7
DEANE-DRUMMOND 30/7
HINDE 28/7
FOSTER 1/8
DORMAN 30/7
LEE 30/7
SMITH 30/7
ALEXANDER 1/8
ELLIS 1/8
MACFIE 3/8
VARLEY 3/8
YATES 3/8
DEANE DRUMMOND 3/8
WILLIAMSON 3/8
PELLING 3/8
SMITH 3/8
FOSTER 3/8
NEILAN 3/8
WILLS & ELLIS 3/8
STEPHENSON 3/8
SCALE: 0 10 20 30 MILES
STARTING POINT
CAMP HILL
2ND AUGUST
PAGE
MEDDINGS
PICK
ORAM &
COULSON
BOLSOVER
STEPHENSON
FRECHEVILLE &
D. DRUMMOND
ALLAN
GOODALL
DOWDALL
LEE
BISGOOD
FOSTER
MARTLEW
YATES
HINDE
WILLS
MORRISON
LONGSTAFF
SMITH
COTTON
ASHBOURNE
SCALE

Championship Flying

SATURDAY, 25th July, was only a practice day, with a barely soarable south wind and rain most of the afternoon. J. C. Allan won a Daily Prize for duration in the A.T.C. Sedbergh from Christchurch.

Sunday 26th July

Goal of Pilots' Choice

AFTER an official opening by Mr. John Profumo, Parliamentary Secretary to the Ministry of Civil Aviation, Mr. Wallington forecast a S.W. wind, blowing 30 knots at 5,000 ft., with cumulus getting bigger, and said the best convection would be over the hills to the north.

Low, fluffy cumulus-like clouds were bobbing up all over the place at 8.30 a.m. (07.30 G.M.T.); but this early exuberance did not, as on some other days, presage a superabundance of cloud cutting off the sun, though a few patches of strato-cumulus were formed in mid-afternoon, with congested cumulus pushing up past them to higher levels.

Thirty pilots got away from the site, a few of them in the morning but most in the afternoon, and 15 reached their goals. Much better thermals were to be found when they got well away from the site, to quote both Stephenson and Deane-Drummond. The latter, more or less in company with Bisgood, went furthest to their goal at Whitby, 94 miles, so that each scored 100 points.

Many pilots tried for Speeton, on the coast near Filey, 84 miles directly down wind, and six got there. Wills made the journey at 49.4 m.p.h. average speed, and would have averaged even more if he had not wasted a quarter of an hour enjoying the view of Flamborough Head and the lighthouse, before realising that he was going to beat his previous U.K. local speed record of 44 m.p.h. over 100 kms. straight line.

Stephenson covered the distance in 1 hr. 35 mins., once he got away, but, as this was not a race, pilots were only timed officially from the launch. Neumann, in the Cambridge "Bluebell" (T-21b) landed 4 miles short after covering 80 miles in 100 minutes.

Coulson, Hahn, Whitfield and John Cotton, who also made Speeton, were in the second handicap class, so their 10% bonus brought their scores to 98 points each, nearly equalling the day's winners.

As it is impossible to mention every creditable flight made during the meeting, readers are referred to the map opposite, and to the reproduction of the scoreboard on page 99.

Two pilots who scored 98 points on the first day by reaching their goal at Speeton. Above, Andrew Coulson with Kite II (Individual Class); below, John Cotton with Olympia (Team Class).

Flying the Skylark

by Tony Deane-Drummond

MOST of my post-war soaring has been done in Olympias, which set a new high standard to me of handling and performance in the air, combined with practical features such as ease of derigging and reasonable dimensions.

The only thing the Skylark will not do better than the Olympia is to fly slowly. In fact, its minimum airspeed in its present form is about 10 m.p.h. faster, which results in larger diameter circles when turning. This seems to be little disadvantage, except on days with weak and small thermals. Slingsby hopes to correct this fault on future versions.

Like most sailplane pilots I have been used to putting on a lot of rudder when going into a turn quickly to counteract the adverse yaw caused by aileron drag. In the Skylark there is no noticeable aileron drag even when applying full stick; a touch of the rudder is all that is necessary to start it turning accurately. The rate of roll is truly astonishing and has been measured to be about 2½ times that of the Olympia. Such a high rate of roll is not really necessary for normal thermal soaring, but I have found it very useful when centreing on the rough and small variety both in and out of the clouds, and in nipping out of the way of some thermal hog whilst soaring over Camphill.

I found cloud-flying very easy in the Skylark as soon as I was used to the small control movements necessary to correct the instrument readings. It is beautifully stable in all planes, and will come back to within 2 m.p.h. of its trimmed airspeed regardless of the attitude into which it is placed.

Having extolled its virtues so highly, readers may wonder why the Skylark was not placed higher in the Championships. The last three days were the trouble. It might have been small thermals, or bad luck or more likely the pilot inside. I know I learnt a lot.

The first day of the Championships, Sunday 26th July, was real skylarking weather. Cloud base started at 4,000 ft. above sea level and rose steadily to 5,000 ft. Thermals averaged 5-10 ft/sec. below cloud and 10-15 inside. Wind was about 20 m.p.h. from S.W. The met. forecast predicted these conditions fairly accurately at the morning briefing, so I declared Whitby as my goal, 96 miles away. I estimated that my cross-country speed should be 45-50 m.p.h., so about 2 hours would be required for the flight. After being launched at 11.30, I was in no hurry to leave until 1.15, when I found myself circling up to cloud base in a strong thermal accompanied by Pete Bisgood in the Empire Test Pilots School Sky. I arrived at cloud base just ahead of him, so I went on circling up to 6,800 ft. a.s.l., when the cloud began to give out. The flight was then easy as far as the Malton-Kirbymoorside area, which was covered with a lot of decaying and spread-out cumulus. Although I was at 4,000 feet, which in theory should have been enough to cross the moors to Whitby, I judged it safer to get a little higher first. Eventually, after 20 minutes nibbling at little bits and pieces, I found a weak thermal over Pickering which went up to 4,500 ft. and drifted me over the middle of some very forbidding-

Above: **the "Skylark" taking off at Camphill. The production model will have a rounded fuselage.** *Below, from L. to R.* **John Neilan, Tony and Mrs. Deane-Drummond, Fred Slingsby and Gordon Bell.**

looking country. From this height Whitby was now in sight and I reached it with 2,500 ft. in hand. I selected a small field beside a holiday camp to come in to land at 3.15. Five minutes later Pete Bisgood landed in his Sky in the same field, having also declared Whitby as goal, and having encountered very similar conditions. We had not seen each other on the way but we had both been at cloud base over York.

Landing the Skylark in small fields seems to be rather easier than a wheeled Olympia. Towards the end of the Championships I was quite content with 100 yard fields and could stop within 50 yards of the down-wind fence.

Rigging and de-rigging is quick and simple, and the Skylark will fit into a 20-foot trailer. I borrowed the Army Gliding Club Grunau trailer and there was a lot of room to spare. On one occasion it took only 10 minutes from the moment the car and trailer arrived in a field to the moment we drove away.

In conclusion, I might say that after flying the Skylark for about 35 hours, including nearly 370 miles across country, I can say with confidence that it is a big step forward. If Slingsby can make it fly 10 m.p.h. slower, then it should make an excellent all-round high-performance sail-plane suitable for pundits and novices, both in England and in Texas.

EDITORIAL NOTE.—We understand that Slingsby Sailplanes are preparing an alternative wing for soaring conditions in Great Britain. However, cruising speeds for all sailplanes are likely to go up in the future, because of the weight penalty in meeting the A.R.B. Rough Gust Case.

Monday 27th July

Goal of Pilots' Choice

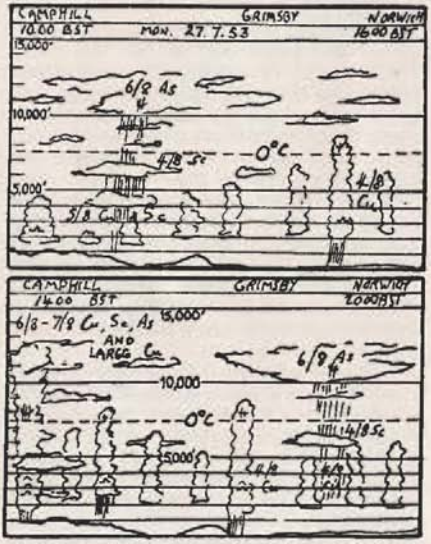
THE main weather features were a pair of troughs, one of which passed over during breakfast and the other after lunch. Nobody got away from the site in the morning and congestion over Bradwell Edge limited the launches.

The second trough, which thundered over the site and beat everyone down to earth with its heavy rain, was followed by cumulus and developing cumulo-nimbus; but after eight people had got away, the rest remained stuck over Camphill.

Some of the eight reached better lift downwind, especially Piggott, whose astonishing climb to a new British two-seater height record is described in the following article. Since he wrote it, the record has been homologated and his gain of height works out at 15,240 ft. and absolute altitude 16,540 ft. He reached his goal at Grimsby, 71 miles, thereby taking the lead from the Empire Test Pilots' School in the Team Class, and carried off the Daily Prize for height.

Stephenson, the only other competitor to reach his goal, went into a cu-nim just after reaching Sheffield and climbed to 14,800 ft.; from there the glide to Scampton, 48 miles from Camphill, involved a "fantastic waste of height". By this flight he took the lead from Deane-Drummond and kept it thereafter.

Among those landing short of their goals were Rigg (48 miles), D. A. Smith (31), Tonkyn (27) and Foster (19).



Tracings of the cloud diagrams from the Flight Forecast handed to the pilots on 27th July. In the first, a trough has moved away from Camphill. In the second, it has nearly reached Norwich, while a second trough is passing over Camphill.

17,000 Feet in a Sedbergh

by Flt./Lieut. A. D. Piggott

ROUND about lunch time on 27th July there was very heavy rain as the trough of low pressure forecast by the met. man passed through Camphill, and it was apparent that behind the trough there were large build-ups of cumulus, which might make it possible to climb up high in the cloud and so go a fair distance downwind. At the last minute it was decided to change pilots as I had previous experience in cu-nim.

We took off at about 15.25 and spent about an hour searching up and down the ridge, trying to get away. Just after take-off we dived down below the hilltop to mark a low on the barogram; this caused considerable comment on the ground, as it was thought peculiar for a Sedbergh to worry about height.

We climbed up amongst about five other gliders and eventually left the site about 3,200 ft. a.s.l. Gradually the other gliders (all except two Olympias) dropped out, which left us soaring together just below cloud base. As I fell out of lift the Olympias found some for me; I went over to it and they kept me going.

About 4,000 ft., just below cloud, I ran out of lift and turned down wind, arriving over Sheffield at about 3,000 ft., where we got a strong thermal and climbed up into the cloud. We couldn't see what sort of cloud it was. When we went in the sky was overcast and there was a pitch-black patch a mile or so N.W.

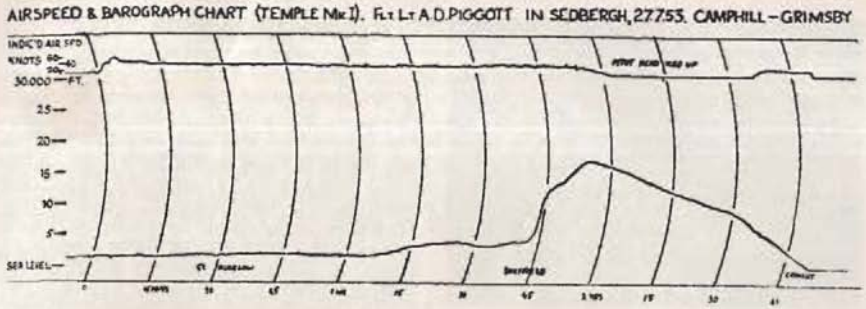
Just after we entered cloud we did a timed climb against a watch to check the rate of climb, and we gained height from 5,500 to 6,500 ft. in 45 secs. At about 7,000 ft. the Cadet asked me at what height he needed oxygen. I said, "Oh, about 15,000 feet," never dreaming we should get as high. Climb was very smooth and rapid to about 15,000 ft. when it started to rain ice crystals, but the cockpit cover was sufficient protection and we did not have any difficulties from this. It became very turbulent just about the time the pitot head seized up between 15 and 16,000 ft., and we climbed by turn-and-bank and sound the rest of the way, stalling quite frequently owing to turbulence. It often happens that way when you get near the top.

We did have radio and had seen our trailer on the road and called and told them we were off—that was over Hathersage.

Above: Flt.-Lt. Piggott (facing camera) with his crew. Below: congested cumulus building up into cumulo-nimbus, looking westwards from Camphill a few minutes before he took off.

Unfortunately they weren't listening out throughout the flight, and although we called them from about every 3,000 ft. we got no answers at all. Probably, at 15,000 ft. we were heard all over England.

When at about 15,000 ft., I realised that the electrical variometer (a prototype of an instrument which has been developed) had stopped flashing green lights and I tried to switch it off. Unfortunately I had forgotten to wear gloves and I found my fingers frozen,



so I had to get out a pair of gloves to unfreeze them.

During the climb, when I looked round, I found ice on the leading edges everywhere, but strangely enough the venturi for the total energy variometer was still operating in spite of a considerable build-up of ice all round it. It had also a new type of venturi which has been developed and will probably be on the market shortly.

I decided to continue to 18,000 ft., which I considered to be the limit for straightening up, and allow possibly another 2,000 ft. for getting out of the cloud. I thought that would allow a reasonable margin, as we had no oxygen and my cadet was somewhat frozen.

We were thrown out of the top of the cloud at 17,000 ft. and, looking around, it appeared that we had come out almost at the very top, as there was little cloud above us.

We turned on to course for Grimsby, hoping that we would be somewhat on track, and we were able to pick out the River Trent and Gainsborough through a gap in the cloud. In the distance we could see very large cumulus clouds apparently masked by a layer of alto-stratus at about 10,000 ft.

As we glided down we realised how cold it was. The met. forecast had given us a temperature of 18°F. at 15,000 ft. and in our lightweight suits and open cockpit it felt like it.

It was noticeable that flying at this height seemed very much quieter than normal flight, and I think this is probably due to reduced density of the air, as this also occurs in jet aircraft at height—although it may possibly have been slight deafness.

We broke cloud at about 10,000 ft., pinpointed ourselves over Bindle airfield, and saw our goal for the first time. I then realised that we were going to have flown over 100 kms. and there was a possibility of putting up a two-seater 100 kms. record; I therefore dived for Grimsby as fast as was comfortable, only to find Grimsby aerodrome a deserted airfield with apparently no hope of official observations. We landed at Grimsby at 18.20 hours to find warm, calm conditions in between heavy showers.

The aerodrome wasn't, in fact, deserted. There was an A.T.C. officer who was permanently stationed there, and he observed our arrival and welcomed us with tea and eggs, generally thawing us out.

A flight of this sort is within any person's reach who is lucky enough to get into the right cloud. We must have entered the cloud just as it was building up. Stephenson apparently entered the same cloud but only reached 14,800 ft. and, strangely enough, complained of lack of oxygen. We certainly didn't suffer from any lack of oxygen as far as we could tell, although the main problem was discomfort through being too cold. The moral is: go properly dressed. The other thing was that we arrived over our goal with 8,000 ft. to spare and could have done so with 10,000 ft., which would have given us a gliding range of another 70 miles, assuming that we didn't find any more lift—which shows the possibilities of finding just *one* good cloud and exploiting it to its full. It also possibly shows once again that artificial horizons and all "mod. cons." are not really necessary.

The worst feature of the flight came afterwards—publicity! I received many telegrams, but the most amusing one was from my wife, which said: "Now I can really get you certified".

Spreading-out of cumulus into strato-cumulus began to affect the clouds on Tuesday, 28th July, as shown in the upper part of this photo taken at 3.43 p.m., looking S.W.

Tuesday, 28th July

Race to Boston

OF thirteen who got away, two finished the course of 73 miles. They were favoured by a tail wind and by being able to soar over Bradwell Edge while awaiting the best moment to cross the starting line, but by little else.

Stephenson averaged 36.1 m.p.h. and D. A. Smith 33.4 m.p.h. The latter rose to 7,500 ft. in cloud beyond Staveley, but reported bad conditions between Newark and Cranwell. Of the remainder, Hinde went furthest, using two clouds to carry him 41 miles to Newark.

Wednesday, 29th July

Distance along Given Course

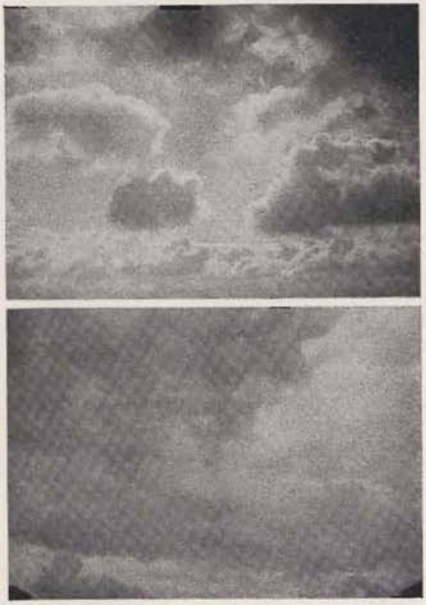
THE prescribed course was to the E.S.E., passing Newark and Kings Lynn and reaching the east coast 159 miles away "when the tide is in". But the cumulus spread out into strato-cumulus while everyone was in the briefing room.

Furthest distance, 36 miles to Ossington, was made by Stephenson, who glided down from an initial climb to 6,500 ft., encountering only bits of weak lift on the descent. Yates, who made a similar flight, and Wills, who found "zero lift all over the Dukeries," each went 33 miles.

Thursday, 30th July

Goal of Pilots' Choice

CUMULUS spread out into strato-cumulus again in the morning, but Mr. Wallington prophesied that it would clear in the afternoon because a northerly veer in the wind would bring air that had not spent the night among convection clouds over the Irish Sea. His forecast was right, but does not explain a large area of clamp seen to the north by Deane-Drummond en route to Boston (goal 73 miles) after 4 p.m. He, Smith (60-mile goal) and Bisgood (46-mile goal) found good cumulus so the east after an initial "scrape". The only other goals reached were by Pick (51 miles) and Warminger (39). Wills and Hickling reported colossal sink S.E. of Sheffield. Lee's 103-mile flight, to be described, was outstanding.



Before the pilots went into briefing on 29th July, cumulus was popping up all over the sky, as shown in the upper photo taken at 9.01 a.m. (B.S.T.). But they came out to find this dead-looking sheet overhead at 10.19 (lower photo).

Goal Flight to Marham

by G. H. Lee

On 30th July I had the second launch of the day at 10.35. It was too early to declare a goal with any certainty, but I said Marham. I flew around and nothing happended by 1 o'clock, by which time conditions looked so poor that I thought I ought to land and change my goal. But there was such a large queue of machines on the ground that I decided to wait a bit longer. The queue had thinned out by about 2 o'clock, but I was doing better then and decided that, although I did not expect to get to Marham, I might as well leave the goal unchanged.

Things became slowly better and by about 3 o'clock we got a clear patch and some fairly good thermals started up. I got up to near cloud base on one of these, at about 3,000 ft. a.s.l., but the sky down-wind looked very poor, so I came back again to the site. After about a quarter of an hour I was again near cloud base, and this time the weather down-wind looked reasonable, so I carried on.

I got a thermal low over Froggatt Edge and another near Chesterfield, but after that I was reduced to flying from coal mine to coal mine (or slag heap to slag heap) in an attempt to use any thermals they might be producing, since the sky was pretty clear by then, and they were in the sunshine. In this way I just kept up, though at the lowest point I was down to take-off level. I was also able to get some help by joining one or two other machines which I saw circling in the area.

These weak thermals gradually built up in strength and finally took me to cloud base somewhere east of Worksop, from which I could see the Trent and was able to spot Newark-on-Trent to the south. I got into cloud for a little, but left it as I knew there was already another machine in it just above me, and made for a rather large cloud in Newark direction, only reaching it with the help of a number of small thermals *en route*. It was a rather elderly cloud, and did not produce very much lift, but I circled with it as long as it was lifting at all and it lasted long enough to permit some newer clouds to form down-wind of it, which gave me some assistance on the way.

I was rather lost from Newark until about this time, when I managed to recognise Spalding from the map and picked up Kings Lynn in the distance, the nearest town to my chosen goal.

After a little more lift between Spalding and Kings Lynn, it was clear that thermal activity for the day had finished, since it was by then about 6.15 B.S.T. Accordingly, I could only set course for where the aerodrome should be (my height being about 3,500 ft.), and just glided on, hoping that I might just about make it. Much to my surprise, the aerodrome appeared dead ahead and I got there with about 1,500 ft. to spare.

The total time of flight was 7 hours 50 minutes, of which about 3½ hours must have been spent in the goal cross-country flight. The greatest height reached was about 4,700 a.s.l., and it is perhaps of interest that lift was nearly always found near the down-wind side of the clouds.

The first lesson learned seems to be that patience is worth while in gliding competitions, since I was in the air 4½ hours before being able to get away on this flight. The second lesson is: on doubtful days every inch is worth circling in; and the third lesson: despite all experiences to the contrary, there are times when luck does come your own way. On this flight I was several times rescued by finding a thermal at the vital moment which kept me afloat long enough to get on to the next real bit of lift.

At 2.40 p.m. on the 30th, the strato-cumulus began disintegrating at last.

Saturday, 1st August
Goal-and-Return Race

FRIDAY had been a non-competition day, which started unpromisingly but turned out well and enabled a club member, Rodney Sneath, to fly 80 miles to Cheltenham and Wally Kahn to climb to 8,800 ft., also *hors concours*. The Lord Mayor of Sheffield was taken for a ride by the Mayor of Chesterfield, Eddie Swale, veteran member of the club.

Saturday's task, 50 miles S.E. to Rearsby, near Leicester, and 50 miles back, involved a return directly against the wind, which veered to N.W. just in time to hamper the returning ones. Most pilots found the outward journey particularly difficult as far as the Matlock district, where many came down.

Eight reached the turning-point. Ellis went via Melton Mowbray through not realising the wind change, had to return cross-wind to Rearsby, and landed there. Alexander, after several thermal climbs from Rearsby followed by glides down again to the same spot, made his only possible progress along the return track by pushing the Cambridge "Bluebell" 4 miles upwind to a landing.

Dickson (Olympia) took 1 hr. 12 mins. to get there, then 40 minutes over the first mile of the way back, so he put on speed and made another 7 miles in a descent to Wymeswold. Morison (Olympia), after going 18 miles, rushed back for a second launch at 3 p.m., reached Rearsby in two hours and came 8 miles back to Wymeswold in 40 minutes. Nixon (Olympia) also reached Wymeswold on the return.

Foster went straight off from a winch launch at 11.40, got to 9,000 ft. in a cloud and glided from it to 1,000 ft. at Loughborough, reached the turning-point at 1.25, and spent over four hours returning 37 miles to a landing near Matlock at 5.45, thirteen miles short of the finish.

Stephenson finished only 3 miles short after trying to make a direct glide home from Bakewell. Smith, after coming out of cloud over Nottingham and mistaking it for Derby, went back into cloud without knowing he was off course, and landed astray near Grantham; however, he was credited with the projected distance to Rearsby. Wills alone finished the course, and his account follows.

Camphill – Rearsby and Return

by P. A. Wills

THE morning forecast at briefing gave a 17 knot wind from 290°, so that the announcement of the task, at briefing, as an out-and-return flight to Rearsby, 50 miles away, on a course of 143° (323° return) was greeted with some alarm and despondency.

A brief shot at a flight-plan showed that, allowing 1½ hours to get there and 4 hours back, it would be necessary to get away from the site not later than noon, which in the weather conditions prevailing might be rather chancey—the trouble being that the wind was so high that one had to cut away from the slope before being quite sure one was not going to be let down.

But in the event I got away to time, and without much trouble was at Rearsby by 12.45 hrs. where I saw the letter "A" on the ground easily from 3,500 ft. Now the grind back.

At half past one I was still in sight of "A", perhaps 8 miles north, but I still had my height. Tough work. My plan hinged entirely on getting back on course at Matlock because, once there, various westerly facing slopes gave the prospects of ports in storms, to which one could retire when in real difficulty.

The safest bet from Rearsby to Matlock seemed to be to use Nottingham as a stepping stone. There were lots of cumulus in lumpy streets, and lift up inside them was quite good to around 7,000 ft.

To cut a long and slow story short, it all came off. By 4.30 p.m. I was just south of Bakewell, with 5 miles to go, when I saw Steve's Sky No. 2 above me. Things were pretty desperate, but I saw Steve set off on a straight glide for home. He had at least 500 feet on me, and I decided I hadn't a chance by following him, so called my last trump. A downwind dash brought me with 100 feet to spare to the slope overlooking Chatsworth. If this failed to produce lift I had every prospect of joining Long-stop in a cricket match proceeding at its foot. But I was never much good at cricket, so was glad when my long-idle green ball sprang again to life. We slope-soared easily to the point where the Baslow-Sheffield road crosses Froggatt's Edge, just opposite the

eastern end of Camphill's south slope. Upwind, four miles or so away, I could see aircraft happily soaring on the west slope. Five o'clock—had the wind strength decreased with the evening enough to make it possible to get back? A last thermal gave one 1,850 ft. to do it in, and clearly I had no option. From my height the cement factory smoke over by Castleton gave a little hope that the wind had backed a point or two and at least I might not find a down-current as I battered along the south slope.

We set off the maximum range against a 15 knot wind chart on the variometer.

Which is really all. We arrived with 100 feet to spare and landed at 5.30 p.m. The 5 miles from Bakewell had taken one hour, and until the last thirty seconds it was quite uncertain whether or not we were going to make it.

So many outsiders always say "Gliding must be so gloriously peaceful". They should have seen my trembling form tottering out of the cockpit.

Philip Wills's sole completion of the course to Rearsby and back provides an exciting finish for spectators who had watched his approach for half an hour.

Sunday, 2nd August

Triangular Course

It was not quite a closed triangle, as the start had to be made by circling the cement works chimney at Hope, and the finish by landing on the flying field. With a forecast wind of about 15 knots from N.W., the course was E.S.E. to Bolsover Castle, then S.W. to Ashbourne airfield, and N. by W. home, covering 63.4 miles in all, or just over 100 kms.

Only Bisgood completed the course (see next page); Foster fell short of the finish by 2½ miles; Wills was the only other one to pass the second turning point, and Cotton landed there.

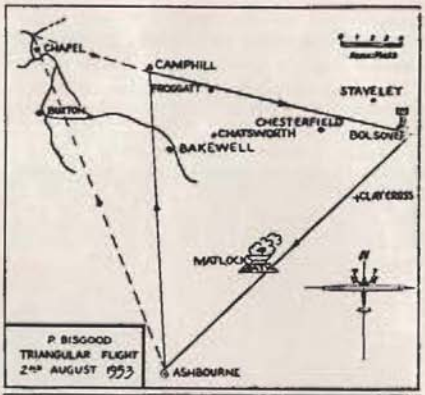
Haze interfered with visibility, especially in the industrial region round Bolsover, which was reached by nearly two-thirds of the pilots. Lee rounded the Castle without seeing it or being seen, and Smith circled the wrong castle. Stephenson covered the first leg to Bolsover inside a cumulus, finding huge areas of lift in it and rising to 10,000 ft.; he then descended to 2,000 ft. in looking for the Castle before realising that reliable lift was only to be found up above.

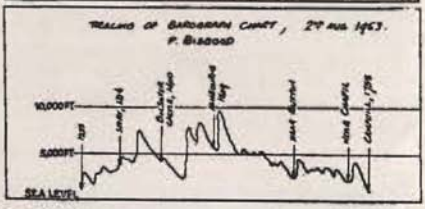
Yates landed at Cromford before the Ashbourne turn and Wills landed there after it. Wills had reached 8,000 ft. in cloud from a launch at 12.25, passed Bolsover at 13.01 and then rose to 8,800 ft. in another. He passed Ashbourne at 13.59 and made for Matlock with the intention of slope-soaring northwards from there, but the wind had unexpectedly dropped, so he was let down.

Foster got away about 13.50 in a cement-smoke thermal which was boosted by the hill up to 6,500 ft. The next cumulus took him to nearly 7,000 ft.; so, after rounding Bolsover, he returned to the same cloud, only to find it dispersing. He then spent 20 minutes at 1,000 ft. in a small colliery thermal till the sun broke through and provided something better. A cloud street, parallel to track, lifted him to 6,000 ft. and another cumulus to 9,000, enough to take him well past Ashbourne. But the sun-facing slope at Wardlow failed to give the 1,500 ft. he needed to finish, so he had to land at the bottom of Eyam Edge instead of at Camphill just beyond the top.

The Eternal Triangle

by Peter Bisgood





First and Second Legs

WE were near the bottom of the launching list and, during the waiting period, the cu began to spread out as forecast. I estimated that this would worsen during the day and decided, therefore, not to fly for speed but merely to try and get round the course.

In the following account, all heights are a.s.l. and times B.S.T.

The launch was at 12.23 and after working up sufficient height we managed to contact reasonable lift about 1½ miles upwind of the cement works, left it for long enough to circumnavigate the chimney (13.16 hrs.) then returned and eventually entered cloud. A second climb in cloud took us to 7,400 ft., at which height a compass course was set for Bolsover. We left cloud about 5 miles W.N.W. of Chesterfield and found the sky ahead 7/8 overcast with stratified cumulus in which a few ragged cumuli were still apparent. At Bolsover (14.00 hrs.) some time was spent ducking through this murk before the identification letter could be seen and course set (14.10 hrs., 4,200 ft.) for Ashbourne.

After leaving Bolsover one wisp of cumulus provided a most unsatisfactory climb and conditions ahead looked poor, apart from similar wisps which one hoped would prove better. They didn't, and near Clay Cross I backtracked towards a patch of sunshine about 2 miles away; after fumbling round in reduced sink, lift was contacted at 2,200 ft. and cloudbase reached at 3,500-4,000 ft.—a short head in front of No. 29, who had joined me. Two climbs were made in this cloud, to 7,600 ft. and 8,200 ft. respectively, prior to setting course for Ashbourne; we emerged near Matlock Bath, skirted a ragged-looking cloud and reached Ashbourne at 15.09 with 5,400 ft. on the clock.

Dog-leg

On leaving Ashbourne I returned to the cloud that was by-passed on the way in, since by this time it looked much more lively. Cloud was entered from its upwind side at about 5,000 ft. and the lift was smooth and strong up to about 8,500 ft., above which height it became progressively more turbulent; at 9,400 ft. I discontinued the climb and, after a somewhat rough ride, emerged from the upwind side about 200 ft. below cloud top. There was a haze layer at about 8,500 ft. which, I suspect, denoted an inversion and was probably associated with the turbulence encountered in cloud at and above this height. To the north and east other cumulus build-ups could be seen but, like the cloud I had just left, none extended very far above this haze layer.

Immediately to the north and directly below me there were large patches of strato-cumulus making it impossible to obtain a reliable fix; however, I estimated that the downwind drift during climb had been about 4 miles, leaving about 25 miles to cover on a track of 345° (approx.)—I had only to point in the right direction and wait or, at the worst, make one more climb, and it would have been in the bag. I did and it wasn't—the sink after leaving cloud was excessive and a straight glide to Camphill soon dissolved in a cloud of opium smoke; further fumbles in odd bits of cu and strato-cu produced nothing adequate in the way of lift, so we left and pressed on towards Bakewell, which was now visible, and where

the cloud, though still wispy, looked more promising and was not so stratified.

We arrived near Bakewell at 3,000 ft. and were down to 2,500 ft. before weak lift was contacted. Things didn't look quite right, but I was too busy pirouetting to pay much attention to this until a height sufficient to reach Camphill without more ado had been attained. A further glance at the map showed that it wasn't right—Bakewell couldn't look like that unless British railways had been very busy—the navigator had obviously fallen asleep on the job, so I unfolded my map from a neat square into a tattered sheet concealing all the instrument panel and much of the outside world, only to discover that my target town had been Buxton. The cockpit resounded with cries of despair and selfcastigation; these woke up the navigator (for the first time since leaving Ashbourne) who insisted on checking and re-checking our position—a process that was prolonged by the inherent tendency to descend possessed by all sailplanes.

By the time things were sorted out, the sky to the east looked stratified and dead, the territory we had to cross looked like a Sky graveyard and we were uncomfortably low for a straight dash—in short, it seemed a good time to wait and to pray to the providence that looks after state-supported fools. About an hour's fumbling ensued until, at 2,300 ft. near Chapel-en-le-Frith (a further fix) despair was lightened by a patch of no sink which lasted for 10 panic-stricken minutes before we started climbing slowly; the lift improved and at 4,500 ft. a straight glide to Camphill seemed possible, even to the pessimist I had by now become —I could see Camphill, so the navigator was jettisoned and a dash at 60 knots through heavy sink ensued. We arrived over the ridge at 1,500 ft. (about 300 ft. above Camphill) and landed hurriedly (17.55 hrs.). Very few gliders were visible and while waiting for the ribbing due to the Sky pilot who had made the slowest time round the course, I realised just how slow it had been; obviously the others had even had time to de-rig and stow away—then Kitty Wills and Alan Piggott drove up to tell me I was the only one to get round.

P. L. Bisgood & E. C. Rigg, alternate pilots of the Empire Test Pilots' School "Sky", who flew it to victory in the Team Class.

Flight Log

	Time	*Distance miles*	*Ground speed m.p.h.*
Launch	12.23		
Depart	13.16		
Arrive Bolsover	14.00	19.5	26.6
Depart Bolsover	14.10		
Arrive Ashbourne	15.09	22.9	23.3
Depart Ashbourne	15.10		
Arrive Camphill	17.55	21.0	7.6

Total time en route, 4 hrs. 39 mins; length of course, 63.4 miles; average ground speed, 13.6 m.p.h.

The actual length of the last leg (Ashbourne—Buxton—Chapel—Camphill) was 34 miles, giving a ground speed of 12.4 m.p.h. and an average speed of 16.4 m.p.h. for the total distance of 76.4 miles.

Conclusion

In the sense that this flight scored a maximum mark it may be considered a success; from any other point of view it was a sorry failure due to my incompetence on the last leg—if I had obtained a reliable fix before reaching Buxton the flight could have been reduced by more than an hour.

In view of my personal limitations and the prevailing weather I think the decision to take things slowly was a correct one. My major errors occurred on the last leg and were (i) in assuming the forecast winds would not change, (ii) in not fixing my position as soon as possible after leaving cloud, (iii) in wasting far too much time near Buxton when, initially, I had gained sufficient height to make base.

A clear case of fool's luck.

Geoffrey Stephenson with the "Sky"
Courtesy of "The Aeroplane"

Monday, 3rd August
Distance along Given Course

THE course was to the far end of Kent, 143 deg. true, with a directly following forecast wind of 10 to 12 knots. Thirty-four cross-countries totalling 2,901 miles were made, and to get the hang of what happened, the map on page 104 should be consulted. Stephenson's 193-mile flight, the longest of the meeting, is described separately.

Ellis (157 miles in Olympia) writes that he found it difficult going to Baslow; even after that, the lift was never strong and usually decreased at cloud base. After Nottingham, which he reached at 14.05 at 5,300 ft. a.s.l., he travelled faster by making use of a street of cumulus stretching out of sight to the S.E. It was to the left of his track, which was blocked by an area of clear sky, while 8 miles to the east of his street another one developed. His own finally became "teazed out" a little west of Cambridge (where he met Dan Smith at 16.30). The line of this tremendous street, if prolonged backwards, would cross Kinder Scout. At 17.30, near Braintree, the last good thermal gave him 5,000 ft., and he landed at Southend at 18.05 under an almost clear sky.

Gold and Diamond

by G. H. Stephenson

MONDAY, 3rd August, the last day of the contest, was, for me, full of excitement from the time I woke up with a bad cold to the time I should have gone to bed.

The forecast, which for some reason turned out to be very accurate, said: "Only weak hill lift, moderate to good convection, wind 320° at all working heights." The cloudbase was given as rising to 6,000 ft. towards the end of the day; actually it rose to nearly 5,000 ft. around the middle of the day and then dropped somewhat as one flew south.

The task for the day was one which normally gives the pilot least to worry about. One had to fly as far as possible along a line laid down by the judges. In this case, however, the line passed through Lympne and this means for most of us the possibility of a Gold C and Diamond.

For me the path was glittering with rewards. I had a moderate lead in the marks for the week, but was by no means unbeatable. If I could get past the 100-km. mark, the Londonderry Cup was in the bag. This, however, was in conflict with the need for an early start and a fast flight in order to reach the gold and diamond which lay at 310 km.

I decided to try and make sure of the Londonderry Cup even if this meant remaining at Camphill too long to enable me to reach Lympne.

My turn to be launched came at 11.35 and I flew in weak thermals for half an hour. At 12.20 I reached 4,000 ft. and a lot of people went away. I decided to be ultra-cautious and use one more cloud before taking the plunge. Unfortunately, somebody else beat me to the next cloud, so I had to look for another. This one took me to 7,500 ft. at 12.40 hrs. and the battle was on.

For the first 100 km. there was not a hitch. I kept above cloudbase all the time and slightly to the right of the track line. The only worry was in wondering whether one would emerge from a cloud to find a complete cover of alto-stratus to cut off the sun. It seemed silly even to think of this, but it had happened so many times during the previous week that by now we all expected it.

The first 100 km. were successfully covered with extreme caution and a slight change of tactics was now called for. The speed between thermals was increased to nearer the optimum, and gradually the weather became more like a normal summer's day. Previously the clouds had been large but the core of the lift had usually been very narrow.

All had gone well for the second 100 km. At Bishops Stortford (205 kms.) I saw the first signs of trouble. It was only 15.35 hrs., but there were definite signs of dissolving clouds. I found myself being edged over to the east all the time. At Chelmsford (230 km.) I was down to 2,000 ft.

For the next half hour I was gladly accepting anything that would pass as lift. At the same time I was now deliberately trying to work east towards the mouth of the Crouch where some active cloud was being fed by a sea breeze.

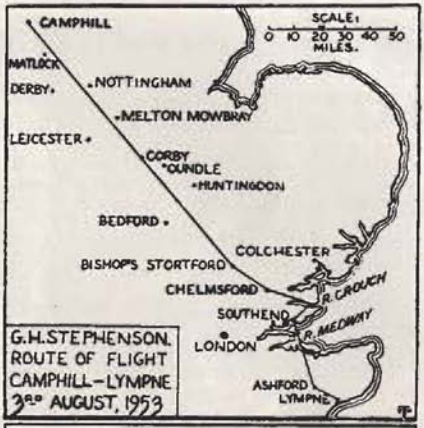
I managed to reach this cloud and decided to stay with it until either it or I wilted. For half an hour I flogged away at the poor thing until I emerged feeling slightly sick but very elated with 7,500 ft. of height.

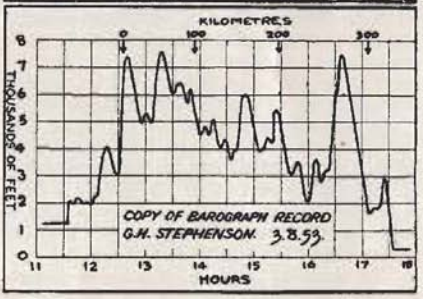
I set course down Southend pier and across the silkily smooth piece of air over the Thames and the mouth of the Medway. The clouds which could be seen half-way across Kent all dissolved before I reached them, and so I gave up all thoughts of any more cloud lift.

Just before Ashford it looked as though I would manage to scrape over the 300 km. line but would not have enough height to make a landing at Lympne, which was still 20 km. away, and my ground clearance was about 1,500 ft.

The thing that saved the day was the ridge of west-facing hills which ran parallel

Skyscape at Camphill, 11.58, 3rd August.





to my track slightly to the east. I did not realise it until I reached Lympne, but the wind was blowing gently off the sea and presumably filling up the lowland in front of these hills. This may be the wrong explanation, but the effect was that a line of small cumuli hung over the sun-baked ridge. These were the only clouds to be seen and they provided what appeared to be the only lift to be had, and this in precisely the position where it was most needed.

I drew off nearly 3,000 ft. of height so that I had plenty of time to spell out LYMPNE and also to avoid creeping up behind any of the numerous Bristol Freighters which live there. After being airborne for nearly 6 hours I landed at 17.29 hrs.

One goes through life trying to get a Gold C and it seems impossible. Then one day one has John Furlong's car, the London Club's Sky, my wife and Tony Pragnell as crew. One is launched at the right place at the right time, and the weather is right and all's right with the world!

New Gliding Instruments

SEVERAL very interesting new instruments specially designed for use in gliders were used at the National Gliding Competitions and are the first of a series of new instruments embodying radically new ideas designed by P. Temple.

Electric Variometer

This is a completely new instrument designed to supplement the use of standard variometers and not to replace them.

Indications of climb and descent are given by flashing green or red lights, the rate of climb or descent being assessed by the rate of flash. This method of indication enables the one instrument to operate lights in both cockpits of a tandem two-seater and has the advantage that the lights can be placed anywhere in or out of the cockpit. For initial soaring it is possible to mount the indicators on the pitot head or other position so that it is unnecessary for the glider pilot to look in the cockpit at all. Power supply is from a 4½-volt dry battery, which lasts a considerable time as the instrument uses no power unless the lights are flashing.

The detector unit is of unique design which eliminates the lag of a normal variometer. A pressure-operated diaphragm is arranged to close contacts as soon as a pressure difference equivalent to a certain height is reached (normally six feet). As contact is made, the appropriate light flashes and a small solenoid releases the difference in pressure across the diaphragm by operating a valve; this operation is repeated for each gain or loss of height of the set amount.

Any rate of climb or descent is indicated, however small; this makes the instrument useful in marginal conditions when no indication is given by normal variometers.

The lack of time lag makes it easier to centre in weak thermals because the instrument will indicate changes of height which are lost in the lag of most other instruments. It is common to find both variometers contradicting each other, but since the new type requires an actual gain or loss of height to show a flash, there is little doubt as to the real situation.

Unfortunately, this type of indication does not give a numerical rate necessary for computing the best speeds to fly. It does appear to have advantages for inexperienced soaring pilots and for glider pilots wanting to squeeze the maximum out of prevailing conditions. An indication of its possibilities was a Sedbergh flight of 40 minutes in which 200 ft. were gained at an average rate of about 0.1 ft. per second. During the flight another type of variometer indicated ZERO throughout; consequently other sailplanes not fitted with the new-type variometer were unable to take advantage of the very weak lift and therefore could not soar.

It is possible to use this instrument for total energy, but tests seem to indicate that in gusty conditions fluctuations caused by rapid changes in speed cause many false flashes.

The detection unit is cylindrical, 3½ ins. diameter × 6½ ins. long, and must be mounted vertically. A knob at each end enables the sensitivity to be adjusted in flight; a small switch prevents battery wastage and damage to the diaphragm when the battery is disconnected. The instrument weighs 12 ozs. and is of robust construction.

These instruments will shortly be available from Marplesons Ltd., Shillito Road, Parkstone, Dorset.

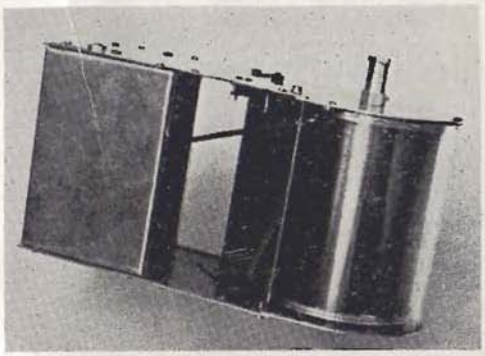
Small Total Energy Venturi

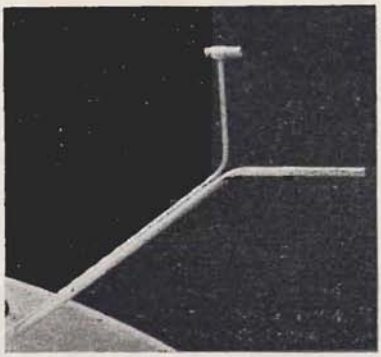
This is a new type of venturi for adapting any type of variometer to "Total Energy", which is small and obviously has far less drag than types already available.

The body of the venturi is a tube 5/16 in. diameter × 1½ ins. long, mounted on 3/16 in. diameter brass tube 24 ins. long (this can be cut to suit individual aircraft). The finish is cadmium plating. Photograph shows fitting on the pitot of a Sedbergh.

The need for an external baffle has been eliminated by careful design, and there is negligible error when the aircraft is yawed in flight.

During Flt.-Lt. Piggott's flight when he broke the multi-seater gain-in-height record, the aircraft was coated in ice, but the Cosim variometer, which was connected to one of these venturis, continued to work satisfactorily, and after the flight the moisture trap (a small glass phial) was found to be





Two of the new instruments designed by Mr. Temple. Left: barograph in metal case; the production instruments will have reinforced plastic cases. Right: a "total energy" venturi mounted on the pitot of a Sedbergh.

perfectly dry; it appears that a water trap will be unnecessary.

These venturis are available from Cobb-Slater Instrument Co. Ltd., Matlock, Derbyshire.

Barograph

A new barograph has been produced with a range of 0-40,000 ft. on a chart 4 inches wide. The chart is of aluminium foil 0.002 in. thick, chemically treated and dyed. The stylus of the instrument parts the dye, leaving a very fine and clear aluminium trace on a dark-blue background. The foil is wound from a spool, holding up to 60-ft., onto the recording drum at a speed of 4 ins. per hour.

The aluminium foil is comparable in price with paper, and provides an almost friction-free surface for the stylus to work on. The recordings of this barograph are exceptionally clear, and since the lines are much finer than are usually obtained by either a pen or a stylus on smoked paper, very acute measurements are possible. The record requires no fixing after use and is not affected by temperature. The necessity of frequent re-loading of the barograph is avoided by the large capacity of the spool of foil.

Particular attention has been paid to the provision of a really good clock movement, as timing has frequently been a cause of failure of some types of barograph.

The end of the instrument case is rounded Perspex through which 7 ins. of chart can be viewed (1¾ hours' flight); the rest of the case is of reinforced plastic. The clockwork drive can be wound up, started and stopped without opening the case; dimensions are 9½ ins. × 4½ ins. × 4 ins., weight 2¾ lbs.

Combined Barograph and Airspeed Indicator

This instrument is identical to the Barograph except that there are two stylus on the same chart, one recording altitude 0-30,000 ft. on 3 ins. width of chart, the other 20-120 knots or 20-40 knots on ⅞ in. width of chart.

With this instrument a complete analysis of a flight is possible from the recording of height, airspeed and time. It was possible to obtain a considerable amount of otherwise unobtainable data from the recording of Flt.-Lt. Piggott's flight on 27th July.

All these instruments were used in the National Gliding Championships by entries Nos. 31 and 34 which were first and second of the multi-seaters.

The Barograph and the Combined Barograph and Airspeed Recorder will shortly be available from Marplesons Ltd. for United Kingdom, and from Slingsby Sailplanes Ltd. for abroad.

* * *

A new instrument for indicating the position of a thermal (left or right) will shortly be available.

The 20th United States National Soaring Contest

by Nicholas Goodhart

THE 20th U.S. Nationals were held at Elmira, New York, or rather at Harris Hill which is about 5 miles from Elmira. Harris Hill is a superb hill site with three good approach roads, and facilities second to none which include a very large two-storey hangar (the lower floor is mainly used for storage as it has some pillars), a huge assembly room, an equally huge dining room, met. office, barograph office, administration office, etc., all of which are centrally heated. In addition, there are a series of dormitory cabins, the whole being beautifully laid out and cared for by, I believe, Elmira, which for its enthusiasm for soaring certainly merits its self-adopted title of the "Glider Capital of America."

Tuesday, 7th July, was the day set for the start, but as I had had no time to prepare my borrowed L-K—in fact, had only had one soaring flight in it and that somewhat of a farce as virtually the whole flight was made with elevator hard up due to a mis-location of the C.G., we trailed the 300 or so miles from Washington to Elmira on the Saturday preceding the start. Del Pierce, my crew, is fortunately an excellent ground engineer and Sunday and Monday saw the machine at least reach a basic condition of fitness for contest flying, which, however, strictly excluded luxuries such as radio, artificial horizon, nose pitot, total-energy vario, oxygen and speeds-to-fly tables.

Meanwhile, the other competitors were arriving, many from far distant places, and there was a chance to inspect the other machines and meet their pilots.

Amongst them were several well-known names, including Paul MacCready, Paul Schweizer, Stan Smith and Bill Beuby, all of whom competed in Spain last year. Beuby, by the way, was flying a Weihe which was the only European sailplane in the contest. The other three were all flying sailplanes from the Schweizer drawing boards, the two Pauls having flush-rivetted 1-23D's while Stan Smith had a 1-21.

A list of the sailplanes would look like a catalogue from the Schweizer Aircraft Corp. with a number of Laister Kaufman (L-K) war surplus training sailplanes thrown in. There was only one oddity which was a pre-war strutted sailplane aptly christened The Whatsit since that is what everyone said when they saw it.

And so to the first day, which dawned bright and clear after a cold frontal passage overnight, and to met. briefing which opened with a pistol report, which was the met. man's method of announcing that the weather was such as to start the meeting with a bang. Barney Wiggins, the meteorologist, turned out to be a first-class gliding forecaster with a unique ability to tell the pilots what they wanted to know, and, of course, the inevitable ability to evade awkward questions.

The contest committee declared an open day, but the selection of a goal was complicated by the fact that National Airlines had offered prizes (1st $200, 2nd $100) for the flight to the most distant National Airlines terminal during the contest. There was thus a strong incentive to go for New York International (Idlewild) which was the most distant terminal in the downwind direction.

Out on the field an hour or so was taken up by the opening-day ceremonies, but soon all was ready and launching started. The launch was by aero-tow (one free one each day) and three towing aeroplanes were barely able to keep up the three-minute intervals which, even if maintained, meant that it took about an hour and a quarter to complete the launches. Take-off times were pilot-selected, initially secretly, but this secrecy was dropped after a few days.

Inevitably, I chose Idlewild (191 miles) as my goal, as did three others. It was, perhaps, a trifle optimistic as the minimum sink of an L-K is over 3 ft/sec. and the best glide ratio is 1 : 22, but the dollar urge was high. Despite several desperate moments, including one over New York City, I finally made it to find Stan Smith was already there and to see Steve Bennis land shortly afterwards. Initially, the natives were markedly hostile—it seems local usage

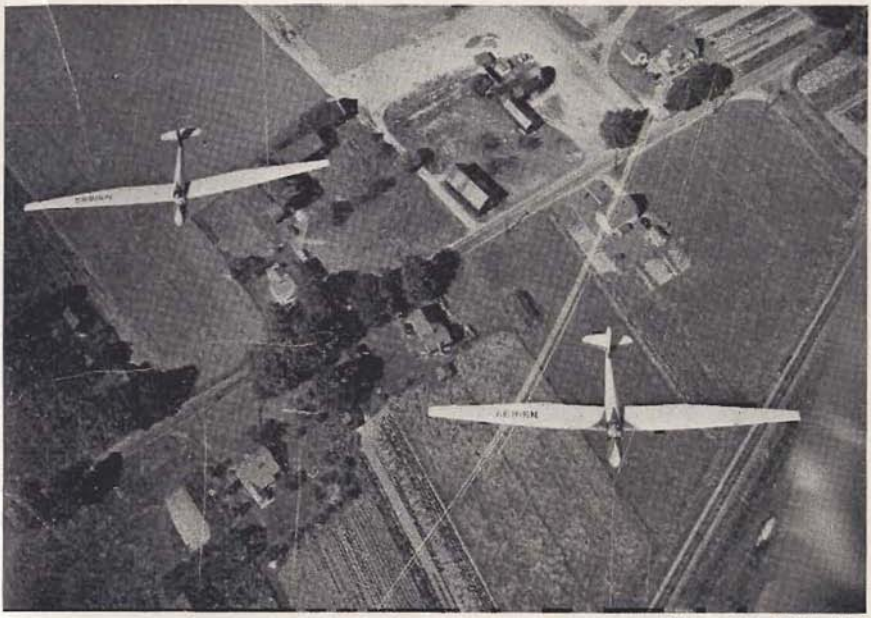


Photo by E. Lehecka.

Two of the contest machines on tow at the Elmira meeting. That on the left is the Schweizer 1-23D flown by Steve Bennis, who finished fourth and was at one time in the lead.

calls for two-way radio for all arrivals and departures—however, by the time my crew arrived all was comparative peace and we trailed through New York City and on home through the night, getting back at 07.30.

At pilots' meeting the pilots who had made the more outstanding flights were asked to give a short description, and we thus learnt that Paul MacCready had made the best flight of the day, a 215-mile goal to Simsbury, Connecticut, while second best was Paul Schweizer with a 204-mile goal.

Since the marking system was very simple, there being no speed marks or handicaps but only a goal bonus, points now stood as follows:

Paul MacCready	244
Paul Schweizer	235
Stan Smith	220
Steve Bennis	220
Nick Goodhart	220

Betsy Woodward, the feminine champion of two years' standing, who was the fourth pilot to try for Idlewild, did not have enough height to cross New York City and landed at Teterborough (176 miles), where it seems she was practically jailed.

Weather for Wednesday, July 8th, was a continuation of the northerly type but the cold air was deeper and highly unstable, resulting in a parade of enormous Cu and Cu-nimb. As always, it was difficult to find the lift area under these clouds and many pilots, including myself, did not get away on the task of the day, an out-and-return to Tunkhannock, 68 miles away.

Paul MacCready and a few others got away about noon, and the best of this lot was 56 miles by Paul. About 16.00, Steve Bennis got away in a Cu-nimb and made the best flight of the day, 75 miles.

Points now stood at:

Steve Bennis	370
Paul MacCready	356
Paul Schweizer	335
Stan Smith	286
Nick Goodhart	220

On Thursday, July 9th, there was again

a cool northerly type airstream with adequate instability, but the clouds were not so big. The contest committee declared a fantastic cross-wind out and return to Albany, 326 miles all-told. The reason for this decision was the fact that the marking system did not include speed marks and the task was, therefore, selected such that at the most not more than one pilot would complete it. In the event it is hardly surprising that no one completed, particularly as there were several large dead areas of old Cu, and also the wind increased from the north-west during the late afternoon to about 30 m.p.h. or more. My own flight included about 1½ hours of hill soaring, as did several others.

Stan Smith made the best flight of the day by turning at Albany and coming back about 15 miles for a total distance of 178 miles. I got second best by returning 6 miles, a total of 169 miles.

Standings now were:

Paul MacCready	682
Paul Schweizer	661
Steve Bennis	650
Stan Smith	644
Nick Goodhart	558

The next day, Friday, was another out-and-return of more reasonable proportions, 152-mile total, the turning point being Norwich. But again, in order to "separate the men from the boys" it was made not a simple out-and-return but a shuttle, i.e., out and back as many times as one could. Clutching hands seized me on my way back from Norwich first time round, when I was stupid enough to try and get across a dead patch rather than around it. Distance was only 85 miles as compared with Paul MacCready's there, back and there again for a total distance of 228 miles.

This flight put Paul MacCready way out in the lead, with the standings being:

Paul MacCready	1228
Stan Smith	1073
Steve Bennis	900
Paul Schweizer	887
Nick Goodhart	728

Saturday came with the same weather, except that each day the air mass was getting a little slower, warmer and deader. In other words, a large anticyclone was building up.

The task was an 87-mile triangle: Harris Hill, Owego, Ithaca, Harris Hill. Once again, the lack of speed marks made it a round-and-round affair, and off we went on a steady grind round the course. There were still areas of old Cu about, but having been bitten the day before, I avoided them with care, and eventually came to rest after completing about 1½ laps, i.e. 125 miles.

Best of the day was Paul MacCready, who got within a very few miles of two circuits.

Points to date were:

Paul MacCready	1589
Stan Smith	1397
Steve Bennis	1249
Paul Schweizer	1235
Nick Goodhart	1030

Sunday was a most welcome rest day and gave everybody a chance to make up on sleep and go swimming or what-have-you.

Monday was a washout since nobody went anywhere. It was declared an open day, and since the rules required each pilot to drop the points for one open day, this was the day selected by everyone.

On Tuesday the weather again picked up, and though we were still in the same air mass it was by now getting considerably modified, having picked up an enormous amount of heat. Subsidence had not been too severe and there was good instability up to just above cloud base; however, it was late in starting. The contest committee had declared an open day, and after a second launch I got away on a very modest out-and-return of 82 miles total, turning at Tri-Cities Air-Port.

Most pilots selected Rochester as a goal, the incentive being a goal prize, and the best flight of the day was about 154 miles by Paul Schweizer, who nearly made Rochester out-and-return. Another interesting flight was Bill Beuby in the Weihe, who went to Canada. International confusion reached a high peak when he tried to get back, as his crew included a Scot (Jock Forbes) and a Pole, and his sailplane was of mainly British construction.

This brought results to:

Paul MacCready	1680
Stan Smith	1533
Paul Schweizer	1385
Steve Bennis	1340
Nick Goodhart	1135

Wednesday was the last flying day of the contest, and by now conditions were fully anticyclonic with only very small amounts of Cu and enormous blue patches.

The task was Utica and return (208 miles total), which sounded feasible, but conditions turned out to be far from ideal as it was very difficult to get across the blue patches, which were 15 to 20 miles wide and lay across the track. I finally made only 73 miles, and the last 20 of that was done in amongst the trees on the sunny side of the valley. As a fitting conclusion to a wonderful 8 days of soaring, my crew achieved the impossible by being in the field when I landed and handing me a much-needed can of ice-cold beer practically before I stopped rolling. Is this a record without radio? The ice-cold beer came from our ice-chest in the back of the car which was by far the most important item of our equipment.

Paul MacCready again got best flight of the day by reaching Utica.

Thus came to an end the flying of an extremely successful and well-organised contest. No one has produced a statistic of the miles flown, but it must be very large. I flew 728 miles in 32¼ hours' flying, and most of it cross-wind at that. Damage to the competing machines was restricted to minor trouble with rough ground and a fence pole, except for one of the 1-19's which had an adventure with a power line and was the only machine to miss a competition day. This lack of damage was due to an early harvest having provided an excellent supply of most adequate fields, in marked contrast to the 1951 U.S. Nationals, when a later harvest produced the reverse effect.

Nick Goodhart and Paul MacCready arrange take-off times with Wendy Ryan.

Photo by E. J. Reeves.

FINAL RESULTS

1	MacCready	1-23D*	1889
2	Smith, S.	1-21*	1677
3	Schweizer	1-23D*	1574
4	Bennis	1-23D	1506
5	Goodhart	L-K	1279
6	Coverdale	1-23*	1170
7	Beuby	Weihe	1130
8	Klein	1-23B	958
9	Burr	1-24	834
10	Miller	1-23	768
11	Woodward	1-23	679
12	Lehecka	Whatsit	624
13	Smith, Bob	L-K	585
14	Gehrlein, Sr.	1-23	415
15	Pfeiffer	L-K	386
16	Frutchy	1-23*	361
17	Brooks	L-K	189
18	Hoverman	1-19	100
19	Seymour	2-22	79
20	Wilkins	—	61
21	Ball	2-22	58
21	Norton	2-22	58
23	Gehrlein	1-19	43
24	Placek	L-K	36

* Flush-rivetted.

Socially speaking also, the contest was a great success, due to the hard work and ability of the organisers. Many and varied were the entertainments for those not out on retrieve. Amongst them was square dancing in the hangar (the band arrived by air), a wonderful lawn party at the Schweizer plant at which Jock Forbes gave an excellent performance on the bagpipes—excellent that is for those who appreciate that particular form of artistry—and finally the whole contest wound up with a monster banquet in the ballroom of the big hotel in Elmira at which Paul MacCready collected a vast number of pots and prizes, what were left being distributed amongst lesser mortals including $100 from National Airlines to me.

And so after a day of relaxation at a private but unused beach on a neighbouring lake, we drove back to Washington overnight, it being too hot to drive by day.

One outstanding difference from U.K. which deserves mention is that of retrieving. First, there is no speed-limit other than that on ordinary cars (50 or 55 generally); second, the trailers, which are not in general covered, are completely stable. This is due, I think, to the weight of the car. Third, many of the trailers are unbraked,

but this does not seem to matter as the cars are so heavy. My car, which is a 1950 V-8 Ford with overdrive (cheap and second-hand), seemed ideal as it would cruise very comfortably at 55 and we were up to as high as 70 once or twice. The overdrive is a great boon as it makes passing so easy, not that passing is the problem that it is in England since there is no "20 m.p.h. speed limits for lorries" nonsense, all of which apparently run at full throttle the whole time—I paced one at 68 along the flat.

My car got back to Washington with just exactly 2,700 more miles on the clock—it could have been very rugged with a little car.

Stratocumulus Parasols

by R. S. Scorer

THE biggest headache at the Competitions at Camphill this year was the spreading-out of cumulus into a layer of strato-cumulus. By ordinary standards the weather was not fit for cross-country flying on at least three of the competition days because of this, and it is a fine achievement of British gliding that on every day at least one completed the tasks set. More would undoubtedly have succeeded in going round the triangular course had it not been necessary to come so low because of poor visibility and large cloud amount at the Bolsover turning point.

In the evenings of the days on which the stratocu "parasols" were a serious hindrance to soaring, the sky always cleared. Thus, although the parasols reduced convection, some convection at least was necessary to keep them in existence. Most of the time they were being eroded at the edges by evaporation as they mixed with the air already up there, but were being replenished by any cumulus that existed. In order to forecast how much there will be, one has to guess whether the evaporation will keep pace with the formation.

Obviously if there is an inversion (or very stable layer) with nearly saturated air below, the spreading out is more likely, but the whole appearance of the temperature- and humidity-height curves can be altered in two or three hours if there is no large-scale motion of the atmosphere to keep it the same. Indeed the reason why the tephigram is any use for forecasting cumulus is that large-scale motions keep it the same in spite of the effect of thermals on the temperature.

If there is large-scale descent of the air between 5,000 and 10,000 ft. it will be kept dry; if there is ascent it will be kept damp. Descent usually strengthens any inversion: the existence of an inversion may therefore mean that descent is taking place and in that case the cu tops will evaporate. The inversion alone therefore does not mean that parasols will form.

Given a stable layer in which spreading-out is possible, the best criterion for spreading-out is whether the isobars are curved cyclonically or not. If they are, large-scale ascent is probably occurring and the evaporation of parasols inhibited. If the curvature is anticyclonic the parasols will tend to be evaporated by the general sinking motion of the air on a large scale.

Using this rule, my forecast of whether it would spread out or not was wrong on the Thursday because my forecast of the direction of curvature of the isobars was wrong. But the rule seemed to work all right. If the pressure is rising, then the air is almost certainly descending and so stratocumulus formed from cu tops will evaporate. But in the winter, stratocumulus that comes in from the sea may not evapor-ate because radiation and the shallowness of the subsiding layer may prevent it: that is to say, there are other complications in the case of anticyclonic gloom of winter.

This is not the only rule that has been suggested, nor does it help the pilot to soar when the parasols are there. Furthermore there are probably local complications in the Pennines and to their lee, but as a general rule it is a good bet.

EDITORIAL NOTE.—Isobars during the Competitions are shown on pages 102-3, and photographs of "parasols" on page 110.

A Lee Wave Scale

by C. E. Wallington, B.Sc.

ALTHOUGH it is not yet possible to forecast the occurrence of lee waves with complete accuracy, recent developments in wave theory have suggested a technique which may be tried until better methods are available.

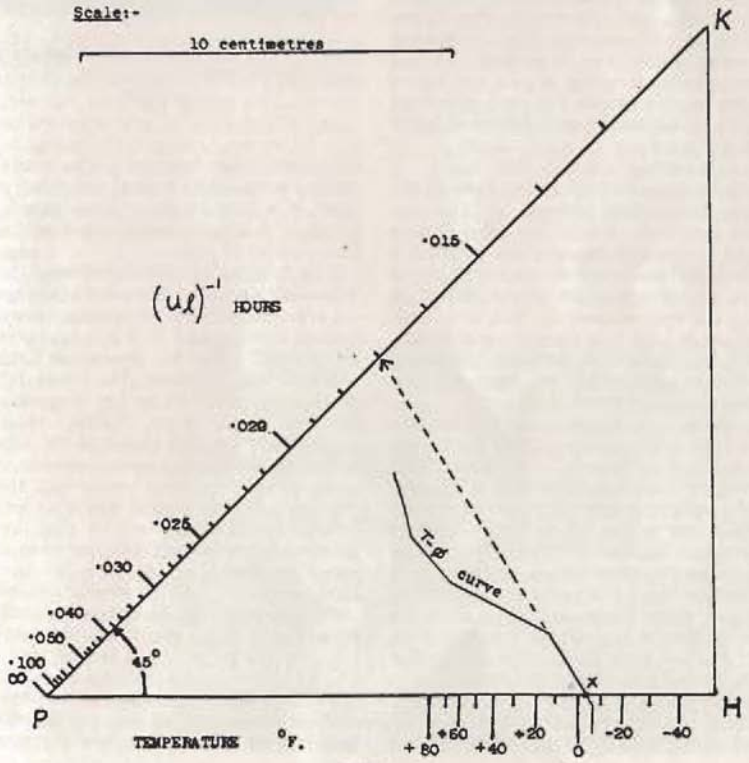
In GLIDING for Spring, 1953 (p. 32) Dr. Scorer described the types of waves likely to accompany particular vertical variations of the now well-known parameter *l*.

Glider pilots wanting to try out his method may be interested to know that a much quicker means of finding $(Ul)^{-1}$ has recently been devised. The method makes use of a triangular perspex scale calibrated as shown in the diagram. The dimensions suggested are applicable to the Meteorological Office Tephigrams on Form 2810.

To find the value of $(Ul)^{-1}$ at a particular point of a T-ϕ curve it is necessary to draw on the tephigram a straight line representing the lapse rate through the point. Then the scale should be placed on the tephigram with PH parallel to the dry adiabatics and the appropriate temperature of the PH scale on the point to be considered. The straight lapse-rate line will then cross the PK scale at the required value of $(Ul)^{-1}$.

Multiplication by U, in knots, yields l^{-1} whose significance has already been discussed in previous articles by Dr. Scorer.

In the example shown the temperature at the point X of the T-ϕ curve is —5°F. and the required value of $(Ul)^{-1}$ is .017 hours.



To Yugoslavia for the Contests

by Ann Welch

THE main impression we got from this visit to Yugoslavia was the tremendous "get on with the job" spirit of the Yugoslavian gliding people. Gliding is subsidised by the State, but a very high standard is insisted on from the people who take advantage of the subsidy and the facilities offered. For instance, crew members who went to the competitions had Silver C's.

An example of this spirit of "get on with the job" occurred the very minute we arrived. Having spent two nights in the train, we arrived on the aerodrome at 10 o'clock in the morning. Lorne Welch was told: "Here is your Weihe. It is completely new. Fit to it any instruments you like. The task for today is a goal race to Belgrade. The finishing line is drawn on this blackboard. This is the weather chart. Here are your maps. Start is in 20 minutes." That was the complete briefing. Lorne was one of the eight pilots to reach the goal, although he went to sleep on the way there and twice on the tow back.

The task-setting was extremely good. It would have been difficult in the light of the results to have chosen better tasks. The only mistake occurred on one day when it was declared a non-competition day because it was thought the weather was not good enough, and this mistake was admitted at briefing the next morning. The only task which was not set was the all-out distance, and the reason for this was that the entire competitions occurred in windless weather, ideal for the other F.A.I. tasks.

The general administration and organisation appear to be carried out by a very small number of people in a very small office, but marks were got out promptly, and the organisation worked extremely efficiently and without fuss. One change from what we are used to in this country was that goal declarations were not secret, and it was interesting to see that the discussion stimulated, while pilots were thinking what goal to declare, was not only instructive to all but did not lead to a follow-my-leader attitude.

The flying was of a very high standard, and about the first twelve of the 20 competitors were certainly of acceptable World Championship standard. The most spectacular occurrence was at the finish of one 100-km. triangular race. Nine gliders, eight of them Weihes, crossed the finishing line like a shoal of fish.

Lorne and Ann Welch visit Camphill after their return from Yugoslavia. Wally Kahn on right.

The Weihes (17 of them) were built in Yugoslavia and felt more rigid than the ones we are used to flying. In addition they had a bubble canopy and D.F.S. brakes, making them very easy to put into small fields.

There was considerable interest in the Irving venturi, both by the Yugoslavs and by the Swiss pilot, "Pirat" Gehriger, particularly on the occasion (it was subsequently declared a non-competition day) when at one moment Lorne was the only pilot able to stay up and was seen departing across the Danube on a cross-country attempt. This venturi is probably one of the more important steps forward in glider equipment.

Of the other gliders, the Orao II was unlucky, in that on no occasion did it get the weather to which it is best suited. It will be remembered that the Orao I flew in the World Championships in Sweden.

Another new glider was the single-seater KB-9. This is a laminar-flow machine with

Vampire-type air brakes. It is a private venture designed and built by a young enthusiast, and so far only the prototype exists.

The most interesting of the Yugoslavian gliders was the Košava. This is a tandem two-seater with slightly swept-forward wings (the root is 15 inches aft of a line between the tips). It is a big, heavy glider with a remarkably fine finish. It has flaps and adjustable ailerons which can be progressively raised for high-speed flying and lowered for slow circling. These are remarkably effective, and in calm conditions in the evening, flying at 150 k.p.h., the variometer did not reach 3 metres down. It is very silent both from the point of view of the pilot and from outside. The brakes are large, and only on the under surface of the wings, but are not really effective enough for English fields with their approaches.

During the competitions the Košava was flown as a single-seater by Komač, who is an instructor at Vršac. At present only the prototype of this glider exists, and by the time this article is in print it will also have flown in the German competitions against the German two-seaters. Komač found that the superior speed and performance of the Košava allowed him to maintain a lower average height on cross-country flying, and this often enabled him to make very good times on speed flights. I think there is little reason why this glider should not do very well indeed in English conditions in spite of its weight.

Practically all retrieves and all launches were made by aeroplane. The aircraft used were the Russian-designed PO-2, although there were also one or two Bulgarian versions of the Stieglitz. The PO-2 has a 125 h.p. five-cylinder radial engine. As its normal revs. are only 1,700 and the five cylinders have four exhaust pipes, it makes a most characteristic "popping" sound. It has more wing area than the Tiger Moth, a straight-axle undercarriage and two seats.

On one occasion Lorne was successfully towed out of a soft field 370 yards long over trees, in no wind. The principle adopted to get out of restricted spaces was the simple one of reducing the length of the tow-rope. On this occasion the rope was equal to the span of the Weihe. On many occasions retrieves were carried out in formations of up to four aeroplanes and gliders; this was great fun and certainly relieved the tedium of long tows home.

We were also given an aeroplane, PO-2, and allocated a wonderful crew man called Marian Knes. We called him "The Camel" because when gliding he could go for two days without food. Our tug pilot was called Anton Shimek, and he looked like an angelic Mexican bandit. He was always cheerful even when confronted with the smallest or roughest fields to tow out of. He, like Marian, and for that matter most of the Yugoslavian gliding people, regarded food as quite unimportant and would never bother to stop for food on retrieves. This caused a certain amount of rumbling of English stomachs.

Quite apart from the gliding, our stay in Yugoslavia was made most enjoyable by the great friendliness and hospitality which

The Kosava in Oerlinghausen for the German contests, in which it finished fourth.

Courtesy of "Thermik".

was shown us. It seemed people could not do too much for us and it will be most interesting to have the Yugoslavian team with us next year, as they are gliding people after our own hearts, and we may expect them to do very well here.

Tasks

28th June:—Race to goal: won by Arbajter (Gehriger fastest, but *hors concours*).

1st July:—Pilot-selected goals: longest distances by four pilots including Welch; each went 237 km. (50 km. short of goal).

3rd July:—100-km. triangular race: won by Rajn in 1 hr. 20 mins. Seven, including Welch, completed the course.

4th July:—Out-and-return race: 11 pilots completed the course.

5th July:—Race to Punčeva: again won by Rajn; Welch landed 20 km. short.

8th July:—Out-and-return to Darawa: 6 pilots completed the course.

9th July:—100-km. triangular race.

Final Day:—Pilot-selected goal.

Results

Komač (Košava) 6,533 points; Mordej (Weihe) 5,865 points; Rajn (Weihe) 5,043 points; Lorne Welch 4th, but *hors concours*; Dimitrovski (Weihe) officially 4th.

First Mynd Lee Wave

by G. S. Neumann

(Cambridge University Gliding Club)

Up till this year all standing-wave flights at the Midland Gliding Club have been made in winds with a westerly component blowing up the hill. This year, for the first time, soaring has been done in waves formed by easterly winds in the lee of the Long Mynd escarpment. In our last issue, in an article on "A Second Kind of Wave", Dr. Scorer commented on the fact that, in the lee-wave flights, the wind speed fell off with height.

IN the morning of 18th March, at about 7.30 a.m., a roll cloud was seen to form about one mile out to the leeward of the Long Mynd in a 25-knot easterly wind. The cloud ran parallel to the west slope and was as long as the ridge itself, i.e., about 5 miles. Its base was only a few hundred feet above the Mynd, and it was most impressive to watch the leading edge of the roll cloud grow and streaks of cloud rush down the ridge and dissolve.

At 11 o'clock cloud base was 1,000 ft. (all heights are given above the Mynd) and the base and shadow of a similar wave cloud about three miles downwind of the edge was now visible. The Mynd itself was now covered by 6/8 stratocumulus. The wind was still 25 knots.

LAUNCH AND CONTACT—A trial circuit in the Prefect at 10.50 a.m. showed that conditions were far less rough than it looked and that the wind strength at the top of the launch was no more than 25 knots.

At 11.04 I was again launched in the Prefect to 1,000 ft. by winch. This was cloud base. I turned straight downwind and contacted wave lift at 600 ft. about half a mile over the valley close to the front of the leading edge of the cloud. On crossing the ridge I registered no more than 15 ft. per sec. sink, although flying at 48 m.p.h.

THE "C" WAVE—There was no need to enter the roll cloud, for flying along the front of it I soon climbed above the top of the cloud which was at about 2,000 ft. Then by keeping well to the front of it I soon

reached 5,200 ft. The lift was extremely smooth and was up to 10 ft. per sec. close to the leading edge of the cloud, and then decreased steadily with height. I found I had to fly further in front of the cloud with increasing height to keep in the lift. Also the belt of maximum lift was found to be further out in front of the cloud with increasing height, and at 5,000 ft. it was more than half a mile ahead, i.e., vertically over the west slope, still covering the full length of the west slope.

It was surprising that the wind was about the same at all levels at 20-25 knots and also in the same direction, i.e., east.

The cloud, as well as the belt of maximum lift, kept moving back and forth through a few hundred yards during the flight.

OTHER WAVES—The inversion was about 2,000-2,500 ft. above the Mynd. There were clouds all round as far as the eye could see, and compared with some of the crests downwind the "C" wave appeared rather small. In the direction of Snowdon several peaks surmounted the level of the tops. Cloud cover was 6/8 or even more. At one time I counted eight crests immediately downwind of the "C" cloud, only about 2-3 miles apart from one another. A well-defined wave system with five crests and about the same wave-length could be seen to the south of the Mynd, the fifth being almost in line with the "C" wave. Another and apparently isolated crest extended to the north of the Mynd, in prolongation of the "C" wave, but without a clear gap in front. I crossed over to this wave and found weak lift at 4,000 ft.

Attracted by a gap up-wind I went as far as Church Stretton three times where I found another wave lift area that gave lift between 0.5 and 1 ft./sec. rise in places at 3,000 ft. There was no strong down draught between the "C" wave and the crest upwind, and I lost less than 3,000 feet before I joined the "C" wave again. In an attempt to contact the system to the south I found no more than the usual sink of the Prefect for two miles, but gave up the attempt as I did not wish to come back through cloud.

After 3½ hours in the air I landed back at the Midland Gliding Club, and during this time lift conditions had changed very little, although the cloud was smaller and slightly higher in the end.

FURTHER ATTEMPTS—After A. A. MacDougall and John Worsley in the T-21b and G. R. Whitfield in the Prefect had soared the "C" wave in a similar manner for over an hour each, I tried again to contact it at 17.00 hrs. in the T-21b, but I found no lift at all and had to land at the bottom. The Prefect, which was launched soon after, was also unsuccessful and joined us in the valley. The cloud, however, was still there.

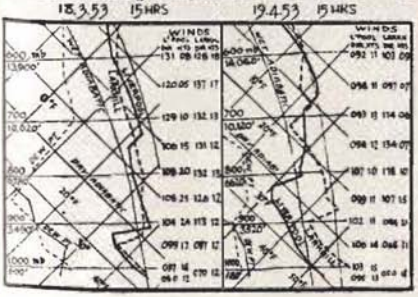
CONCLUSION—Soaring the "C" wave was found to be a perfectly straight forward proposition by all pilots concerned. The only risk seemed to be a landing at the bottom, where the wind was very light.

As I had only an intermediate sailplane and did not want to leave the site, the investigation was carried out rather cautiously. There was certainly the possibility of a cross-country flight even up-wind. The wave would also have served for a five-hour flight, and the gain of height completed Whitfield's Silver C.

LONG MYND LEE WAVE: TEPHIGRAMS

NOTE: LONG MYND IS ⅓ OF THE WAY FROM LIVERPOOL TO LARKHILL

18.3.53 15 HRS



19.4.53 15 HRS

The April Wave—I.

by R. H. Prestwich

(Midland Gliding Club)

DURING the Cambridge University Gliding Club camp in March, three contacts were made with the lee wave. The driving power behind these was complete east-wind frustration and a bit of initiative. This convinced me that we had all been thoroughly idle at the Midland Gliding Club and too absorbed with that fate too horrible to contemplate, a bottom landing !

Sunday morning, 19th April, seemed

made for the job. The wind was E. with low cover, poor visibility, and a clear patch in the valley. I launched into cloud at 700 ft. and flew out over the valley. After losing about 600 ft. I found wind-shadow thermals and regained it trying to get back on top. However, the row of vultures on the bungey point was too much, and after 20 minutes I landed in the bottom.

At 6 o'clock in the evening there was a definite cumulus roll visible about a mile from the hill. Amidst much head-shaking, condolences to the underwriters, etc., I tried again. This time, at 400 ft. above the hill-top, over the valley, I found good lift and climbed rapidly out over the cover into sunshine. My roll cloud, the first of two, went up to 2,000 ft. I was soon above this in clear air in such good lift that my mind was lightly turning to the thoughts of oxygen, when the lift stopped with considerable turbulence. I was at 3,800 ft. so I had a good view of everything. Total cover was broken only by the individual roll clouds and holes associated with the larger hills, Linley, Clee, Stiperstones, Corndon and such like. There was no general wave system visible, and no high cloud of any type. The Long Mynd, being the largest edge available, had two lee waves. I visited the second one and climbed back to 3,000 ft. (above hill) when the lift stopped. I returned to the first, lost 800 ft., then climbed back again to 3,600 ft. Meanwhile Stan Jones in Cream Olympia came to join me, and we floated quietly around, flying upwind with no difficulty whatever.

Flying at 80 knots with full brake, I came down to 1,800 ft. through the hole. Reducing speed to 40 knots, still with full brake, I began to climb at 5 ft./sec. I shut the brakes, increased speed to 85 knots and managed to produce no sink, all the time in dead smooth air. Back at 2,000 ft., six loops and stall turns lost me only 300 ft. Maximum lift on my needle vario was 850 ft./min., while the Cobb-Slater, an eternal optimist, produced 20 ft./sec.

Landing back after an hour and a bit, the downdraught behind the Mynd did its stuff, and proved that brakes are by no means essential to land Olympias in front of hangars.

Cloud base, 700 ft.; haze inversion at approx. 4,000 ft.; top of cover, 1,000 ft.; top of roll, 2,000 ft.; wave length approx. 1 mile ; wind, 25 knots E. All heights given are above the Mynd, 1,400 ft. a.s.l.

The April Wave—II.

by Stan Jones

For some time it had been thought that a wave was sometimes produced by an east wind, since typical strato-cumulus roll clouds had been observed over the Onny Valley at various times.

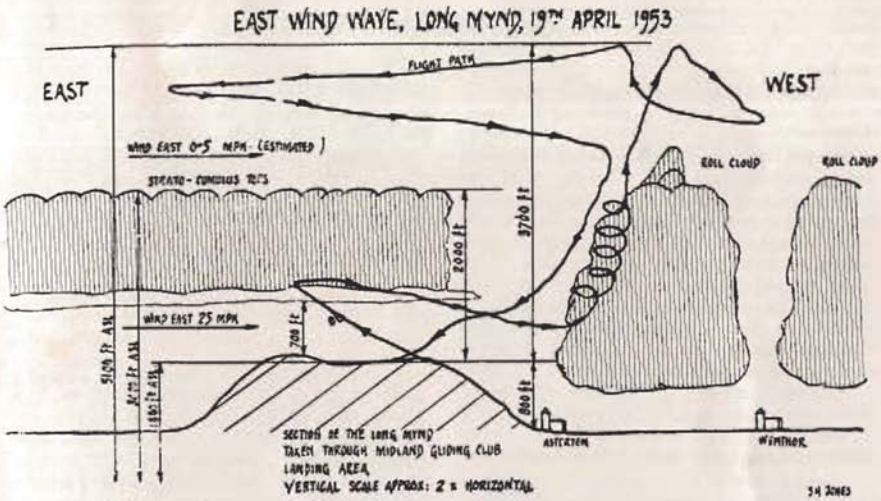
On 18th March, 1953, three sailplanes made contact with the wave.

On Sunday, 19th April, there was again evidence that this wave was working, and at 11.50 hrs. Rick Prestwich took off in the Blue Olympia to try and make contact. At this time the top edge of the roll cloud appeared to be very feathery and it looked rather doubtful whether it was fully developed. This proved to be the case, and after a flight lasting 20 minutes in very weak lift he landed in the valley.

By 18.00 hrs. the roll cloud again appeared and this time the top edge of the cloud was very firm and well-defined. Rick Prestwich decided to make another attempt to contact the wave and asked me to organise his retrieve from the valley, should this be necessary. However, I felt sure that no retrieve would be necessary and went into the clubhouse for a late tea, keeping an eye on his progress by watching the group of club members on the edge peering out over the Onny Valley. After 15 minutes I went out and joined them and could see the Blue Olympia in a patch of blue sky over the top of the roll cloud.

Looking west out over the Onny Valley, one saw a great wall of cloud extending down almost to the floor of the valley 800 ft. below, the outline of the fields being just discernible through the heavy haze. Looking up, one saw a patch of blue sky parallel with the top of the roll cloud approximately two miles long and a quarter of a mile wide in the otherwise complete cloud cover.

I soon found myself strapped in the cockpit of the Midland Gliding Club Olympia at the launching point. Before the cable was attached, our chief wave theorist, Ron Rutherford, gave me a few words of advice about turning into wind as soon as I ran into "no sink". I found myself heading rapidly towards cloud base and hurriedly switched on the turn-and-bank. Cloud was entered at 700 ft., and at 950 ft. I pulled the release and turned onto a compass course to take me out over the



valley, getting a glimpse of the hangar through a break in the cloud on my way. An area of "no sink" was entered at 400 ft. above the Mynd and I duly turned into wind, soon finding that the wind up there was certainly not the 25 m.p.h. wind prevailing on top of the Mynd, with the result that I soon found myself descending rapidly.

Turning again, I entered the side of the roll cloud into a lift of 5 ft. per second and began circling inside cloud. The lift soon increased to 10 ft. per second and, still circling, I soon found myself in clear air alongside the Blue Olympia and level with the top of the roll cloud. Further height was then gained by slope-soaring the roll cloud. Although the lift had previously been very smooth, very rough air was encountered over the top of the roll cloud and full aileron and rudder control was required to keep the Olympia on an even keel. This turbulence was not of the small-scale vibration type sometimes likened to riding over cobblestones, which one often encounters when wave flying, but the general tossing about variety one experiences on rough hill-soaring days.

The top of the roll cloud did not have a smooth appearance like the strato-cumulus clouds which extended as far as one could see, but had sections towering up 100 to 200 ft. above the general level. Looking up, one saw brilliant sunshine and a cloudless sky apart from two lenticular clouds which appeared to be over Shrewsbury, one at approximately 8,000 ft. and the other 15,000 ft. a.s.l.

After reaching 5,100 ft. a.s.l. and finding no further lift above that level, I flew west over the top of the roll cloud and soon found myself descending at 10 to 15 ft. per second, and after inspecting a further break in the cloud cover approximately over Wentnor, I returned to my original position, regained altitude and then flew east, finding it possible to progress upwind quite easily, flying at an indicated 38 m.p.h. with normal sink of 3 ft. per second. After travelling upwind for approximately two miles I returned to the roll cloud and began the descent with the air brakes fully open. On the way down I checked the area of strongest lift two-thirds of the way up the roll cloud, and found that with the brakes fully out and flying at an indicated 40 m.p.h. the Olympia was rising at 3½ ft. per second.

This wave was utilised by two aircraft over a period 18.15 to 19.20 hrs. and was then still active.

The accompanying diagram of the wave system follows very closely a theory put forward by Forchtgott in Czechoslovakia in 1949 and reported by Dr. R. S. Scorer. ("Airflow over Mountains": *Science Progress*, vol. 40, No. 159, pp. 466-477, July, 1952).

Correspondence

CHAMPIONSHIP MARKINGS

Dear Sir,

At the recent National Championships many competitors had thought that the Individual and Team Championships would be scaled separately each day. This would have meant that the performance in each would receive 100 points for the day. Each class would be scaled by its own daily factor. The main advantage in this variation would be the greater freedom for the Contest Committee by allowing different tasks to be set for the two classes.

It may be of interest to see what differences this would have made to the markings in the championships. The leaders would have been little affected:—

Pilot	*Points*
G. H. Stephenson	609 (553)
D. A. Smith	506 (454)
F. Foster	494 (452)
P. A. Wills	465 (452)
A. J. Deane-Drummond	348 (311)
Entrant	*Points*
E.T.P.S.	458 (414)
London G.C.	434 (351)
A. H. Yates	378 (336)
2nd T.A.F. G.C.s	357 (267)
C. G. Dorman	327 (288)

The change would have had greater effect on the order lower down in the Team Championship. Eleven place changes would have occurred between the 8th and 19th places; the A.T.C. No. 49 G.S. Team would have gone up from 18th to 11th place and the Imperial College Olympia Team would have gone up from 17th to 13th place. The five teams that scored on the Tuesday were heavily penalised, relative to the other competitors in the Team Championship, by the performance of G. H. Stephenson on that day. With separate scaling the Team Championship marks for the Tuesday would have been:—

Entrant	*Points*
2nd T.A.F. Weihe	100 (34)
A.T.C. No. 49 G.S. Sedbergh	85 (29)
London G.C. Olympia	62 (21)
Cambridge G.C. Olympia	50 (17)
Imperial College Olympia	50 (17)

I believe that the separate scaling would have been fairer since it would have avoided the interaction of the two Championships on each other. With the method used, a competitor was competing against his own class directly and indirectly against the other class if the latter produced the best performance of the day.

C. G. Dorman.

"GLIDING—TILL NOW"

Dear Sir,

I am making, for the British Gliding Association, a sub-standard film (with the above title until a better one occurs) on the history of gliding. By the time this appears, it will probably have been seen in its rough state at the National Competitions at Camphill.

I have a lot of material (the stills date from 1506 and the movies from 1906), but there are many gaps in the story, which could be filled by further reprinting from other people's old films. Can any of your readers help by lending these, or by telling me where they can be found? Perhaps some of the teams coming from abroad for next year's Internationals could bring some dupes with them? I should mention that I have already had good material from Espin Hardwick, Graham Head, Dudley Hiscox and J. V. Rushton, and have contacted R. F. Stedman and the National Film Library. The newsreel companies are an unpromising source, as they charge about £1 a foot for the use of their negatives.

Any size or type of film, including colour, but excluding 8 mm., is suitable and can be duped as necessary. Still photographs, or models of gliders, would be welcome if exceptionally interesting.

Naturally I would take every care of such material, and would send an addressed transit case to anybody offering from outside London: near London I would collect.

There are no commercial possibilities in the project, but it will be worthwhile; if it is not done now it may soon be too late—films perish.

My address is 16 Carlisle Street, London, W.1. (Gerrard 1253).

Lawrence Wright.

"ON BEING A BIRD"

Dear Sir,

The trials of writing a book are many, and one is the last-minute panic in which page-proofs are rushed through.

I left until the last moment the question of whether to acknowledge Anstace Goodhart's delightful work in *On Being a Bird* by putting "Illustrations by Anstace Goodhart," or whether to do so in the acknowledgments. I decided on the latter because I also wanted to thank Tony for his great help.

Accordingly I wrote a piece and sent it in—and it was left out. I can only make what amends I can by asking you to publish this letter.

Anstace and Tony gave me more help and moral support than anyone during the pangs of creation, and without them the book would not have been half so good (or much worse, whichever way one wants to look at it). May I make public through your columns my mingled thanks and apologies?

PHILIP WILLS.

Gliding Certificates

Gold C

No.	*Name*	*Date of Completion*
13	J. S. Armstrong	1.6.53

Silver C

418	J. Bishop	13.4.53
419	A. Pickup	10.5.53
420	J. Welsh	17.5.53
421	C. Dorman	25.5.53
422	R. Barwell	26.5.53
423	B. Plummer	17.5.53
424	J. Price	31.5.53
425	S. Morison	9.7.53
426	R. F. Vickers	8.7.53
427	J. Cochrane	4.7.53
428	R. Stafford Allen	13.7.53
429	J. Gaskell	8.7.53
430	J. Riddell	19.7.53

C Certificates

May

No.	*Name*	*School or Club*
6448	G. R. Scott	No. 48 G.S.
10601	J. E. Hutchinson	Cambridge Univ.
10953	Eileen F. Tylee	Surrey G.C.
11615	G. C. French	Gutersloh G.C.
11781	J. E. Toplis	No. 80 G.S.
12848	G. C. Lewis	No. 143 G.S.
12924	W. R. L. Reed	R.A.F. Fassberg
13486	H. Hedayat	No. 80 G.S.
13509	J. F. G. Stonham	No. 203 G.S.
13609	M. G. De Garis	No. 44 G.S.
13968	J. P. B. Youngman	Cambridge Univ.
14093	G. A. Cropper	Coll. of Aeron.
14111	R. C. Hastings	Coll. of Aeron.
14204	B. D. C. McCarthy	No. 80 G.S.
14480	G. A. E. Fenn	No. 83 G.S.
14809	J. Graham	Oxford G.C.
15113	R. C. Anderson	No. 123 G.S.
15227	S. T. Little	R.A.F. Wahn
15447	G. G. Graham	No. 168 G.S.
15646	B. M. Nicholson	Moonrakers G.C.
15866	J. R. E. Mills	Derby & Lancs.
15898	G. E. P. Pipe	H.C.G.I.S.
16270	C. F. Warner	H.C.G.I.S.
16302	F. Wright	Lüneburg G.C.
16316	V. C. Redfern	London G.C.
16327	E. C. Halliday	Bristol G. C.
16341	W. A. Ingram	Midland G. C.
16252	V. H. Price	No. 68 H.S.

June

5090	E. W. Coe	No. 146 G.S.
14174	M. H. J. Barnard	Cambridge Univ.
14495	G. Marshall	Scharfoldendorf
14835	J. M. Lipscombe	Southdown G.C.
15801	P. A. Crabtree	Southdown G.C.
16343	Margaret Crabtree	Southdown G.C.
16395	K. W. Riley	Army G.C.
16412	A. L. Allinson	Lüneburg G.C.
16413	D. H. Jones	Deeside G.C.
16419	A. Petrie	Lüneburg G.C.
16423	S. H. Balam	London G.C.
16426	C. H. Campbell	R.A.F. Wahn
16462	J. D. Price	E.T.P.S.
16464	E. Dennison	Derby & Lancs.
16468	B. J. Hulley	Midland G.C.
16484	P. H. Lockwood	Yorkshire G.C.
16494	W. R. Keatinge	London G.C.
16510	F. Steinhobel	Gloucestershire
16509	D. K. D. Foster	Midland G.C.

Clubs & Associations

Midland Gliding Club

With a flying membership of 150 we have now doubled our size in two years. Many certificates have been taken by the new people and the number of Silver C legs, particularly heights and durations, is encouraging, but that of distance qualifications is not. It is hoped that another addition to the fleet will help in this direction, besides relieving the Olympia list on good days.

Perhaps the most important improvement on the flying side this year has been the phenomenal increase in the utilization of the site both by club members, visiting clubs and private owners. To date we have reached a total of 1,500 hours and as many cross-country miles have been flown.

The Coronation holiday provided some excellent weather. Saturday, 30th May, saw a standing wave in a N.N.W. wind of 30 knots, in which Olympias flown by Horrell and Hickling reached over 11,000 ft. a.s.l. A visiting Sky from the Empire Test Pilots School, flown by Dick, reached 8,200 ft. later in the evening. On Sunday, 31st May, a lighter wind from the N.N.W. gave pleasant conditions, enabling Price of E.T.P.S. to do his 5 hours and Wilbur Wright and Bob Neill, Jnr. to convert to Olympia.

Monday, 1st June, was very much a cross-country day for big stakes. Cloud streets formed early, being propelled by a 40-knot wind from the N.N.W. Rigg in the E.T.P.S Sky, Dick in the E.P.T.S. Olympia, and Adams in his Olympia all declared Lympne as a goal. Rigg landed at Redhill, 147 miles away, Dick near Fleet, 132 miles, and Adams landed at Lasham, 123 miles. The two visiting pilots reached 12,000 ft. en route, but were defeated by the fierce cross-wind on the final leg. Worley flew his Kite II 42 miles for the distance leg to his Silver Badge.

In contrast to all this wind, the following week-ends, 6th and 14th June, yielded strong thermals in calm weather, and heights in cloud up to 6,500 ft. were the order of the day.

The Club's first camp started on Saturday, 20th June, and included a party from the Cambridge University G.C. with their own Prefect and Tutor. A light south wind blew in the evening and a "wave" was contacted by Prestwich in his Olympia off the south tip of the site. He explored this phenomenon completely, rising to 8,800 ft. and travelling along its length for 20 miles. His experience was enjoyed by a camp member in the T-21b and by Bowdler in the Club Olympia. The west wind did not blow during this camp, but even so Foster managed a flight of 2 hrs. 20 mins. in a Tutor for his C certificate, and four ab-initios reached B standard by flying proficiently in a Tutor now fitted with spoilers.

The July camp had west winds to the extent of 286 hours flying—a camp record, and produced a fair crop of certificates, namely 1 B, 4 C and 9 duration legs. Although cloud base was sometimes rather low for the time of the year, many pilots found lift extending well away from the site under cloud streets, and Alan Yates reached 9,600 ft. in his Olympia inside a sizeable cumulus.

Camphill proved to be out of reach for Prestwich in "Blue O"; he landed at Congleton, 53 miles, on Saturday, 11th July, owing to weakening convection due to an approaching warm front.

We were pleased to see the Southdown Club in July, again under the leadership of cheery Ray Brigden, and also Prof. Varley and R. Stafford-Allen with their Olympia—the latter completed his Silver C with a 5-hour flight.

In Saturday, 18th July, Col. Benson did his 5 hours and Guy took an excellent C at long last, while Prof. Varley reached 9,600 ft. in a cu cloud. Sunday, 19th July, Hugh Trotter flew for 5 hours in the Fisher-Worley Kite II.

During the period of the National Championships at Camphill we entertained the Navy. They were presented with excellent weather and a number of certificates, including 3 B, 6 C and 5 duration legs. The spreading out of cu at medium levels, so troublesome at Camphill,

did not occur at the Mynd except late one afternoon.

John Cotton tried hard to avoid having to take the Blue Olympia by road to Camphill, and on two attempts he got just over half way each time. Incidentally, John has now completed 100 hours of gliding at the age of 18.

The Club's Chairman, R. M. Thwaite, enjoyed a good flight on Sunday, 2nd August, when he flew to near Welshpool and back.

We are pleased to report that the new clubhouse is very near completion, and by the end of September it should be ready for use.

J.H.H.

Surrey and Imperial College Gliding Clubs

FOUR of our gliders and just over 30 members attended the National Championships. The Weihe was flown by Wally Kahn, Red-O by Cliff Dowdall, Cream-O was shared between Bill Tonkyn and Tony Oram, and Daisy, our T-21B, between Ron Macfie and Peter Murden. In spite of this representation we won no prizes, but a very good time was had by all and Daisy did manage two trips of over 70 miles.

After the Champs, Peter Murden and a party took Red-O to Scotland, stopping at Crossfell on the way up and Sutton Bank on the way back. Unluckily they coincided with a week of, to a layman, excellent weather, and the wind didn't blow enough to be soarable.

At Lasham, although there have been few cross-countries of note, training has gone on steadily and a number of people have gained their Silver C heights on thermals. Rupert Brown, who is soon returning to Australia, spent 6½ hours in thermals on Bank Holiday Monday, but landed 29 miles away after having, in the course of the flight, been well outside Silver C distance. On 16th August John Neilan flew his Olympia to a goal at Ramsgate Aerodrome, 106 miles in 3 hours with a best height of 7,800 feet; he described it as the easiest trip he has ever had and the complete opposite from his 136 mile trip on the last day of the Nationals, when he scraped all the way.

Many of our members have had their first aero-tows from the Tiger Moth which the Army Club have on loan during the summer, and the presence of the Moth also means that the winches can concentrate more or less exclusively on the two-seaters and there is less frustration among the Daisy and Pansy (T-21 and T-31) customers.

We are holding a further course from 7th to 19th September, but this is already fully booked, though we do need volunteer winch drivers from among our members for it.

We give early warning that our Christmas party will be held at Lasham on Saturday, 12th December.

H.T.

Crown Agents' Gliding Club

IN January, 1953, members of the staff formed and constituted the Crown Agents' Gliding Club. This is the first and only Club of its kind in the Civil Service. Membership of the Crown Agents' Gliding Club is open to members of the staff of the Crown Agents for the Colonies and their families, to staff of the Colonial Office and to officials employed in the Colonial Administrations. It is hoped that Colonial Officials, when on leave, will take advantage of membership of the Club and thus learn to fly whilst on leave in this country at a moderate cost.

At present the flying subscription is only 4 guineas per annum and solo soaring with the Surrey Gliding Club costs only 15s. per hour. Training classes of 12-14 days' duration are organised from time to time and accommodation for these classes as well as at week-ends is available on the aerodrome.

Possessing as yet no equipment or financial backing, and due to the great shortage of suitable flying fields near London, the Club sought the assistance of the Surrey Gliding Club, whose full facilities have now been made available to us on very generous terms. Many of our members are now receiving regular dual-control flying instruction, one indeed having now gained his B Certificate. Up to 9th August, the Club has had 117 launches from the Surrey Club, with an aggregate flying time of 9½ hours.

Full particulars may be obtained from the Hon. Secretary, J. E. G. Harwood, W.10 Dept., Crown Agents for the Colonies, 4, Millbank, London, S.W.1.

Cambridge University Gliding Club

Two more Silver C's were completed in July, giving us a total of three so for this year. George Whitfield got his height at the Mynd in March. Pip Gaskell did five hours early in July and later in the month Chris Reddell took the Olympia 54 miles towards Tilbury; on an earlier attempt he had gone 46 miles, but his initial aero-tow to 3,000 ft. had raised the required distance to about 57 miles.

The National Competitions are reported elsewhere. Unfortunately, our Prefect entry was scratched by the organisers owing to the large number of aircraft entered. and the Prefect pilots-elect therefore joined other teams in humbler roles. Eventually about a dozen C.U.G.C. bodies assembled at Camphill with Bluebell and the Olympia.

Bluebell's final score was 190 marks, giving us tenth place in the 25 team entries, while the Olympia came eleventh with 186 marks. If we did not do quite so well as we had hoped, it is perhaps some consolation that we failed in excellent company.

The Comps. Concert included a short talk on "Over-to-youmanship" (a little-known branch of Glidermanship) by Ken Machin, who had arrived for the week-end.

Meanwhile, in Cambridge, Prefect flying continued. On 29th July, Oscar Bunemann missed Silver C height by 100 ft. and the aerodrome by three miles. Ernie Clarke got Silver C height on 2nd August, and would have gone away but for the lack of a retrieving vehicle.

Owing to the wear and tear of the Competitions only the Prefect is flying at the moment. Bluebell should be ready by mid August. The damage to the Olympia will take longer to repair, as the rear fuselage is completely severed and there is a broken leading edge; it is hoped that the job will be completed in about three weeks. The Tutor is not considered airworthy at present, and may need a considerable amount of re-covering. The Kranich has not yet been overhauled.

The new section of the hangar has now been erected, which exactly doubles its length. There is also a plan to supplement this by building an end wall.

Army Gliding Club

Like all Service clubs, we turn over our membership at a very high rate. We have been fortunate, however, in keeping sufficient old members to show the way and our utilisation of aircraft has been much more evenly spread than in previous years. Club records certainly prove the old gliding adage that those that put the most into gliding, also get the most out of it.

Our best flights so far this summer have been by Charles Dorman and Stuart Morison, who both completed their Silver C's with 5-hour flights in thermals over Lasham. Silver C distance legs have been gained by P. Wenham (38 miles to Redhill), Evie Deane-Drummond (52 miles to Poole), and A. Tobin (42 miles to Hurn).

Unfortunately the club Olympia was damaged ten days before the Championships when it was landed in a cornfield near Crawley. We then substituted the Prefect with David Martlew and John Williamson as pilots in the Army Club team. David Martlew must be congratulated in winning the Daily Prize for best height on 2nd August.

Southdown Gliding Club

New members have been joining us at a steady rate this year, most coming from far afield, several of them from London. Training therefore has been our main concern. A number of pupils were soloed in time to go to Long Mynd to fly our Tutor, which together with the Olympia spent a fortnight there in July. Everyone had a very enjoyable time. We obtained four C Certificates, and one five hours. Ray Brigden got his Silver C height and landed 15 miles away near Cressage. Dr. Jameson flew to Kinnersley, 25 miles. Together both aircraft flew 120 hours for about the same number of launches.

The northerly winds, which were the curse of most hill sites during June, gave us at Friston some thermal flying with heights of up to 3,000 feet. Peter Crabtree got an almost unique C Certificate at Friston by climbing from 650 ft. to 1,200 ft. in a thermal. On Sunday, 17th May, we had a visit from the Surrey Gliding Club's "Green O." The cliffs obliged on this day and were soarable to Beachy Head, but lift died away just after mid-day. Two of our lady members, Margaret Crabtree and Joan Cloke, obtained their C Certificates over the cliffs on Sunday, 21st June, and on Sunday, 26th July, Roger Sweatman did five hours.

A.R.S.

Royal Naval Gliding and Soaring Association

Summer Camps

THE nine-day camp organised by the Midland Club for the Association was a terrific success. The west wind blew every day and well over 100 hours' soaring was achieved by the 11 course members, including 3 Silver C durations and a possible height, the latter as well as one of the durations by Lieut. Comdr. (E) Elswood-Row in one of the Club's Olympias.

The camp run by the Army Club at Lasham was not quite so successful, although the members all reckoned they had had an excellent holiday. Bad weather interfered considerably, and sickness of the chief instructor also resulted in less flying than would otherwise have been possible.

High Performance

News from America tells us that Commander (E) Goodhart (Nick) came 5th out of 32 in the American Championships. As he was flying a surplus wartime Army training glider of distinctly mediocre performance, this result is more than creditable. His most interesting flight led him to Idlewild, New York's equivalent of London Airport, where his unheralded arrival caused some consternation amongst the air traffic authorities.

The Navy's entry for the National Championships had to be cancelled as the other Goodhart brother (Tony) went down with appendicitis shortly beforehand. By the time this issue of GLIDING is out, Tony will be on his way to Australia where, no doubt, he will find ways of continuing his sailflying activities. We hear rumours that the Australian Navy has recently bought one of the Admiralty's two Kranichs! No doubt nothing more than coincidence?

Portsmouth Naval Gliding Club

The Club's part-time ground engineer, Mr. Pinniger, has so much other work on his hands that he was unable to complete the annual overhauls of any of the Club's gliders until the end of May, when the T-21 became serviceable; the Tutor was ready by the end of July and the Grunau is hoped for in August. The result is, not surprisingly, that relatively little flying has been done this season, though this has also been due to lack of regular instructors. It is obvious that some better arrangements for annual overhauls must be made for the future, if the club is to prosper as it has in former years.

Heron Gliding Club

Under the guidance of Lieut. Comdr. David Elswood-Row, and with the much-appreciated assistance of some of the staff of the Westland Aircraft Company, the Club has made good progress this season with a two-seat Tutor and a Grunau.

Gannet Gliding Club

Here also are a two-seat Tutor and a Grunau, both hired to the Club by the R.N.G. & S.A., and regular training has been going on under Lieut. Frank Heenan, who, as well as doing most, if not all the instructing, has been turning his talents to repairing the Club's somewhat bent primary.

Fulmar Gliding Club

Lieut. Alwyn Greenhalgh has been making great efforts to get this Club back on its feet after a period of near-hibernation.

In June he received a brand-new two-seat Tutor from Slingsby's which is being loaned to his Club by the R.N.G. & S.A. As the Admiralty suddenly withdrew his winch for modification, he has been concentrating on auto-towing and finding it, on the long newly rebuilt runways available, if anything preferable to winching.

The Club's own Grunau has been having a major rebuild; in fact it has been some of Mr. Pinniger's "other work" referred to above, and they hope to get it back in time to make some use of it this season.

Dartmouth Cadet Courses

The Admiralty are again running courses for Naval Cadets who volunteer for them during their summer leave. This year the

courses have been increased, on the advice of the R.N.G. & S.A., from 6 to 9 days, and it is hoped that the cadets will be able to put in quite a few solo flights during the last two or three days of their course.

The Admiralty is again hiring gliders from the Association, this year 2 two-seaters instead of one, so that more emphasis may be given to dual instruction than heretofore.

The Association's policy of taking gliders away from its Branch Clubs to hire to the Admiralty during the best weather of the season has been much criticised by the unlucky clubs concerned; it may be that, at the Association's next A.G.M., this policy will be reversed, since the gliders have all been bought (without Admiralty assistance) for the benefit of the Association's members and Branch Clubs, and taking them away for six weeks in August and September can hardly be called benefit.

London Gliding Club

Annual General Meeting

At the A.G.M. held in the club on 16th August, Dan Smith, the Chairman, said that he believed the utilisation figures for the club aircraft were the highest of any gliding club in the world.

Although 68 new members joined during 1952, there was a slight decline in paid-up membership, which stood at 280 (226 flying members and 54 associate). Flying, however, had increased; the figures were 2,007 hours from 6,598 launches in 1952, compared with 1,649 hours and 4,670 launches in 1951.

Trophies were awarded as follows:—

Dent Cup for best flight of 1952: Frank Foster, 111 miles to Binbrook, Lincs., on 12th August.

Desoutter Cup for best constructional effort: A. (Johnnie) Walker, for re-building the Sky, whose wreckage the Club acquired last Autumn.

Cellon Cup for best progress by an ab-initio pupil: Mrs. Betty Richardson.

Derry Trophy for voluntary services to the Club: Derrick Abbott.

Committee members elected or re-elected: I. G. P. Fletcher, G. H. Lee, G. H. Nixon, J. E. Simpson, D. A. Smith.

After the business meeting, Lee gave a talk on cross-country competition flying. It was needed because, as he explained, although club members had collected three-quarters of the prize money at the National Contests, the pilots who did so were nearly all pre-war flying members. This showed the urgent need for post-war members to do more flying, and especially for advanced instruction to C pilots.

May.—On the 3rd the wind was blowing straight towards Cornwall, but the forecast cumulus failed to appear, to the disappointment of two pilots who were all set to have a go. Next week-end Stephenson, on the 9th, tried for Cambridge out-and-return, but had to turn back at Bassingbourn and came down near Luton after the hardest 4 hours' work he has ever done in the air. Next day Latto, trying for Kidlington, overshot to Chipping Norton, 43 miles.

In the Whitsun cross-country competition between the Flying Committee and The Rest, Stephenson led off on the 24th with 31 miles to Upper Heyford. Next day Peter Rivers and Alan Yates beat the Committee by both flying to Henlow, and on the 26th, Rivers went 22 miles to Cuffley.

Certificates in May: 3 A, 3 B, 1 C.

June.—The only cross-country was 11 miles by Tarnow to St. Albans. A member of the golf club kindly telephoned to say Tarnow had landed "on the golf course" but failed to say which, being apparently unaware that there were other golf clubs in the United Kingdom. A prolonged but fruitless search of Dunstable Downs was the result.

Certificates: 2 A, 1 B, 1 C, 1 Silver C duration.

July.—On the 8th Ross Vickers completed his Silver C with 66 miles to Wattisham, near Ipswich, and Daval went 23 miles to Buntingford.

On the 19th, D. M. R. Riddell made a goal flight to Cambridge, Betty Richardson reached Silver C height on the way to Radlett, and Dudley Hiscox made his goal at Horsham St. Faith, near Norwich (95 miles) but was not too well received until he pointed out that they completely ignored his prolonged circuiting on the approach and, on their own admission, failed even to locate him by radar. The first two machines were aero-towed back by Jack Partridge in his Gemini, which he generously brings over from Elstree often to do aero-towing from the club ground when slope lift is absent.

July was particularly good for flying: 337 hrs. 19 mins. from 924 launches. Certificates: 6 A, 6 B, 5 C, Silver C legs: 2 durations, 2 distances and 4 heights.

Yorkshire Gliding Club

For the last two months we have been flying every day, training our own members and trying to cope with the demand for passenger flying at week-ends. Groups of members have spent weeks or odd days of their holidays at the Club. Training Camps have been most successful in spite of the far from ideal training weather, 75 per cent of campers having joined the Club as full flying members. Our ab-initio list having reached saturation point, we are now in the unique position of having to place new applicants for ab-initio training on a waiting list.

The Camp which followed the Whit Rally resulted in 6 A's and a B, and the June Camp, which did not include one good soaring day, resulted in 5 A's and 5 B's. We were lucky in being able to use the Gallops, and in order to get high launches from our own site in N.E. winds, have made a large gap in an almost non-existent wall and launch through this and a gap in the dyke. This makes it possible to fly aircraft over to the Gallops for the day, and avoids much delay and risk of damage on the ground.

We were very lucky this time to have the help of Mr. A. Turner, North-eastern representative of the Central Council of Physical Recreation, who did all the administrative work during the week, became a qualified winch driver, and was of very great help all along the line. Jack Alcock, who got his A on the Easter course, came to help with the June course and got his B, finally capping this with his C on 6th July.

A Lee Wave

On Sunday, 28th June, a thick mist came rolling in from the sea about 8 p.m. We watched from the edge as clouds rolled down over the Gormire ridge into the valley, and then came boiling up again to form a long wave-cloud out in the bowl half-way between the ridge and Sutton village. It was not possible to launch a machine to investigate, as clouds were down on the deck.

The next evening, in the same wind conditions, but with no condensation and no sign of a wave cloud, Bob Swinn was launched in the T-21; suspecting that the same conditions were there though invisible, he went to investigate, and there, in the middle of the bowl, in a N.E. wind which one would normally expect to give nothing but sink or definite downdraught, he soared to 2,700 ft. Lift was very weak—not more than 2 or 3 ft. per sec.—but it existed right across the bowl, from Hunt Hill to the Cliffs above Gormire.

So busy have we been trying to satisfy the demand for training that we have had no time to explore further this newly discovered lee wave.

On 9th and 10th August we had a brief visit from the Surrey group with their Olympia. Our Kite II is now being test flown.

SUE.

Newcastle Gliding Club

We had 40 launches on Sunday, April 26th, during which Alan Crawford got his A and B and Eric Williams did likewise after arriving late straight from work. These are the first certificates gained at Woolsington by pupils who commenced training there this year. May 3rd provided poor flying conditions, with winch and cable trouble. The cable has now been replaced. Total flying for the rest of May was 151 launches—nothing spectacular.

Ultimatum

We were shocked to learn that the local Airport Committee gave notice that gliding on the airport must cease from the Sunday of Coronation week-end. The reason given was "danger to passenger aircraft" (some of our members have still to see these passenger aircraft activities).

A deputation from the Club attended a meeting of the Airport Committee on 28th June and after stating our case invited the few councillors present to go to the airport and witness our activities. This invitation was refused and a blind councillor, who has never seen the airport, proposed that the ban on gliding should remain in the interests of safety.

Since the ban at Woolsington the members of this Club have made 70 launches at Sutton Bank, during which Dr. Kylok, H. G. Nichols and Ian Paul gained their A and B certificates, and Jack Anderson completed his 5-hour duration flight in the Blue Kite.

The B.G.A. has been asked to make an approach on our behalf for permission to operate on another aerodrome, and we are hanging around the Club bar counter with our fingers crossed.

A.P.M.

Bristol Gliding Club

AFTER waiting for five years, John Cochrane managed to complete his Silver C on July 4th, when he flew the Olympia 60 miles to Hurn. He left Lulsgate with no definite goal in view, but after reaching Dorchester, he turned to fly east to Hurn against a light N.E. wind, so that his route mileage was over 80. Course instructor Stuart Fursman also managed a short cross-country in the Grunau on August 8th, when he flew 15 miles to Colerne only to meet the infamous Bristol clamp.

Apart from these two flights however, Lulsgate weather has permitted only local soaring and unstable week-end weather is a great rarity. Unstable Mondays of course are normal, but after Thursday things settle down once more. Roundway unfortunately has been out of action since June for grass growing and cutting. We hope to restart there early in August, and during the quiet period, have seized the opportunity to overhaul the winch and re-decorate the club cottages. Our farmer landlord plans to rotate the four fields adjacent to the cottages so that, next year, there should be no interruption to flying.

Ab-initio training has proceeded apace at Lulsgate and the majority of the unusually large intake of new members at the beginning of the year are now flying solo. Our weekly courses are also proving as popular as in previous years, although this year there seems to have been more frustration than usual due to weather and auto-towing vehicles. We have been trying ways and means of improving clutch life from the week or so which occurs with ham-fisted drivers, and have just acquired a Ford fire engine tender, complete with heavy duty clutch and a body almost ideal for gliding activities. Its usefulness remains to be seen.

We were quite pleased with the efforts of our team in the Nationals as only the captain, Doug. Jones, had flown in the last one. John Hahn did well on the first Sunday with his goal flight to Speeton which broke the club record held by Chris Staffurth for a similar flight to Boston. The Olympia was eventually put out of the competition by a pilot who should have known better than to make a low although fast approach into a strange field. Caught by downdraughts in the lee of some houses, his wing tip hit an upright in the fence and the resulting sideward landing wrecked the fuselage nose.

Statistics for the first half of this year show that we are slightly down on the figures for last year, 2,176 launches as against 2,629, and 186 hours as against 194.

M.G.

Scottish Gliding Union

THE Club Holiday Week began in excellent style when on 25th July David Hendry flew from Balado to Kirriemuir (38 miles) to complete his Silver C—the first home-grown specimen in the Club. His other two legs had been gained only the previous Thursday on Bishop Hill.

Because of the weather the rest of the week yielded little of note, save for an out-and-return by Bill Lawson to Bishop Hill where he did his five hours, and a spirited 15-mile dash to Markinch by Andrew Thorburn. Bob Porteous had bad luck when, after reaching Bishop Hill from Balado in the Tutor and soaring there for 3¼ of his five hours, he was forced down by a squall, and spent the next five hours on the ground struggling with wild bullocks and watching his friends, ignorant of his presence, disporting themselves in the Cadet in ample lift above.

Since the return of a Cadet to permanent storage on the Hill, much more use has been made of this site, and six duration legs and 10 C's have resulted. Notable among the latter was that of Robert Parker who, after steadfastly remaining a B for fourteen years, was caught in a weak moment after the loss of his Auster in Loch Leven, and shot off the edge. He forestalled any attempt to make him do his five hours by buying an Aiglet shortly after.

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