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# THE SAILPLANE and GLIDER 

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## Revival in France

WHEN gliding started again in France, no obstacles were put in its way by authorities who are paid salaries to foster aviation. Even altitude was not restricted, though distance was. P. Massenet, writing in L'Air pour les Jeunes, describes how the revival came about, and the following, in abbreviated form, is what he says :-
"To interrupt military duties for a few minutes' flight in a glider, that is truly the finest of relaxations." So writes our comrade Floner, and so, in their daily letters, say all our mobilised comrades. Their present life they describe but briefly. But they talk at great length of saillying, to which their thoughts cling by the solid bond of an ardent faith, by recollections of minutes or hours of flight, of distances traversed, of magnificent climbs and of voyages among the clouds on board these surprising birds who, in this modern century, have refused the motors of men. They dream of their next leave which will bring them back to the site and to the sailplanes. They live on in this hope, and that alone justifies the opening of our centres.

At the beginning of September, 1939, the hangars closed their doors. The gliding family was dispersed at a single blow. And now, little by little, the spirit of sailfying has found itself again.

It is at Marseilles that activity started again under the inspiration of Reynier. Now, every Sunday, he and his staff of young, old and air scouts grope for lift over the club ground at Pas-des-Lanciers. Every Thursday evening the instructors hold courses on aero$\operatorname{logy}$ and aerodynamics, and all work at the construction of a glider.

Next we cometo the Paris region, at Beynes-Thiverval. The University Aeronautic Club, the Olympic Club of Billancourt, Moiselles, the group L'Air, the "Seagulls," the "Cormorants," and how many others, dream sadly of the lovely Sundays of sailflying. Alas, the gliders sleep; how can they be awakened? Timidly, one Sunday each month, the club house at Beynes-Thiverval opens its doors for a friendly déjeuner. At first there are ten guests. Rapidly they become fifty. At the foot of the slope is the strange habitation of Guillot, of old the chief mechanic and instructor. He is keeping the equipment in order.
Jarlaud, Simille and I set about restoring the life of Beynes-Thiverval. A request to the official powers is favourably received. A crowd of pupils descends upon Beynes. The University Club, creator of the centre,
furnishing an example of comradeship and esprit sportif, abandons what may be called its rights. One section is set up under the aegis of the Amicale du Vol à Voile français. There are no longer separate clubs. There is only sailflying.
And it is thus that, on Easter Day, winches, gliders, pupils recommence a common existence. They may not go away across country, but there are altitude flights and, above all, instruction of the young is carried on. The section has 85 inscribed members, of which more than 45 are less than 20 years of age.

In one month's activities this is what has been done: 645 launches; 35 hrs .47 mins. flying; 6 certificates, including two "C." Best performances : seven climbs of over $1,000 \mathrm{~m}$., including four of $2,000 \mathrm{~m}$. and more, the best being by Mathieu, $2,200 \mathrm{~m} .(7,200 \mathrm{ft}$.). Six gliders and seven sailplanes are in use. Henceforward, every Saturday and Sunday, pilots from Paris district come by train, car, and bicycle. For the hard tomorrows they draw strength and courage.
In the technical domain saillying has carried on its work. Gabelier at Marseilles has completed a highperformance machine developed from the Avia $40-\mathrm{P}$, with a span of $15 \frac{3}{2} \mathrm{~m}$., of middle-wing type. On March 31st, at Pas-des-Lanciers, he climbed to $1,100 \mathrm{~m}$. from a cast-off at 100 m ., toured the horizon and stayed up 56 minutes. Jaumin, at Nantes, has almost finished his Castel 36 . It is the same with Fradon, at Montguyon.

The gay spirit of sailfying has led to its renewal. Our comrades who are defending France say to us every day: "Our joy is great that the sailplanes are flying." Far away, they forget their own circumstances. They rejoice very simply for their friends and for sailflying.
M. Massenet and his friends are to be congratulated on their enterprise and success in a country where, evidently, there is no official body charged with keeping all civil aviation on the ground. Here in Great Britain we have a Department of Civil Aviation. We have also a Fighter Command, which has expert knowledge of what interferes with defence requirements, has no objection to gliding, and consists of people who know that flying is kood for the soul, national as well as individual. Unfortunately it is in a position to be over-
ruled.

## From Here and There

S.S.A. Office Moved.-The Soaring Society of America has moved from Washington and its secretary's address is now : P.O. Box 71, Elmira, New York. This is also the publishing office of the monthly journal Soaring (foreign subscription \$3 a year).
"Conquest of the Air."-The film with this title "has been finished and will soon be shown," according to a Press report. Similar reports have appeared at intervals ever since the film was begun in 1935, when some scenes were shot on Dunstable Downs of fullsized replicas of Lilienthal and Wright gliders.

Olympics in Finland.-Two members of the London Gliding Club, now in Finland, write: "We hear that the gliding arrangements for the Olympic Games have all been completed and we hope to see some gliding here." As we announced a year ago, the soaring contest was provisionally fixed for July 22nd to August 4th this year, at Jamijärvi.

Indian Gliding School.-According to a Press report from New Delhi, "the first of India's gliding centres" is being established at Allahabad, now that sanction for a grant of land from the U.P. Government has been received by the Committee of the All India Gliding Institute. The committee has ordered two machines from England and secured the services of a Dutchman to instruct, and was expecting to admit "cadets" at the Allahabad centre by June.

Palestine Meeting.-Gliding contests were held in the Mount Carmel region early in April, sponsored by the Palestine Aero Club in conjunction with Palestine Aviation Enterprises, Ltd. The Jewish Chronicle reports that a duration record of 6 hrs .10 mins . was set up by Meir Stoll, aged 22, who stayed up from 11.27 till nearly dusk. He beat by 54 minutes the previous record made by Ernest Rappoport, of Tel-Aviv, in 1935. Isaac Henesson, aged 20, "remained in circulation'" over Haifa for 4 hrs. 11 mins. Sholmo Brenner did a flight of 2 hrs .25 mins . The meeting lasted a week.

Landing Charges.-Rolfe Pasold, whose Rhönbussard collected some telephone wires on approaching to land over the railway line at the Oxford Club's site on July 1st last year, has now at last received the following account for settlement:-

| Wages <br> Materials: Wire bronze, $7 \frac{1}{2} \mathrm{lbs}$. " Sleeves, tapes, and binder | £ 5. |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  |  |
| Less materials recovered: |  |  |  |
|  |  |  |  |
|  | £2 1 |  |  |

Cruising Speeds.-In the article on Cruising Speeds in our last issue (page 22) the diagram was out of alignment. The line $A C$, from the top of one thermal to the top of the next, should have been horizontal.

Prospects in Eire.-The possibility of anyone from Great Britain joining a gliding camp in Eire is now hindered by a Home Office regulation allowing exit permits to any part of Ireland only to those who satisfy the permit authorities that it is necessary for them to travel on business of national importance.

Gliders of "National Value."-The first report of the use of gliders in warfare comes from The Times correspondent in Rome, who sent the following message published on May 22nd: "A dispatch from an Italian special correspondent to his newspaper describes how a bridge over the Juliana Canal was captured from the Belgians by the use of gliders. The gliders are described as being of exceptional size and capable of each carrying from six to eight fully armed men. Their use in warfare is stated to be a military innovation and their success to be due to their being able to land in a very small field, and also to their silence, the garrison guarding the bridge being taken by surprise and overwhelmed. The correspondent hints broadly that these gliders were the 'secret weapon' which enabled the Germans to capture the fort of Eben Emaal."

In Parliament.-On April 11th Lord Apsley asked the Secretary of State for Air whether he would consider making use of "this wasted potential" (machines, etc., lying idle and deteriorating) for the increase of gliding, soaring and small-powered glider flying activities on the lines followed by Germany after 1920. Sir Samuel Hoare replied: ". . . . it is not practicable to include gliding in the syllabus of training for pilots for the R.A.F., but the possibility of including it in the facilities for organised recreation is under consideration." In a supplementary question, Lord Apsley asked whether it was intended to give the Civil Aviation Department "constructive work, instead of obstructive or destructive work."
On April 17th, Mr. D. L. Lipson (Cheltenham) asked the Air Minister whether he would consider providing the necessary financial support to make possible a gliding camp for Air Cadets. Sir Samuel Hoare replied: ${ }^{\text {c }}$ For defence reasons it has been necessary to impose severe restrictions on all kinds of civil fying in this country, and I regret that I cannot see my way, in present circumstances, to sanction the establishment of a gliding camp for Air Cadets."
On June 4th Mr. F. Seymour Cocks (Broxtowe) asked the Secretary of State for War if he intended to organise a corps of parachutists and gliders. Mr. Eden replied that recent operations were being carefully studied by his department to decide what, if any, changes in the organisation of the Army were required. It would not be in the national interest to make any further announcement at this stage.

## Reviews

Flight Without Power. By Lewin B. Barkinger. With contributions by six outstanding specialists. Pitman Publishing Corporation, New York. Price \$3.50.
This, the only modern text-book on soaring written in the English language, has really been written, not merely compiled, with the result that it is well balanced and comprehensive.
N. H. Randers-Pehrson starts off his historical chapter with a delightful phrase about "the false belief that an engine is indispensable for human flight." His only slip is to state that Kronfeld's cross-channel glide of 1931 "brought new life to the movement in Great Britain," which nobody believed but the B.G.A. officials who were photographed congratulating the pilot ; actually it was Kronfeld's demonstrations of real soaring at Itford in 1930 which performed that function.

The two technical chapters by the brothers Schweizer, on aerodynamics and on design, construction and maintenance, tell the keen amateur what he should want to know on these subjects, pretty fully and quite intelligibly, which is a pleasant surprise. A notable difference in American practice, compared with European, is the widespread use of welded steel tube for fuselages.

The chapter on instruments, by Charles H. Colvin, is short but well illustrated. Their action is described, but it would have been well to mention the lag of different types of variometer.
Karl O. Lange has been given a generous amount of space for his chapter on soaring meteorology, and this has enabled him to go thoroughly into the physical bases of the subject, ignorance of which prevents many an amateur making useful contributions to science from his soaring experiences. We note with joy a formula for calculating the strength of a thermal current, which, be it noted, has acceleration, not velocity. Dr. Lange has a great deal to say about both thermals and cumulus clouds, much of which is quite unknown to the average meteorological writer. His explanation of how evening thermals arise in combination with katabatic winds is, however, at variance with the theory held in Poland. He says little about cloud streets, which are much more fully treated in the chapter on soaring technique, yet the only reference to them in the index is to the meteorological chapter, such is Mr. Barringer's modesty.

Lewin B. Barringer writes about half the book, treating of glider types, launching methods, flight training, soaring technique and soaring sites, all of which is very good, but we have not space to discuss. You will be buying the book, anyway.

Lists of American and British gliding clubs, with addresses, are given. The American enormously outnumber the British, but none of them appears to be as big as the leading British clubs. Mr. Barringer, in the course of two pages on how to run a club, gives 15 as the typical membership of a gliding or soaring club.

Useful appendices include a list of American and British "Silver C" and "Golden C" pilots.

We hear from the London branch of the publishing firm (Sir Isaac Pitman \& Sons, Ltd., Parker Street, W.C.2) that they have not yet imported any copies
of the book, but will be publishing it in England in a few weeks' time. The price is not yet decided.

The National Review, June, 1940. Price 2s. 6d. This has been sent us by Colonel Raymond ffennell, who has an article on "The Miniature Rifle and the Glider." In the part which refers to gliding, the author, who happens to own the field where the Oxford Club started gliding in 1938, quotes from the last two issues of The Sailplane and Glider our editorial remarks on the suppression of gliding in Britain. In urging the official encouragement and subsidising of gliding immediately, he writes: "Is it not clear that if Germany is really passing 100,000 youths through the preliminary stages for becoming air pilots, this country, its Dominions and France between them should be training at least that number, or preferably twice as many?"

## Commander R. R. Graham

THE scientific study of bird flight was notably advanced by Commander R. R. Graham, D.S.O., R.N., who, we regret to report, lost his life when the French destroyer Bison was sunk off Norway on May 3rd. Old readers of The Sailplane may remember that he wrote to this paper in February, 1932, asking readers to send him fresh carcases of any large soaring birds, as they were hard to come by and he wished to examine them.

His most notable paper on "Safety Devices in the Wings of Birds," which appeared in the Journal of the Royal Aeronautical Society in January, 1932, and was reviewed by C. H. Latimer-Needham in The Sailplane for February 1st, 1932, explained how the spread-out primary (wing-tip) feathers of certain birds acted as an anti-stalling device, as did also the alula. He explained the mechanism of the action, both aerodynamic and anatomical, and noted the fact that it was characteristic of land-living birds with wings of small aspect ratio.

In another paper in the same journal, published in 1934, he investigated the comb-like leading edge of the wings of birds which fly silently, like the owl. The "teeth" of the comb are best developed half-way along the wing, where the greatest incidence occurs on the down-beat. These, and certain "fringes" along the trailing edge, serve to deaden the sound of flight.

Australian Statistics.-According to an annual report on Australian aviation, there were 23 gliders owned and operated by the approved gliding organisations in the country at the end of June, 1939.

News from Hirth.-A letter from Wolf Hirth received in America is published in the February-March issue of Soaring. He states that for the first two months of the war gliding in Germany was stopped entirely, but has been permitted since then. His factory (at Göppingen) is still making gliders, mostly for export, but part of his employees have been assigned to repairing training 'planes for the training camps. Petrol shortage is the most severe complaint, but since he has a physical handicap and his wife chauffeurs for her sister, a physician, they are allowed 25 gallons a month. In suitable weather, Wolf Hirth uses a small motor cycle to conserve his petrol supply.

## New Australian Records

ALTITUDE and distance records for Australia have followed each other in quick succession since the Kirby Gull reached that country last year from Messrs. Slingsby Sailplanes. We have already recorded how N . Hyde climbed $5,300 \mathrm{ft}$. in it during the Australian National Rally last Christmas, where the machine was entered by the Sydney University Gliding Club. Exactly four weeks afterwards this record was raised to $7,000 \mathrm{ft}$. by S . Newbigin, who writes the following account of how he did it.

## Altitude Record in "Gull"

On the Saturday of anniversary weck-end, January 27 th, we went to Camden and used the winch for launching. It was an exceptionally hot day with an absolutely cloudless sky. The winch rope had rotted a bit with age, and the first few launches did not give sufficient altitude to do any good. I was third on the list and was not launched until $3.50 \mathrm{p} . \mathrm{m}$., but got 900 ft . on the rope and immediately struck a first-class thermal.

The first climb was to about $3,000 \mathrm{ft}$., but was quite smooth and did not need any really tight círcling. From there up it was reasonably easy going, consisting of climbs and sinks, until I reached a maximum height of $7,900 \mathrm{ft}$. The top was reached about a half-hour after take-off, and the lift was quite often in the region of 20 ft . per second. I used about five different thermals to get the top height, and usually sank anything up to $1,500 \mathrm{ft}$. between them. In all cases I concentrated very hard on keeping the turns uniform, so I could watch on which side of the circle I got the most lift, and then moved across a little into it.

Over $6,000 \mathrm{ft}$. the air was beautifully cool, and the only really rough part was somewhere around the $5,000 \mathrm{ft}$. mark. I certainly had a most enjoyable time. My big regret since is that, having got the height, I did not try for cross-country. It seemed much too late in the day for good lift, but, as I later found, there was still plenty around the $2,000 \mathrm{ft}$. level.

It took me another half-hour to decide there was no chance of getting higher, and then getting down back to the aerodrome, and I was down to $1,000 \mathrm{ft}$. just going to land, when I saw that they had packed up the winch. I was feeling a bit squiffy, but thought it a pity to waste the good conditions, and so, without any circling, I rose again to $2,000 \mathrm{ft}$. and cruised around Camden. With circling I could have stayed up longer, but with the cruising around the lift gave out and I landed at $5.25 \mathrm{p} . \mathrm{m}$.

## Stephrn Newbigin.

## Easter Meeting

The remaining records were put up during what must be the first "sailplane tour" to be done in the British Empire, when the Gull flew from one place to another in New South Wales and was followed around by a "Moth" aeroplane which towed the sailplane into the air each morning from the place where it had landed the night before. The following account is taken from a report written for the N.S.W, Gliding Association


Photos taken at Geelong, Victoria, last Christmas during the Australias National Rally, which Was described in our last issue. Above: The Sidney Univernity Club's 'Gull" going up on a car tow. Centre: Being dismantled-Mr. Newbisin is standing beside the cockpit. Below, left to right: "Golden Easle," Grunau Baby II," Red "Kestrel," Yellow Kestrel," and Primary.
On Easter Thursday, March 21st, we left Sydney at 5.30 p.m. with Doc. Heydon's Ford V-8 towing the trailer, ate at Katoomba, slept at Orange, breakfasted at Wellington, and reached Narromine at 11 a.m. Friday, after a trip of 284 miles.

Doc. Heydon was waiting for us with his "Moth," so we rigged the Gull and launched Martin Warner at $12.30 \mathrm{p} . \mathrm{m}$. with vague instructions to go places if he could. He found conditions good and went the only way he knew the country, i.e., back along the road we came. He had no maps, and found when he reached Wellington that he was down to $3,800 \mathrm{ft}$; conditions were dying and he could not safely go further. The flight was 52 miles, with aero-towed launch to $1,600 \mathrm{ft}$. and maximum height $7,000 \mathrm{ft}$. All climbs were on cloud lift except the initial ones. Warner landed at 3.48 . We set off with the trailer to pick him up and drove back to Narromine during the night.

The points learned from the flight were: The necessity of maps, and the advantage of picking clouds always one ahead, as it is otherwise impossible when near cloud-base to tell in which direction to glide for the next. This, of course, needs a compass to make it easy.

## 101 Miles: 9,200 Feet

Next morning (Saturday, March 23rd) the first aerotow was into a clear sky at $10.20 \mathrm{a} . \mathrm{m}$. The air was quite calm and Harry Ryan landed after 14 minutes. I went up at $10.50 \mathrm{a} . \mathrm{m}$. and, after a tow to $2,500 \mathrm{ft}$., struggled about between 1,000 and $1,500 \mathrm{ft}$. for half an hour waiting for conditions to improve, and by 11.40 found myself up to $3,200 \mathrm{ft}$. and well on my way to cloud base. I landed at 11.50 with conditions getting better.

Doc. Heydon was then put in the Gull with parachute, maps, and instructions to go as far as he could. He was towed to $1,800 \mathrm{ft}$. and released at $12.30 \mathrm{p} . \mathrm{m}$. He took about a quarter of an hour to get going and then disappeared south. He reached $9,200 \mathrm{ft}$. twice on the trip, once having made the last climb flying blind in cloud. He landed 25 miles west of Condobolin at 5. 42 p.m., after a flight of 101 miles in 5 hours 12 mins. All the flight was on cloud lift and the base rose from about 5,000 to $8,000 \mathrm{ft}$. as the day went on. It was unfortunate that he could not go further, as he could not see any houses south of Condobolin, and so turned west along the Cargellico road; thus the last 25 miles added little to his total distance. He landed about a mile from a house and then found it had no telephone, but the people drove him to a neighbour's, and we heard from him about 7 p.m.
We got there by $1.30 \mathrm{a} . \mathrm{m}$. and camped. In the morning we cleared a runway of all loose timber and narked a landing "T" for the "Moth," which flew down during the morning. We sat around waiting for conditions to improve, and by noon things looked O.K. Clouds were coming up from the north-west. Harry Ryan was packed into the Gull with maps, parachute, water bottle and fruit (as the Doctor had been very thirsty). This flight we planned more carefully. We arranged that he fly back to the road that ran south from Condobolin and then keep going with the wind down past West Wyalong. If he was forced down hefore 2 p.m. he would ring the Condobolin Hotel ; if after that, the West Wyalong Hotel. We found a message at West Wyalong, rang up various people for

publicity, had dinner, and moved on 20 miles to pick up the Gull. Harry Ryan had landed south of Barmedman at 3.35 , after covering 84 miles in 3 hours 9 mins. He had been launched to $2,000 \mathrm{ft}$. and reached $9,000 \mathrm{ft}$. during the flight. He was also very unlucky in that he had acute air-sickness when still about $5,000 \mathrm{ft}$. up, and decided to land.

This flight showed us that we really could plan ahead in the manner that P. A. Wills has always emphasised.

## 11,600 Feet: 105 Miles

Next morning (Saturday, March 23rd) the first aerowind was round to the west a little more and, with local help, moved the Gull over three fences to a stubble field suitable for aero-tow. The aeroplane flew down during the morning, and we then sat down waiting for suitable conditions. A $15 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. wind was blowing from the north-west approximately, but the clouds
seemed to be staying on the horizon. We decided to give it a go and Len Schultz took off and cut loose at $2,800 \mathrm{ft}$. at $11.45 \mathrm{a} . \mathrm{m}$. in a clear sky.

This time we decided that the hotel messages system could be improved and we used the police stations. We had decided quite early in the trip that it is too difficult to watch the glider continuously when it is flying at $8,000 \mathrm{ft}$. When we stopped in Young for petrol, a policeman came and told us that a glider had landed on "the aerodrome" 6 miles from Yass, but he could not remember its name, and Schultz had taken our only aerodrome map as he was heading away from the plain country into the hills and aerodromes were the only really suitable landing grounds in the area.

Schultz covered 105 miles in 4 hours 15 mins., landing at the emergency landing ground at Coolalie, 6 miles east of Yass, at 4.15 p.m. He reached $11,600 \mathrm{ft}$. Though the first portion of the flight, was in clear sky, the clouds formed later and he followed cloud-base for some time at 9,000 to $10,000 \mathrm{ft}$. He was very cold at times, and he also landed because of air-sickness. He was over the Coolalie aerodrome at $6,000 \mathrm{ft}$., and even a straight glide would have taken him on to Gunning, but he did not feel up to it.

We were entertained very hospitably by the owners of the ground, as we had been at all the other points on the trip, and then set out for Sydney. We arrived back there at 4 a.m. on Tuesday morning, after covering 1,100 miles in the car, seeing an enormous slice of our back country, and having a very fine time generally.
Points we noted, and are going to fix next time, are : A hood is necessary to give shelter from the sun; have a spare variometer of any kind, however primitive ; take water, barley sugar, sick bags, money, and tyingdown pegs for the glider. Another point is that the clouds always appeared from the west, and it would possibly be worth while going further west to enable an earlier start to be made. The weather was not, apparently, at all exceptional for the west, and usually finished up with about eight-tenths cumulus in the sky. We intend to make another trip when we get long enough holidays, and start further north and tour back to Sydney. We think all the other States have equal opportunity of doing as well, except perhaps Tasmania, which we have not seen. A winch would be quite satisfactory, provided $1,000 \mathrm{ft}$. could be obtained on the launch.
S. Newbigin.

## Ten Years Ago

The great event of ten years ago was the meeting on the South Downs, between Itford and Firle, from June 5th to 15th. Demonstrations were given by Robert Kronfeld in his Wien, engaged by the B.G.A., and Carli Magersuppe in a Professor, on behalf of the Daily Express. Several clubs took part, and on June 7th Captain Needham, in the London Club's Prürling, obtained the first British "C" certificate. He also soared an open Zögling for 22 minutes. On July 15th Kronfeld made the first British cross-country soaring flight. Launched at 5.30 p.m., he flew up-wind to Glynde, and then followed the line of Downs to Bedhampton Hill, near Portsmouth, 50 miles from the start.

## The London Gliding Club Ten Years Ago



The I.ondon Gliding Club's first flying meeting, held at Stoke Park Farm, near Guildford, on March 16th, 1930. In front is the first Dagling, or Dagnall-built Zöcling, which Mr. R. F. Dagnall presented to the club but crashed at the end of the day. Behind is the Zögling obtained from Germany. Since that date the club has done, at a rough estimate, between 5,000 and 6,000 hours' flying.


The London Club's first two-seater, a Porpenhausen, launched off Ivinghoe Beacon in July, 1930. In the front cockpit is Captain C. H. Latimer-Needham, and his passenger is the late Mr. Lissant Beardmore, who, a year later, crossed the Channel with the help of an acro-tow, and was the first sailplane pilot to do so. The club had been turned off the Tring ground "because the noise disturbed the game." Soon after this it was turned off Ivinghoe because it "disturbed the quiet enjoyment of the public," all of whom had come to see the gliding. It then moved to Dunstable, where complaints were made of desecrating the Sabbath, but without avail.


The club Prōfling flying over the trees at the foot of Ivinghoe Beacon during the inter-club match between the London and Lancashire Clubs on July 26th and 27th, 1930. Later it landed in the same tree-tops.


The London Club spent the week-end of October 4th and 5th, 1930, on Itford Hill to help Lupino Lane with a film and to do some training. For publicity purposes, the club marquee was put up on the very top of the hill. During the night a gale blew up, with this result. There was no training that Sunday.


The first British gliding certificate was gained by C. H. Lowe-Wylde at the London Club's ground near Tring on March 30th, 1930. He flew the Kent Club's Cotummus, the first British primary, here seen on the occasion of its frirst flight at the Kent Club's ground on February 23rd, 1930. It is still airworthy to-day.

# The South African Easter Competitions 

By Frank Hatfield

TRANSVAAL soaring pilots are still feeling resentful at the way the weather swindled us over the Easter Competitions. The truth is that we are spoiled out here. We have such superb soaring conditions on at least 300 days of the year that the prospect of bad weather at Easter hardly entered our calculations. Easter usually is productive of unstable conditions, rain and thunderclouds, usually attributed to the fact that the Rand Show (the biggest agricultural, governmental and industrial exhibition this country produces) takes place at this time.
We decided to have a three-and-a-half day meeting at Quaggapoort, mainly to give inexperienced pilots some competition experience, and also for once to have full rights to club facilities. The Defence Gliding Club entered two Kites and a Slingsby Grunau Baby recently acquired. The Rand Gliding Club entered its Grunau Baby IIa and its "Royal and Ancient," the Grunau Baby II (four years old and never been crashed). In addition it entered its high performance machines, at that time privately owned. Andries Brink's Hjordis was to be flown by Dommisse, and your correspondent and Peirce were to fly a Rhönadler between them.
Each machine was to be flown by a team of three, in rotation. Any "Silver C" was to be docked 10 per cent. of the team's total marks. Hjordis and Rhönadler were counted as one team, their pilots losing 30 per cent. of their points. There were not enough barographs to go round, so machines without barographs were to wear red streamers, and their heights were to be vouched for by pilots who had barographs. This fantastic arrangement was at least better than nothing, and it gave a pleasing atmosphere to the Comps, which of course could not thereafter be taken seriously.
As time was short over Easter, no points were to be scored for flights of over 50 miles or under 20 miles. Duration points were scored for times over one hour but not more than $6 \frac{1}{2}$ hours. The sky was the limit for altitude flights.
The portents seemed favourable. We had a solid week of rain beforehand. This is most rare and usually breaks into superbly unstable conditions with great galleon cumulus extending upwards thousands of feet, and often travelling fast.

No sooner were the Competitions fixed, however, than things went wrong. Dommisse hit a concealed trench-mortar hole in the grass as he came in to land in Hjordis, which spilled out most of her tummy as she came to rest. Dommisse viewed the daylight shining through the rents in the hull on to his pedals, looked at the coarse grasses which had suddenly appeared inside, and walked away praying silently. Cecily Dallamore, who may be remembered by some in England, had been flying magnificently, and had done some nice thermal work shortly before the comps.

The Sunday before they started there were five machines on the ridge. Cecily was one of them, flying the White Baby (IIA). Somehow she got swept over the ridge, hit the backwash on the lee side, and tried


Above: The Rand Gliding Club's "B"tenm at the Easter meeting. Left to right: "Toota" Pullen (4,800 ft.), Rob Ivy (Club Captain), "Bomb" Finney ( $8,000 \mathrm{ft}$ and 15 miles, the only cross-country). Below : The Rand Club's entries : "Rhōnadler," "Hjordis," White "Grunau Baby Ila," Blue "Grunau Baby II." (Note different aileron desirn in "IIa" compared with "IL.")
to land on the top. There was a noise of crashery as she came to rest with the wing-tip spar and ribs damaged, something wrong with the tail, and a nasty strain in the main bulkhead. The team which was to fly this machine carted it back 40 miles to Jo'burg to repair it in less than a week.

Meanwhile the Rhőnadler was being repaired by Geoffrey Peirce and your correspondent after a storm flight made by its owner in October, 1938.

The workshop activity of that last week had to be seen to be believed. With only five days to go the Rand Gliding Club's men went into action in a manner which amazed and delighted the committee. Paul Dallamore wangled some leave due to him and spent his days at the workshop. Toots Pullen did a 23 hour stretch, working all night on the White Baby. At 3 a.m. on other nights the girls were knocking out pin-stripping like machines and reviving fainting spirits with successive libations of tea. On the night before the competitions the team to fly the White Baby worked all night until five in the morning. Paul Dallamore and "Bomb" Finney (he works in a dynamite factory and tests explosives) who were on the all-night shift were not at their brightest next day.

Meanwhile the Rhönadler, to be flown by Peirce and your correspondent, was being hastily completed. Peirce, a steel worker of parts, nearly went dotty making wing-root bolts to a fancy size out of fancy steel. The team worked every night until midnight to get the machine ready. Discreet inquiries showed that Dommisse, laboriously mending the belly of Hjordis, was equally distraught.
That five days was one of solid mist and rain. Paint refused to dry at all, and dope took an age. However, the weather broke as the Rand's teams arrived at Quaggapoort, to find the Defence people, faced with
no such problems, bursting with health. Our new winching cable was found to be valueless, and a team sent 40 miles to Jo'burg to collect another.
Meanwhile weather conditions looked good. Van Zyl (Defence) went up without a barograph and came down again because it was cold and he was in his shirtsleeves. He said he reached $8,000 \mathrm{ft}$. on his altimeter. He was allowed 6,000 by observers. Meanwhile, launch after launch was made into what looked like a super sky, but nobody except Van Zyl clicked.
Test flights were made with the Rand's machines, particularly the Rhönadler, whose pilots were embarking at once on competition without ever having flown her. In the first few flights she handled beautifully, but ran an impossible distance over our newly-mown grass. Dommisse did not like Hjordis's aileron rigging -a touchy point with this machine. Altogether a black day.
The next day looked superb. Beautiful flat-based cumulus, higher than our average of 5,000 to $7,000 \mathrm{ft}$., floated overhead. Over 80 launches were made by competitors, and only three clicked. As for the "Silver C's" -! Not one single point did they score. They got together and plaintively asked each other where the lift was. Only four people got away. Toots Pullen rose to 4,000 odd, and under an apparently superb sky simply came down again without another flicker.

Later in the afternoon as the rythmically monotonous launches went on, "Bomb" Finney in the newly repaired White Baby managed to get something. He battled for about 10 minutes without losing altitude. Then slowly he went up. As soon as he was clear of the launching area, up went Red Connor in the Defence Club's Kite, and he clicked immediately under Finney with gentle but positive lift.

In a fine frenzy your correspondent leapt into the Rhõmadler, only to have the retrieving car bringing back the cable break down. Fifteen minutes later that thermal was still there. I went off, flew to it at once, and managed to gain about 300 ft . on the last vestiges
of the bubble. There followed a horrid 10 minutes of hill-scraping and down I came. Dommísse, in Hjordis, determined to connect, followed immediately, but sank irrevocably.

Meanwhile Connor and Finney were up and away. Finney disappeared to the south on a cross-country (his first) and Connor floated round until the sun set. He was still $4,000 \mathrm{ft}$. up, and as our short twilight deepened he seemed to be getting no lower. It gets dark quite fast here. We rushed about the landing ground placing piles of hay for a flare track in position, and arranging the cars to throw headlight beams along the ground. Connor was just about invisible when we lit the flares and he landed. He was getting pronounced lift over a plantation which surrounds the local leper asylum. This lies some miles to the north of our gliding site. He recorded 6 ins . to 3 ft . a second, but made no attempt to define its area or duration.

Next a 'phone call was received from Finney. He had landed at Grand Central Aerodrome, 15 miles away. His reception there was cordial and amusing. It seems that as he toured along the trunk road from Pretoria to Jo'burg, which lies beside the aerodrome, dusk fell. An instructor from Grand Central mistook the creamcoloured Grunau for a cream-coloured "Taylorcraft."
"Ooh," said the instructor, "there goes the 'Taylorcraft' without its undercarriage. He'll break his neck when he lands." He refused to look as Finney made his approach, and as the Grunau dipped its wing when it stopped his confusion was complete. This was clear proof that the "crash" was a major one.

The last day of the Competitions was fortunately a ridge-soaring day. Dommisse saved his team's face with points for a $4 \frac{1}{2}$ hour duration flight in Hjordis. Peirce went up on the ridge in the RhöNadler. He shooed everyone off the tiny beat with his whopping machine, and, after all but colliding with Hjordis, came in to land.

But the Comps were such a frost that we washed them out and declared no results.

## Gliding Instruction

THERE are three main schools of thought extant in the methods of instruction of glider pupils : bungy training, auto-towing and winch training. The main points of the three are :-

1. Bungy Training.-Hills and slopes are a necessity. Man-power is required in quantity. It is a method of keeping warm in cold weather, and it is a slow method of training, but it seems to work.
2. Auto-Towing.-Vast flat spaces such as aerodromes are required to do the job properly, as there must be enough run for the glider and the car into all winds. This means, in most cases, an absence of soarable hills near by. The towing car will often have to change gear with the glider in tow, which is a bad thing. If brought to a fine art, it is a quick method of tuition.
3. Winch Training (not to be confused with launching by winch from a slope, instead of by a bungy).This is the ideal method for this country. A normal-
size landing ground only is needed, and this can either be at the top or bottom of the soaring hill. Pupils can be under control of the instructor at all times.

In the early days of gliding every method of launching, except by bungy, was looked upon with great distrust for two reasons:-
(1) The Germans used bungy launching exclusively because ( $a$ ) all their sites were in mountainous regions; (b) there was therefore a lack of the flat ground for winch launching, (c) there was a generous supply of youth power, and (d) winching was new and untried.
(2) The Americans used auto-towing which, therefore, must have been unsafe.

However, at that time we were wrong, as is shown by the many clubs who are gradually converting to mechanical methods of launching to-day.
Winch launching was first used for the full-blooded pilots and sailplanes, who were supposed to be able to take care of themselves and brave the dangers of kiting

## News from the Clubs

## London Gliding Club

April 6th and 7th.-During April we continued to get special permission each week-end to fly. This week-end there were 7 winch circuits on Saturday ( 14 mins.), and on Sunday 12 training hops and 31 launches into a soarable wind, with 2 hours 49 mins. flying.

April 13th and 14th.-On Saturday a N.N.W. wind backed to west and allowed of 12 soaring flights, mostly 300 ft . above the hill, totalling 5 hours 24 mins.

Sunday was just superb : 53 flights with a war-time record of 39 hours 11 mins. flying time. A good strong wind moved gradually from W.N.W. to W.S.W. during the day. It was unusually rough; this was attributed at first to thermals, but when the sun got hidden behind alto-stratus, the air became rougher still, perhaps due to an approaching depression. The limits of $2,000 \mathrm{ft}$. and 2 miles were easily reached by some.

Lacey operated Falcon III, but when he tried shooting up the crowd below, the wrong person was frightened, for his lady passenger threw her arms round his neck and nearly throttled him. After that, of course, he tried the same stunt on other lady passengers, but they failed to oblige.

Cambridge II was also operated off the hilltop by Copeland and Hatcher, and Falcon I by Walker, Gee and Dovey, while Pickering and Baker got their "C" certificates in Nacelle, also flown by Buckley and Bournville.

The Desoutter and old Slingsby Grunaus were in action with Arnold, Wheatcroft, Lee, Manning, Beck, Horsley, Slater, Cramer, Williams, Grant, H. E. Bolton and Cole. The club Bussard was flown by R. Pasold, Williams, Horsley, Smith, and for the first time by Cole and Wilbur. Once, when the cable broke, it performed a remarkable ground-loop. Lewis had the Imperial College Kite to himself.

Stephenson did the longest flight of the day, 4 hours, in Blue Gull, closely followed by Cooper in Rhössperber with 3 hours 35 mins. Hiscox came next with 2 hours 55 mins. in his Gull, which he also lent to Hervey. The Cambridge I was operated by Morison and Crosfield of the Cambridge Club. The Wood Green group, numbering 15 , were brought as usual by their leader in his four-seater car and hopped their home-made Primary. Fourteen machines altogether, and sometimes nine soaring at once.

April 20th and 21st.-East wind on Saturday; 7 winch circuits and 15 ground-hops.

Sunday started with a S.W. wind, soarable until 2 p.m. for Falcon III, Rhönbussard, two Grunaus, I. C. Kite, Cambridge I and Rhönsperber. In the evening Falcon I, Nacelle and Kadet descended from the hill-top. Altogether 51 launches with 3 hours 45 mins. flying.

We were visited by three Polish sailplane pilots, including Miss Pilsudska, daughter of the late Marshal. Also by an officer from Fighter Command who called to see these extraordinary people who would keep, bothering him for permission to fly; in gratitude he and his family were given rides in Falcon III. From 5 to $6 \mathrm{p} . \mathrm{m}$. small cumulus clouds were forming at the top of the cement works thermal.

April 27th and 28th.-Thundery weather and light winds, but nobody could connect with a thermal. There were 60 ground-hops and 27 other flights.

Saturday, May 4th.-A light N.N.W. wind gave promise of winch thermals, which was fulfilled on the first launch. Withall, on his first war-time visit (with wife), was launched at 12.30 and kept the Bussard up 7 minutes. He got a much better one in the same machine at 3.10 , apparently off the field at the base of the knob of the Bowl, and reached $2,000 \mathrm{ft}$. Thence he flew up-wind and got another one to $1,400 \mathrm{ft}$., finally landing at 3.55 . Of 22 other launches between 2.10 and 7.10, only one resulted in thermal connection, by Turner in Bussard, 4.12 to 4.20 .
Sunday, May 5th.-Similar weather, with a stronger wind, not quite soarable over the cable slope, resulted in better thermals. Among 41 launches between 11.15 and 6.25 (Summer Time), the following connected: Withall in Rhönbussard, 11.15-11.35; Hiscox in Gull, 1.50-4.00; Cole in Bussard, 2.20-2.31; Hatcher in Cambridge II, 3.10-3.35; Withall in Bussard, 3.204.10; and Horsley in Hiscox's Gull, 4.27-4.41.

Withall's first thermal was found to the west of the club-house; as it drifted southwards, the wind changed from N.W. by N. to N.N.E. Changes of wind between these two directions continued throughout the day. Withall was convinced that good thermals were coming almost continuously from Dunstable town, which is $1 \frac{1}{6}$ miles to the N.N.E. Hiscox found, during his 2 hours 10 mins. flight, that there was lift pretty well all over the club ground and surroundings, once one got up to it.
Massey, from the Newcastle Club, kept a Grunau up for 7 minutes by flying tail-down in weak slope lift, and horrified the cautiously-minded by keeping it in that attitude till nearly at the ground.
Between 1.30 and 4.30 about one pilot in five could climb off a winch launch, as compared with one in three on our best winch-thermal day (April 25th, 1937, light N.N.E. wind). But the proportion is more than doubled if one includes flights which were prolonged to 4 minutes by weak thermal lift, especially in Grunaus. Many pilots are convinced that the thermals have become much more frequent since so much land around the site has been ploughed up, especially Pratt's ground immediately to the north, between us and the Bowl. Some suggest that, when the Government's ploughing subsidy of $£ 2$ an acre ceases, we should continue to pay it ourselves.
The Future.-By this time we had succeeded in getting permanent (provisional) permission to fly any day, instead of having to ask for it every week-end, and a club circular was sent out announcing instructional courses during Whit-week and in August, but on Whit Saturday we had a telegram cancelling permission. This was not, as we first thought, on account of the Blitzkrieg, but merely because the Fighter Command, which is competent to know whether gliding interferes with defence, has been overruled by the Air Ministry, which isn't.

As a further blow, we were told at the end of May that our premises and ground were wanted for another purpose and would be taken from us, and we now expect to have to turn out by the middle of June.
The Annual General Meeting is fixed for Sunday, June 16 th, in the Old Clubhouse, at 6 p.m.

In the absence of Hervey, who has now started his job at the Air Ministry, Culver is now Chief Instructor and Chairman of the Flying Sub-committee.

The London Secretary's office is moved from Bow Churchyard to 6, Roland Gardens, South Kensington, S.W.7. (Tel. : Kensington 4879.)

What they are doing.-Squadron-Leader W. B. Murray has now left France and is stationed somewhere in Wiltshire; we were delighted to see him when he called on Sunday, June 2nd.

We now learn that Neumark accompanied Ellis to Finland. They are still there, hoping to fly.
N. P. Anson, Pilot Officer, is stationed in the control room of an East Anglian aerodrome.
A. H. Curtis, formerly in Dart Aircraft, has a commission in the R.A.F.V.R. as instructor.

Ronald and Joan Price have moved from Speke to Hooton, Cheshire.

Wilbur has been called to the R.A.F. at last and has gone north to join an Initial Training School.
It is with great regret that we hear that SubLieutenant Gilbert Wardle lost his life when the submarine Sterlet was sunk. He entered the Navy in 1931, and since January last year had specialised in submarines. His twin brother, as we have already reported, became a prisoner of war after the submarine Starfish was sunk. Both brothers used to come over from Portsmouth at week-ends to fly at this club.

## Newcastle Gliding Club

After obtaining permission to fly at Hartside, we only got the Easter weektend, after which a communication was sent from the Air Ministry at London, saying that it may interfere with local defence. The local defence people, the Fighter Command, the police, and everybody likely to be concerned, had already said otherwise.
F. W. M. Ruck has purchased the Kite which originally belonged to Frank Charles. [This, we believe, was the first Kirby Kite ever built.-Ed.]

We still try to meet at the war-time headquarters in Heaton Park every Tuesday evening and Sunday morning, but the feeble attendances are painful to see. More of those who have been staunch war-time supporters of the club have had to leave the district. It is remarkable how many members now refrain from taking any further interest in their club because they have registered, or will be doing so soon, or "something may happen." The attitude which should be adopted by all at home is that they have a duty to carry out on behalf of their fellow members in the Forces, who look to those at home to keep the club together and to do everything in their power to prepare for the grand re-start of activities.
Members in H.M. Forces.-A list of the addresses of current members serving in H.M. Forces has been posted in the club room, in the anticipation that members at home will correspond with them. Pick yourself a "pen pal" and send him a fan mail!

We were glad to have Lionel Tate home on ten days' leave at the beginning of May. He received his biggest thrill when offered a cup of tea and biscuits at the Park. He never thought that we would sink so low. Lionel was in Arras at the time of the German advance.

We regret to report that Launcelot Eustace Smith, who took his "A" and " B " with us, and who became squadron leader at after our President (the Hon. Leslie Runciman), has now been reported missing in France.

It is now learnt that Pete Cochran-Carr, who was reported to be in the Mercantile Marine, is now a Lieut. in H.M.S. Badger. Anthony Lucas is now a Sub-Lieut. in the R.N.V.R. in the south of England. McClean, after nine months of raving fury at delay in getting into the R.A.F. as a pilot, has at last succeeded in donning uniform and is now undergoing training somewhere. Bob Savage has also left to take up a post with the Air Ministry. His work will have to do with production. Robertson has also left for Government work in connection with his firm.

Bill Thompson, who is in the R.A.F., has passed his examination to become a wireless operator. Apparently he never expected such success, as he voluntered to become a gunner before the result of the examination was announced.
We are honoured to be able to announce that two old members have been rewarded for their gallantry in action in France. J. R. Kayll, a pilot who took his "A" and "B" with us, has been awarded the D.S.O. and the D.F.C. He was acting leader of the Squadron, apparently since L. E. Smith has been missing, and he is reported to have bagged no less than nine German planes. The other pilot is W. E. Gore, who joined this club with the late son of Judge Richardson. He was also a " $B$ " pilot and has been awarded the D.F.C.

## Australian Gliding Association

Gliding Club of Victoria.-The Easter Camp was held at Beveridge, and was well attended by both flying and associate members. Owing to the very dry summer, the risk of bush fires prevented any car-towed flights being made, and flying was confined to shock cord launches from the hill, with the G.B. II, and the Eagle (nacelled primary).
G.B. II was brought in trailer from Melbourne on Easter Friday. It was taken by man power to the top of the crater, and launched with A. Hardinge into a moderate northerly. After scraping dangerously for a few beats he stayed up until the lift gave out after $3 \frac{1}{2}$ hours. This was his first flight for six months.

Next day J. Edmonds was launched in G.B. II into northerly and, after 20 minutes slope soaring, he connected with a strong thermal and circled up to $2,000 \mathrm{ft}$. above the slope. At this height there was plenty of lift, and he then toured the surrounding country, flying upwind as far as Wallan, where he reached $2,800 \mathrm{ft}$. On his return the slope lift had given out.

On Sunday the winch was taken to the top of south slope, and machines were dragged up by the winch, a welcome change after hauling them up the 600 ft . slope by hand. The Eagle was launched into a slight northerly, insufficient for soaring this type, but the G.B. II with Hardinge, stayed up for 1 hr . 20 mins. When coming into land he connected with a fence. Training was continued with the Eagle.

On Monday the wind was still a light southerly. J. Hearn, on the first flight of the day, landed Eagle on the fence, and that left the rest of the day to pack up.
It was voted a good camp by all, and the instructor,
N. Hyde, who had Easter leave from military training, did some excellent work. Both Eagle and Grunau have since been repaired, and Kadet kit, purchased from Slingsby Sailplanes, is progressing rapidly.

In addition to the above notes, we have received the club's Annual Report for 1939. The balance sheet shows the club assets to be valued at $£ 5225 \mathrm{~s}$. 9 d . The club's three aircraft were in use as follows:
Hawk: Flown on 16 days; 184 auto-tows ; total of timed flights, 8 hrs .33 mins . Cost of repairs, $£ 2412 \mathrm{~s}$.
Eagle: Flown on 10 days; 84 launches; 2 hrs .41 mins. Repairs, $£ 48 \mathrm{~s}$.
Grunau: Flown on 40 days; 372 flights (including 2 "push-launched") ; 60 hrs .43 mins . Repairs, $£ 2 \mathrm{l} 2 \mathrm{~s}$.
Membership of the club was raised from 44 to 57 during the year. Flying money receipts, $£ 315 \mathrm{~s}$., were nearly double the previous year's figure.

On November 29th an offer of co-operation was made to the Air Board should it decide to investigate the possibilities of gliding for Air Force training.
Queensland Gliding Association, replying to a circular of the Australian Gliding Association, is strongly opposed to discouraging local design and manufacture of sailplanes. "Had England followed such a policy and only bought proved German plans and machines where would she be to-day? Still dependent on Germany." The association raises the question of height records, and says that it checks height by fitting a maximum hand (which cannot be altered by the pilot) to its altimeters.

## Derbyshire and Lancashire Gliding Club

There is very little to report just now as, apart from flying restrictions, it is believed that it would be financially impossible to use the ground for flying even if permission could be obtained.

We have now fully completed repairing the boundary walls of the flying ground and the cows have been duly installed and appear to be very happy and contented. The rumour, believed to have been spread by enemy agents, that we are going to convert the club bar into a milk bar is entirely without foundation, it was learned in official circles this week-end.
We wish to point out that, although we are still officially a club for the practice of motorless flight and welcome other people who are likewise interested, we are not prepared to let our premises be used by certain suspicious-looking characters who are wont to glide through the air by means of parachutes, as we consider that this form of flight is degrading to the movement and should be discouraged.

## Other Gliding Clubs

The Midland Club held a meeting of members at the Woolpack Hotel, Birmingham, on May 3rd, for supper and gliding films. Pilot Officer A. A. J. Sanders, who flew from the Long Mynd to Tamworth last August, is stationed somewhere in Lincolnshire.

Ann Douglas called on us on May 31st after taking her Grunau and other valuables to healthier surroundings in Shropshire. She has acquired the Grex Kirb for the Surrey Club when it revives. She hopes shortly to organise a reunion of gliding friends one evening in London. Graham Douglas has among his fying pupils some Polish sailplane pilots.

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## Scottish Gliding Union

Patron: Lord Weir. (Afiliated to the B.G.A.)
and Treasurer: R, B, President : Hon. A. R. Boyle. Secretary C.2. (Tel. Central 209 Rerson, 20 , Blythswood Street, Glasgow, and soaring site and clubhouse: Feal Farm Main training Lochleven, Kinross; also other training sites in Bishod Hill, Scotland. Primary training and soaring. Full residential accommodation, including rooms for married couples. Flying and training every week-end, together with organised camps. Flying charges from $6 d$. per flight. Soaring flight from 2 s . 64. Subscription, 23 3s. flying member per annum. Associate, 21 is Der annum. Dntrance fee, $\ell 2 \mathrm{2s}$. Full range of machines for members' use. Large hangar accommodation.


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