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AND GLIDER

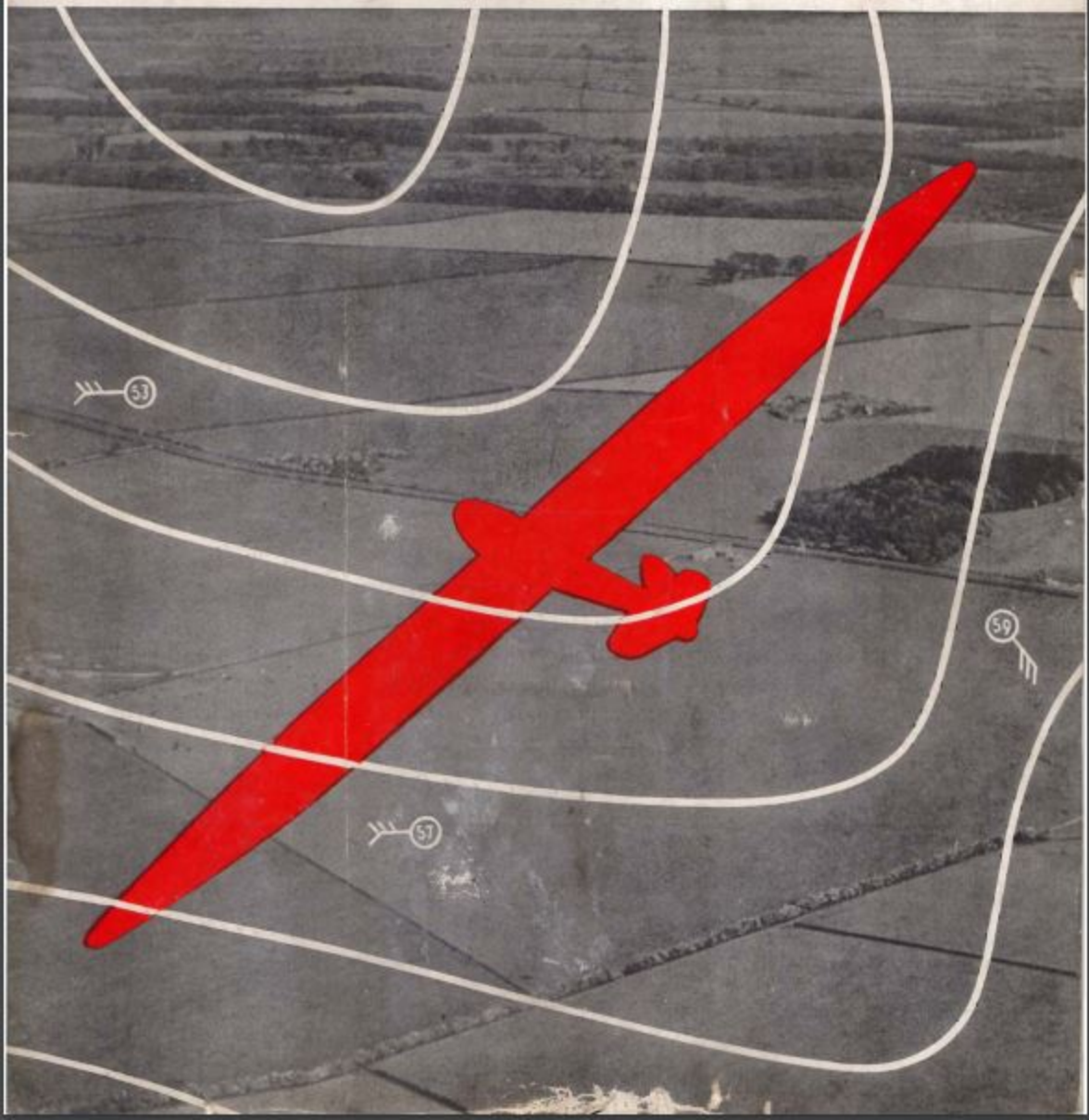
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The International Rhön Contest

By PROF. D. BRUNT

The flags of Czecho-Slovakia, Switzerland, Austria, Poland, Jugo-Slavia, Great Britain, and Germany displayed along the frontage of the Wasserkuppe Gliding Centre.



THE British team went out to the Wasserkuppe, not with the hope of gaining big prizes, but in order to learn, by observing the performances of other nations, something of the technique of the more advanced stages of soaring flight. We had in fact been warned that no nation could expect, on its first visit to International Competitions, to achieve striking success. We were therefore not depressed by the extraordinary achievements which we saw at the Wasserkuppe. The rather overworked word "extraordinary" is the only word which can be used to describe some of the things we saw. On July 10th conditions appeared so hopelessly bad for distance flights that in all only nine starts were made, of which eight led to flights of at most a few miles. But the ninth, that of Dittmar, led to a flight that ended 177 kilometres away.

The lessons which we learned at the Wasserkuppe will require careful discussion and digestion before we shall be in a position to state categorically what are the precise steps which must now be taken, in order to bring British gliding up to the standard of some of the competitors in the International Competitions. It is, however, obvious that if we are to take part in any future competitions with any hope of success, we must develop better sailplanes, and must give our pilots opportunities of gaining more experience in cross-country flying than have hitherto been available.

Major Shaw, who arrived at the Wasserkuppe some days before the beginning of the competitions, lent us his aeroplane for aero-towing, so that the pilots were able, during the two days preceding the start of the competitions, to get some very valuable practice in soaring. All who took part in this practice were impressed by the possibilities of aero-towing as a means of developing soaring in England. We are much indebted to Major Shaw for the use of his 'plane, and to MacMurdo, who piloted it, for his cheery co-operation.

The organisation of gliding in Germany is far beyond anything we have yet achieved in this country. One gained some idea of the thoroughness of this organisation from the magnificent organisation of the competitions themselves. But even more marked than the completeness of the organisation was the friendly spirit we found on all sides. Our German hosts spared

neither time nor trouble to help us in any way they could, and they freely discussed with us any question on which we desired their advice. Even the busiest officials in the Groenhoff-haus always found time to help us in any difficulties that arose. And there were many points on which we wanted assistance from time to time. My own task as leader of the British team was made much lighter by the friendly co-operation I found on all sides, and I should like to take this opportunity, on behalf of the British team, of expressing to our hosts at the Wasserkuppe our appreciation of the hospitality, friendliness, and good comradeship which we found there. They made our stay pleasant and profitable, and we left the Wasserkuppe at the end of the competitions with the hope of returning there at an early date for a future International meeting.

Among the other five visiting nations also we made many friends, whom it would be a great pleasure to meet again at future meetings of any kind. Our conversations were frequently limited by the limitations of our vocabularies, but they lost nothing in cordiality by these limitations.

There is a final point which I should like to make clear to readers of THE SAILPLANE. The British team consisted, at least in the first few days of the competitions, of 24 people, who had all come out at their own expense to help to put up a show for British gliding. Later in the competitions, compatriots of both sexes who were there on holiday for a few days came and helped us in anything within their power. There were several whose names did not appear in any official list of the team, to whom we owe a debt of gratitude for their assistance. To those who worked unremittingly throughout the competitions in the ground teams it is impossible to express at all adequately our appreciation. But as leader of the team I feel it a duty, as well as a privilege, to draw attention to the services which these hard-worked men and women rendered to British gliding by enduring a close approach to slavery for a fortnight, with no reward or glory in return. Each of them can truly say in the words of a forgotten poet, "England, I have not bled for thee; but Oh! I have perspired." The loyalty of the whole team made the task of team leader a pleasure instead of the unbearable burden which, without this loyalty, it might easily have become.



The Opening Ceremony of the International Soaring Competitions on Sunday, July 4th. The British team can be seen on the left, lined up behind Professor Brunt, their leader, while on the right the President of the Aero Club of Germany, Wolfgang von Gronau, is seen welcoming the visiting teams and declaring the meeting open.

[Photo courtesy Aero Club of Germany]

At the Wasserkuppe

LAST month we described how the British teams and sailplanes got to, or were got to, the Wasserkuppe. Once there, all was plain sailing (and sailplaning). Everything had been thought of: even to getting in a stock of Capstan and Gold Flake specially for the British team. Books of vouchers for free petrol and oil were supplied to the car drivers; books of tickets for free meals in the Groenhoff-Haus (though one member posted his by mistake, but got it back in time for the next meal).

Each pilot had a set of forms which, on landing in strange places, he merely had to hand to some authoritative-looking person, who was thereby instructed to do all the rest—telephone his whereabouts to the Wasserkuppe (receiver to pay), get the police, and generally look after the pilot. This was always done with zest, without waiting for instructions—in fact, anybody who landed anywhere in Germany could be sure of receiving the utmost hospitality and kindness until the retrieving team arrived to fetch him (or her) back to the Wasserkuppe and stern duty once more.

Each team had an English-speaking Hitler Youth to look after its comfort and act as a sort of liaison officer

whenever it wanted for anything. Ours, for most of the time, was a lad named Mark, who, having been trained up to "C" stage at the Wasserkuppe itself, included in his duties that of telling our pilots how to come in to a safe landing in different wind directions—and very sound advice it was.



Watching the flying from the North Slope: a group, including Wolf Hirth (seated), Frau Hirth at his feet, with Mrs. Joan Price; standing from left to right: D. G. Hiscox, J. S. Sproule, and Wally Setz from U.S.A., who worked hard as an unofficial member of the British team.



The Wills Brothers, Philip and Richard, escorting the "Hjordis," of which the former was pilot; the latter's fluent German was a great asset to the British team.

The British ground teams, after the demise of one of the KING KITES, were re-distributed and finally settled down, more or less, to the following:—

HJORDIS (pilot P. A. Wills): Mrs. Wills (driver), R. Wills (interpreter), Peter Shaw, Toby Fisher.

KING KITE (pilots J. C. Neilan and Mrs. Price): J. S. Sproule (driver), A. Ivanoff.

KING KITE (pilots P. M. Watt and D. G. Hiscox): C. L. Ruffle (driver), P. Smith, J. E. Marshall, Miss Connie Leathart (the last two attaching themselves, as occasion demanded, to other teams also).

FALCON III (pilots W. B. Murray and J. S. Fox): J. B. Fenton (driver), T. Fox, H. Gerry, K. W. Turner.

Mr. McMurdo, who piloted Major Shaw's aerotowing "Cadet," was also officially recognised.

In addition, the team received useful help from Herr J. Benemann (who organises the Anglo-German camps), and from Wally Setz, of the U.S.A. Mr. Setz attached himself to the first KING KITE, and was a tremendous asset, during both work and play; he also accompanied the trailer party to Hamburg by road afterwards. We were delighted to have him with us, for he cheered us up no end.

Coming back to our German hosts, we have not yet finished cataloguing their good deeds. There was the repair workshop, which we understood we would just have the use of, paying for our own materials. But as things turned out, nearly all the work (which included putting together the broken halves of a KING KITE fuselage) was done by the German staff—luckily for us, or we should have had half our machines out of commission most of the time. Their lightning rapidity was little short of miraculous. And they wouldn't let us pay.

The various teams were not the only foreign visitors at the meeting. For instance, there were the secretary of the Polytechnic gliding centre at Milan; Harris Sachs, of Enschede, Holland, holder of his national height record; Mr. Spire, the French "Silver C" pilot who recently visited Dunstable; M. Cid, Dipl. Ing., of Portugal, now studying at Darmstadt; and Professor

Sato from Japan. Among our German friends, Wolf Hirth and Oskar Ursinus were continually coming and going: they, more than anybody, had been looking forward to a meeting of this sort for years and years, and were really happy. And among short-period English visitors were Buxton, Slingsby, Nicholson, Ashwell-Cooke, Miss Heron-Maxwell, Major J. E. D. Shaw and Miss Shaw.

The Prizes

This month we can only give the bare list of prizes; not till next month will we have space to describe how they were won.

Prizes for total points:—

1. Dittmar (SAO PAULO), 1,662.5 points: RM. 2,500 and prize of the Führer and Chancellor.

2. Hofmann (MOAZAGOTL), 1,427 points: RM. 2,000 and prize of the Minister for Air.

3. Späte (MINIMOA), 1,325 points: RM. 1,500 and prize of the State Secretary for Air.

4. Sandmeier (SPYR III), 1,127 points: RM. 1,000 and prize of the Leader of the National Socialist Flying Corps.

5. Schmidt (ATALANTE), 1,116 points: RM. 500 and prize of the Aero Club of Germany.

6. Hanna Reitsch (REIHER), 1,104 points: Prize of Association of the German Aircraft Industry.

Prize for greatest distance: RM. 1,000, divided between Frl. Reitsch, Dittmar and Mynarski: 351 km. to Hamburg.

Prize for greatest height: RM. 1,000, Zabski, 3,295 m.

Prize for the greatest total duration: RM. 1,000, Frena: 19 hrs. 1 min.

Winners of Daily Prizes will be given next month.



Herr Oskar Ursinus was greatly perturbed at finding that the British team were without marmalade, their national breakfast food. So he thoughtfully presented them with a pot, inscribed "For good gliding angle," and was in the act of handing it over ceremonially to K. W. Turner outside his famous "Schlafwagen," when a sailplane passed overhead and distracted their attention.



A view from the top of the Wasserkuppe, during the International Meeting, showing on the right the "South Slope" where the world's first prolonged soaring flights were made 15 years ago. Since that date the small township, shown in the middle distance, has grown up to serve the needs of the gliding fraternity. Among the machines on the ground is the large-sized "Falcon III" two-seater.

[Photo courtesy Aero Club of Germany]

Machines and Pilots

Poland.					Competition.	
Type.	Sailplane.	Identification.	Pilot.		No.	
ORLIK ...	SP-861	...	Baranowski	...	1	
CW 5/bis/35	SP-995	...	Zabski	...	2	
ORLIK ...	SP-1002	...	Brzezina	...	3	
PWS 101	SP-1005	...	Peterek	...	4	
PWS 101	SP-1006	...	Szukiewicz	...		
			Mynarski	...	5	

Switzerland.					Competition.	
Type.	Sailplane.	Identification.	Pilot.		No.	
S 18 T ...	Nr. 213	...	Godinat	...	6	
SPYR III	Nr. 109	...	Sandmeier	...	7	
MOSWEY II	Nr. 204	...	Müller, Heiner	...	8	
SPYR III	Nr. 39	...	Baur, Willi...	...	9	

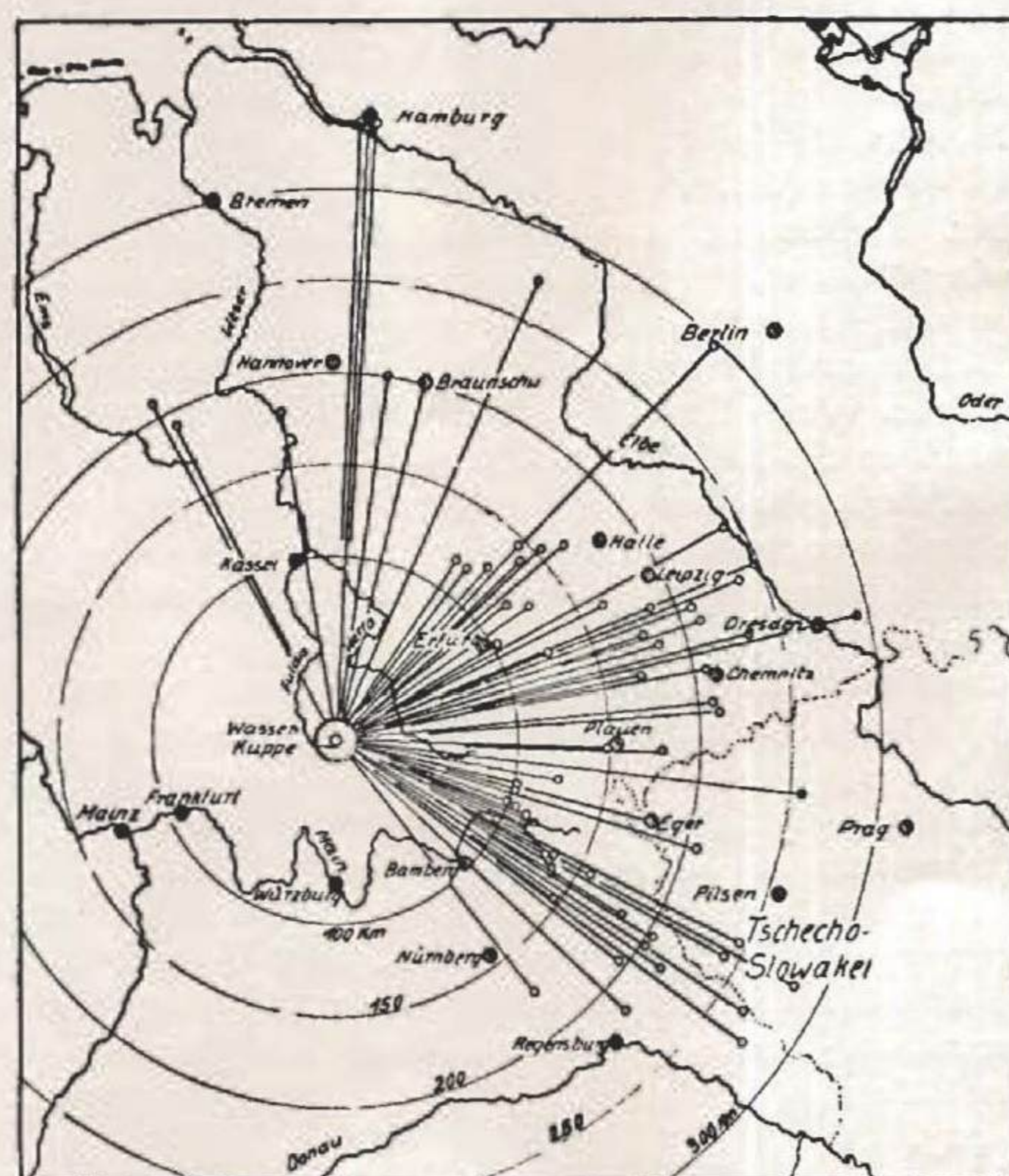
Czecho-Slovakia.					Competition.	
Type.	Sailplane.	Identification.	Pilot.		No.	
TULAK 37	OK-gen. Cecek	...	Pitman	...	10	
TULAK 37	OK-Cechy	...	Silhan	...	11	
DUHA II	OK-Mario	...	Chlup	...	12	
VSB. 35	OK-Olomouc	...	Steyskal	...	14	
			Prachar	...		

Great Britain.					Competition.	
Type.	Sailplane.	Identification.	Pilot.		No.	
HJORDIS	G-GAAA	...	Wills, P. A.	...	15	
KING KITE	G-GAAB	...	Neilan	...	16	
KING KITE	G-GAAC	...	Mrs. Price	...		
KING KITE	G-GAAC	...	Watt	...	17	
KING KITE	G-GAAD	...	Smith, G. O.	...	18	
FALCON III	G-GAAE	...	Watt	...		
			Hiscox	...		
			Murray	...	19	
			Fox	...		

Germany.					Competition.	
Type.	Sailplane.	Identification.	Pilot.		No.	
MÜ 13 ...	D-14-150	...	Schmidt, Kurt	...	20	
MINIMOIA	D-11-94	...	Späte	...	21	
MOZAGOTL	D-4-602	...	Hofmann	...	22	
FAFNIR	D-11-78	...	Dittmar	...	23	
REIHER	D-11-95	...	Frl. Reitsch, Hanna	...	24	

Austria.					Competition.	
Type.	Sailplane.	Identification.	Pilot.		No.	
RHÖNADLER	OE "Florian-Geyer"	...	Fiedler	...	25	
CONDOR II	OE "Tirol"	...	Schaffran	...		
SPERBER	OE "Ziehrer"	...	v. Lerch	...	26	
			Frl. v. Roretz	...	27	
			Frena	...		

Jugo-Slavia.					Competition.	
Type.	Sailplane.	Identification.	Pilot.		No.	
KOMAR ...	YU-Beograd	...	Stanojevic	...	28	



A map showing all the flights of over 100 kms. (62 miles) made during the International Meeting. Note specially the three flights to Hamburg, the furthest point ever reached in a northerly direction; the flight to the outskirts of Berlin by the Polish pilot Baranowski; and the flights into Czecho-Slovakia, including one by Flight-Lieut. P. M. Watt to Eger.

From "Flugsport"

List of Flights

Flights on July 4th.

Name.	Machine.	Landing.	Dist. (km.)	Height (m.)	Points.
Schmidt ...	20	Sondershausen ...	118	1420	94
Hofmann ...	22	Kallehne ...	278	1205	246
Dittmar ...	23	Hamburg ...	351	2142	371
Mynarski ...	5	Hamburg ...	351	—	301
Reitsch ...	24	Hamburg ...	351	1550	334
Wills... ..	15	Langensalza ...	89	1140	54
Baranowski ...	1	Braunschweig ...	200	1185	167
von Roretz ...	27	Grossenwiesen ...	194	1412	170
Zabski ...	2	Bergholzhausen ...	213	1330	186
Sandmeier ...	7	Peine ...	204	1360	178
Späte ...	21	Erfurt-Nord ...	97	1755	92

Also 19 flights which did not earn points.

Day factor: 1.0. Minimum distance for points: 50 km.

Flights on July 5th.

Hofmann ...	22	Nüdlingen ...	34	340	10
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Also 8 flights which did not earn points.

Day factor: 2.5. Minimum distance: 30 km.

Flights on July 8th.

Schmidt ...	20	Sachsendorf ...	71	525	33.5
Hofmann ...	22	Pferdsdorf ...	52	160	9.0
Dittmar ...	23	Eibenstock ...	189	—	180.0
Reitsch ...	24	Wernshausen ...	39	521	—
Baur... ..	9	Plauen ...	152	1310	156.0
Späte ...	21	Tannesberg ...	201	2245	273.0
Sandmeier ...	7	Etzgersrith ...	202	995	205.5

Duration.

Murray ...	19	Wüstensachsen ...	5 h.	19 m.	41.25
Frena ...	27	Wüstensachsen ...	6 h.	54 m.	77.0
Fiedler ...	25	Reulbach ...	6 h.	22 m.	62.7
Müller ...	8	Wüstensachsen ...	5 h.	48 m.	61.15

Also 17 flights which did not earn points.

Day factor: 1.25. Minimum distance: 45 km.

Flights on July 9th.

Schmidt ...	20	Strelln ...	228	1172	245.0
Baranowski ...	1	Bruchstedt ...	97	749	69.5
Müller ...	8	Stadtlengsfeld ...	35	890	8.25
Mynarski ...	5	Rotterode ...	51	970	17.0
Zabski ...	2	Mäbendorf ...	50	744	11.0
von Roretz ...	27	Helmershausen ...	23	708	4.0
Godinat ...	6	Kölleda ...	119	1075	106.0
Wills... ..	15	Heidehaus ...	120	830	100.5
Peterek ...	4	Gotha ...	77	944	48.5
Reitsch ...	24	Auerbach ...	211	1479	237.0
Späte ...	21	Kolinetz ...	284	1850	350.0
Hofmann ...	22	Heyersdorf ...	174	1220	179.0
Dittmar ...	23	Oschatz ...	238	2305	325.0
Baur... ..	9	Madelungen ...	64	765	29.0
Brzezina ...	3	Vieselbach ...	102	980	80.5
Sandmeier ...	7	Obermöbelen ...	143	915	131.0
Watt... ..	18	Jena ...	128	2330	190.0
Neilan ...	16	Waldorf ...	35	850	7.0
Fiedler ...	25	Neuhaus ...	95	1304	93.5

Also 10 flights which did not earn points.

Day factor: 1.25. Minimum distance: 45 km.

Flights on July 10th.

Dittmar ...	23	Meuselwitz ...	177	1968	222
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Also 8 flights which did not earn points.

Day factor: 1.25. Minimum distance: 45 km.

Flights on July 12th.

Schmidt ...	20	Oberstreu ...	27	796	5.5
Dittmar ...	23	Kronach ...	102	745	75.5
Reitsch ...	24	Kulmbach ...	115	724	92.0
Baranowski ...	1	Kronach ...	104	791	79.5
Zabski ...	2	Aub ...	48	887	11.5
Hofmann ...	22	Ramspau ...	218	790	221.5
Sandmeier ...	7	Stulln ...	197	842	196.5
Neilan ...	16	Kl. Bardorf ...	40	600	2.0
Schmidt ...	20	Kauernburg ...	117	663	93.0
Späte ...	21	Sessbach ...	72	590	35.5

Name.	Machine.	Landing.	Dist. (km.)	Height (m.)	Points.
Frena ...	27	Wüstensachsen ...	10 h.	2 m.	184.8
Fox and Murray ...	19	Wüstensachsen ...	9 h.	48 m.	176.0
Prachar ...	14	Wasserkuppe ...	4 h.	16 m.	23.1
Baur... ..	9	Wüstensachsen ...	8 h.	26 m.	117.5
Crujanski ...	28	(Not in competition)	5 h.	17 m.	—

Also 17 flights which did not earn points.

Day factor: 1.25. Minimum distance: 45 km.

Flights on July 13th.

Späte ...	21	Arnsbruck ...	265	1310	237
Dittmar ...	23	Taus ...	244	1626	231.5
Baranowski ...	1	Osvarcin ...	247	906	205
Zabski ...	2	Chudenitz ...	258	1224	225
Hofmann ...	22	Arnstorf ...	300	1040	261
Schmidt ...	20	Teisnach ...	275	1029	236
Brzezina ...	3	Kulz ...	217	885	174.5
Wills... ..	15	Bayreuth ...	132	920	90
Godinat ...	6	Weiden ...	183	1070	145
Müller ...	8	Michelfeld ...	147	810	113.3
Watt... ..	18	Cheb (Eger) ...	179	1000	139
Price ...	16	Schwüritz ...	92	510	47.3
von Lerch ...	26	Kennath ...	155	1071	117
Prachar ...	14	Zedersdorf ...	91	795	51.15
Baur... ..	9	Bayreuth ...	132	950	91
von Roretz ...	27	Althausen ...	45	815	6

Also 17 flights which did not earn points.

Day factor: 1.0. Minimum distance: 50 km.

Flights on July 14th.

Sandmeier ...	7	Elsa ...	65	902	68
Hofmann ...	22	Neumarkt ...	174	750	283
Szukiewicz ...	4	Hildburghausen ...	61	602	54
Reitsch ...	24	Bamberg ...	94	652	121
Baur... ..	9	Coburg ...	77	725	88.5
Steyskal ...	14	Grosseibstadt ...	40	675	14.85
Schmidt ...	20	Elbelsbach ...	77	723	88
Späte ...	21	Zeil ...	71	975	81.5
Neilan ...	16	Schweinsbaupten ...	56	390	42
Baranowski ...	1	Haina ...	43	595	17.5

Duration.

Frena ...	27	Wüstensachsen ...	2 h.	37 m.	1.1
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Also 11 flights which did not earn points.

Day factor: 2.0. Minimum distance: 35 km.

Flights on July 16th.

Schmidt ...	20	Nossen ...	244	1213	212
Baranowski ...	1	Ketzin ...	302	1306	274
Späte ...	21	Böhlen ...	189	1550	172
Reitsch ...	24	Oberndorf ...	144	958	103
Szukiewicz ...	4	Nahwinden ...	70	1377	65
Dittmar ...	23	Haselbach ...	188	927	146.5
Zabski ...	2	Schönau ...	210	2816	290
Mynarski ...	5	Marienbad ...	208	930	166.5
Hofmann ...	22	Zorbau ...	166	560	117
Neilan ...	16	Gotha ...	77	610	29
Schaffran ...	25	Utendorf ...	38	612	2
Baur... ..	9	Etzdorf ...	151	907	109
von Lerch ...	26	Niederreisen ...	124	1194	91
Sandmeier ...	7	Unterröblingen ...	165	1153	131
Brzezina ...	3	Gebesee ...	99	860	56
Watt... ..	18	Gr. Osterhausen ...	154	895	111.5

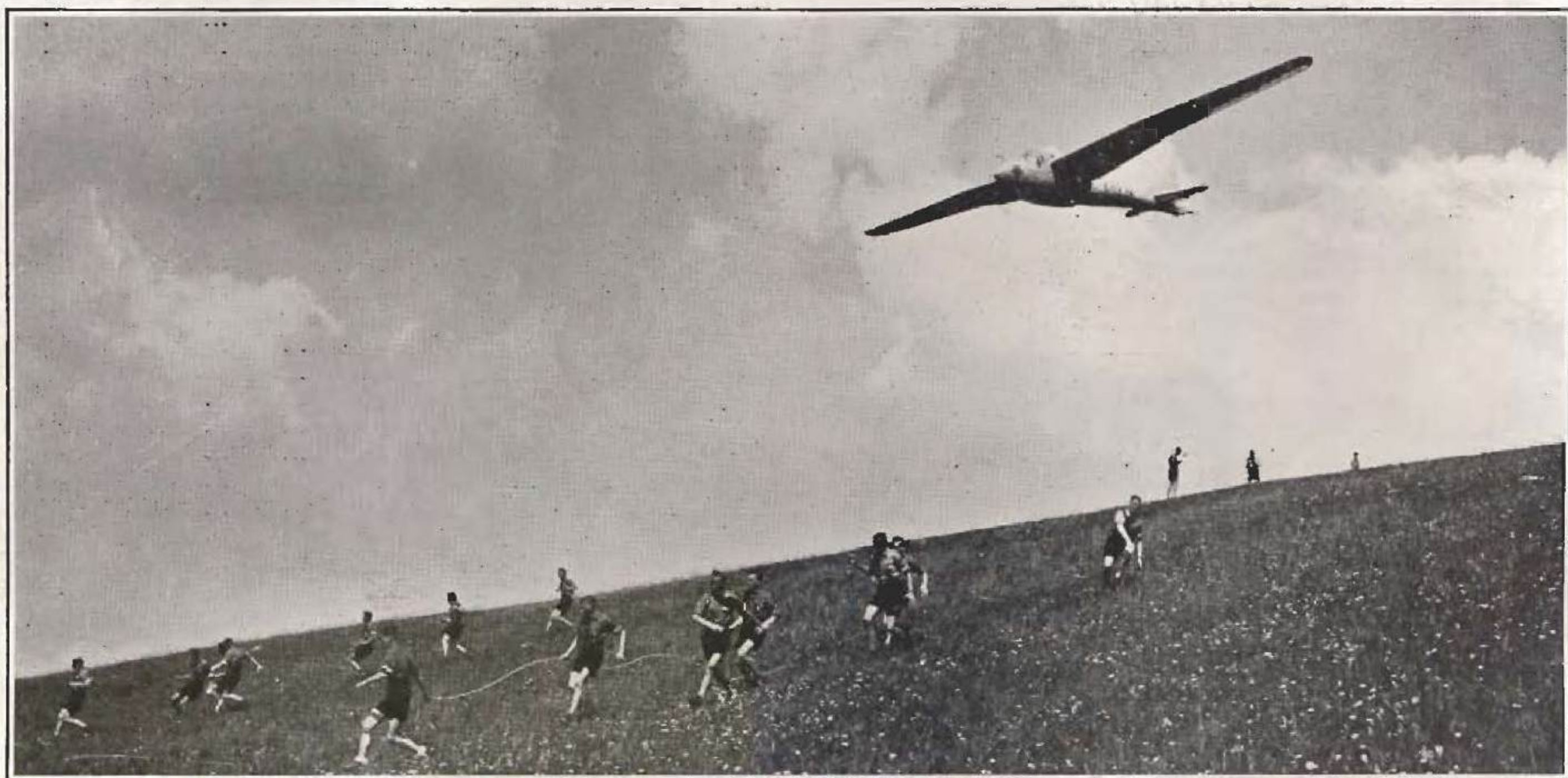
Also 11 flights which did not earn points.

Day factor: 1.0. Minimum distance: 50 km.

Flights on July 17th.

Hofmann ...	22	Lichtenberg ...	123	630	111.5
Reitsch ...	24	Beerendorf ...	206	1189	217
Brzezina ...	3	Eckards ...	31	460	—
Dittmar ...	23	Frankenhausen ...	126	1020	111.5
Schmidt ...	20	Rastenberg ...	129	753	109
Wills... ..	15	Wutha ...	61	820	26
Zabski ...	2	Mäbendorf ...	50	520	6
Mynarski ...	5	Seibelsdorf ...	110	1000	91
Späte ...	21	Sundhausen ...	92	1380	120.3
Sandmeier ...	7	Leupahn ...	209	1061	217
Baur... ..	9	Hasslach ...	99	928	76.5
Schaffran ...	25	Walchenfeld ...	57	651	18

Launch of a "King Kite"



[Photo courtesy Aero Club of Germany]

Reflections on the Wasserkuppe

By P. A. WILLS

WE went to the Wasserkuppe, not with the idea of winning—we were not that optimistic—but of learning. So perhaps one of the pilot's impressions of the main lessons will be of use.

I divide the main headings of a gliding team into three: the pilots, the machines, and the ground teams. Let us examine our efforts in all three directions.

I

First, I think it is admitted that we were unlucky. The very first day of the meeting was the best, and the three longest distance flights of the meeting were made on that day. And it caught us completely on the wrong foot. We were new to the country, to competition work generally; we were also shy and extremely frightened (it looks suicidal country at first sight, after the smooth and kindly fields of England). To add to this, fifteen seconds after the first launch of our newest machine and brightest pilot, the latter was ruefully crawling out from the heap of spillikins to which the former had been reduced in a most unlooked-for spin.

I was next off. The circumstances were not calculated to produce the last ounce of skill, although they certainly required it. No wind, lots of thermals. Feeling like St. George for Merrie England being pushed over Niagara in a barrel to make a German holiday, I shot off the beacon, 2,000 feet above the valley, and

started looking feverishly for lift before I reached the bottom.

Fortunate indeed that I was flying a machine I knew well, so that my reactions were partly instinctive, and fortunate that HJORDIS's performance was well suited to such conditions. Her very low sinking speed and abnormally flat gliding angle helped. I found lift, and after a short struggle was up and away. Our remaining KING KITES, together with more than half the remaining field, sank persistently to Poppenhausen.

Now, having once got going on a day like this, one might imagine that most pilots would go approximately the same distance. Did they Hell? Ten machines out of 28 got away. I followed Hanna Reitsch for some way, perhaps 20 kilometres. Then I thought I saw a better cloud than the one she was leading me to. She flew to Hamburg, 361 kms. I landed at Langensalza, 89 kms.

As the meeting went on, it was more and more noticeable how one's pilotage improved with constant practice. A fortnight was the longest consecutive spell that any one of us had ever experienced at sailflying. In that time I did over 30 hours, mostly thermal flying—as much as I ordinarily get in a year. Towards the end I was sometimes going half as far as the Germans!

Lesson 1, therefore: We *must* have facilities for more constant thermal flying, i.e., aero-towing.

II

A brief description of another flight. Conditions very mediocre: July 12th. Got a thermal which took me to the range of hills overlooking Wüstensachsen, some eight kilometres down-wind. These in a west wind provide a fair soaring ridge (which the Wasserkuppe doesn't, in any wind) and so a good waiting place for a thermal. After a while I got a weak thermal to 1,000 feet, and saw, out of the corner of my eye, Späte in his MINIMOA setting off across country about 400 feet below me.

Mindful of my *gaffe* with Hanna Reitsch the previous Sunday, I tagged on to him. As we went on, the country fell away, so we had a prolonged glide. For upwards of six kilometres I followed behind and above, steadily keeping my superior altitude, both machines flying at 38 m.p.h. Finally, "the cad," Späte landed, and I was left with a gruesome landing between wooded slopes in a water-meadow. Violent gusts threw the machine about; at last I got down. As we were about to stall, a small stream running across the meadow loomed up under my nose. A last minute heave, a zoom, a stall. A wing-tip dropped, and we spun round on the ground, on the far bank. Splash! The nose toppled over the edge into the water. Slowly we started to leak. I jumped out, deposited parachute and sundries on the bank, and heaved at the nose. No damage, miraculously, but it was embedded two or three feet in the soft mud of the farther bank, the machine straddling the stream. Slowly the tide in the cockpit came in. Soon I found that, by sitting astride the tail, I could just balance the nose out of the water, but then I couldn't go for help, which was hardly satisfactory.

At last, however, one man arrived; we shifted her temporarily above the waterline, and I ripped out the variometer rubber tubes and started to syphon out the cockpit.

The point of this story is, however, in the middle; at her best speed HJORDIS was quite up to international standards of sink. (No joke primarily intended, and none taken, I hope.)

III

My last cross-country, Saturday, July 17th, was quite the most instructive. Conditions had been poor all the morning, but about 1.30 they improved and we all took off, nervously, twelve machines finally getting away. I almost immediately struck a thermal, and with Dittmar in the SAO PAULO and Kurt Schmidt in the ATALANTE circled up to cloud base. Dittmar immediately shot off at great speed and vanished—no hope of competing with him. The ATALANTE, however, was quite within range. This remarkable machine had been first off every day, its sinking speed and manoeuvrability outclassing everyone else in the light wind conditions which had in general prevailed, although its flying speed was not high.

As we went on together, conditions improved. Numerous cumuli formed with good up-currents below, and evidently an inversion at about 7,000 feet (4,000 feet above the start) prevented their vertical development, as they remained quite shallow. This meant that blind flying was not much use, and no-one got much above 1,000 metres on that day, the cloud base being 800 metres.

In the special conditions prevailing the ATALANTE's greatly superior manoeuvrability and slightly superior sinking speed were not important. I reached the top of each thermal a little after him, but very rapidly caught up and passed him on the way to the next. It was clear that at last I had a chance to follow a German pilot and find out how he did it.

For 20 kilometres I followed, then outstripped him. A bit of a struggle, a thermal, and a quarter of an hour later I spotted the ATALANTE plugging in *from behind*! I waited, let him go on, and followed again. Another 30 kilometres went by. At last, near Bad Salzungen, the ATALANTE went into a small cloud, and evidently came out round a corner, for, after waiting a bit, I went on to another cloud to the north-east and next saw him some way away having gone off south-east towards Erfurt.

I landed at Wutha at four o'clock, 61 kilometres; Schmidt at six o'clock, having flown 120 kilometres.

After the boos have subsided, let me say humbly that my effort was above the average flight of that day (always excluding the Germans), and that I eventually came out exactly half way down the list, so may perhaps claim to be the Average Pilot.

What Schmidt did was this: He flew to Erfurt and there found stable conditions ahead. Erfurt is roughly on a line with Wutha, where I landed. He sculled around Erfurt for a while, but conditions ahead did not improve. He therefore came back, flew east until the sky to the north looked better, then turned on his course again and went on.

Such tactics demand confidence, and an ability to judge areas of lift from the nature of the ground below and the look of the clouds *as seen from just underneath*. This is quite a special knowledge and can only be acquired by constant practice during actual cross-country flights.

IV

One got better at it as time went on. It was particularly noticeable during that fortnight that lift was to be found over every wood; frequently the cloud patterns seemed an upward reflection of the shape of the numerous woods and forests below. Professor Brunt told me that this was probably due to the fact that the woods were moister than the surrounding country, and



A group of members of the British team watching P. A. Wills soaring his "Hjordis" over the West Slope of the Wasserkuppe.



Waiting for wind? Members of the British team grouped round the "Hjordis." Left to right: G. O. Smith, P. M. Watt, Miss Connie Leathart, P. A. Wills (with hat), K. W. Turner (without shirt), Wolf Hirth, T. Fisher, R. Wills, with Gerhard Mark in foreground.

[Photo courtesy Aero Club of Germany]

the air over them, thus containing more water vapour than elsewhere, was light and tended to rise. This was quite contrary to my own previous ideas, which were that the air over land surrounding woods would be warmer than that over trees, and so would rise and cause a compensating down-current over the trees. However, the reverse was very much the case, and I can only imagine that the wood has to be fairly large in area before the first set of conditions outlined above overbalances the second.

Motoring home at nights in the cool evening air, it was most noticeable how, when the road went through a wood, the temperature jumped up—it was like entering a heated room. I should imagine night thermal flights over wooded country to be possible.

V

My conclusions therefore are, that under the three headings: pilots, machines, ground teams, our greatest leeway is to be made up in pilotage. I say it without shame; my own pilotage improved so noticeably in a solid fortnight's flying; it cannot be expected that casual week-enders like we all are in England can cope with pilots who fly all the year round. But the standard of pilotage in this country can and must be improved.

I am not saying we were unduly or unexpectedly bad; as a matter of fact (as usual, apart from the Germans), we were above the average. But I am saying that, given the opportunity to get more advanced sailplaning in England, we would get much better. And by a re-orientation of our policy, which can probably be carried out within the terms of the present subsidy scheme, I am confident that this could be done without great additional expense and to the advantage of every section of the movement.

As for machines, ours were standard types, costing around £200 each, against—in the main—special jobs costing from two to five times as much. Our new type, pluckily built against time, was really unfinished. Slingsby bravely built three type machines instead of the usual one, and thereby made our participation possible. The KING KITE showed its great possibilities as well as its temporary teeth. The latter extracted, it will be a record-breaker. It already holds two worthwhile British records: for the greatest distance flown by a British machine, and the longest blind flight.

Lastly, ground teams. Our crews were marvellously keen and hard working. They rose most nobly to every imposition foisted on them by their pilots. They were, however, seldom seriously tested because we seldom flew far enough away from them.

VI

I do not want to call down on myself a democratic hate that I am anxious to pander to the tastes of a few "star" pilots. At present, after they have trained a pilot to the "C" stage, the clubs officially lose interest in him. They are there to produce "C" pilots and no more, and they don't profess to own the machines and equipment necessary for the pilot's further progress. So the risk is that that pilot will gradually lose interest, unless he is rich enough to buy his own machine.

If he knows that his progress as a pilot will in future be limited *only by his ability*, he will go on with a growing keenness which will permeate the whole movement.

Correspondence

SIR,

The pilots of the British team at the Wasserkuppe wish to record their deepest appreciation and thanks to the three men who enabled our participation in the International Competitions.

Lord Wakefield, with his magnificent generosity, made the whole scheme practicable.

Major Petre, by taking on the arduous and thankless task of selection and preliminary organisation, saw that the baby should be successfully born.

And Professor Brunt guided us with skill and tact which saw us through our difficulties and won the admiration of everyone at the Wasserkuppe.

It was a fortnight which no one will ever forget, and the experience gained must be put to the greatest possible use.

J. S. FOX,
DUDLEY HISCOX,
W. B. MURRAY,
J. C. NEILAN,

JOAN PRICE,
G. O. SMITH,
P. M. WATT,
P. A. WILLS.

Tailpiece



A member of the British ground team rests from his fortnight's labour on board *S.S. Macclesfield*, which is transporting the sailplanes home.