

# SAILPLAN

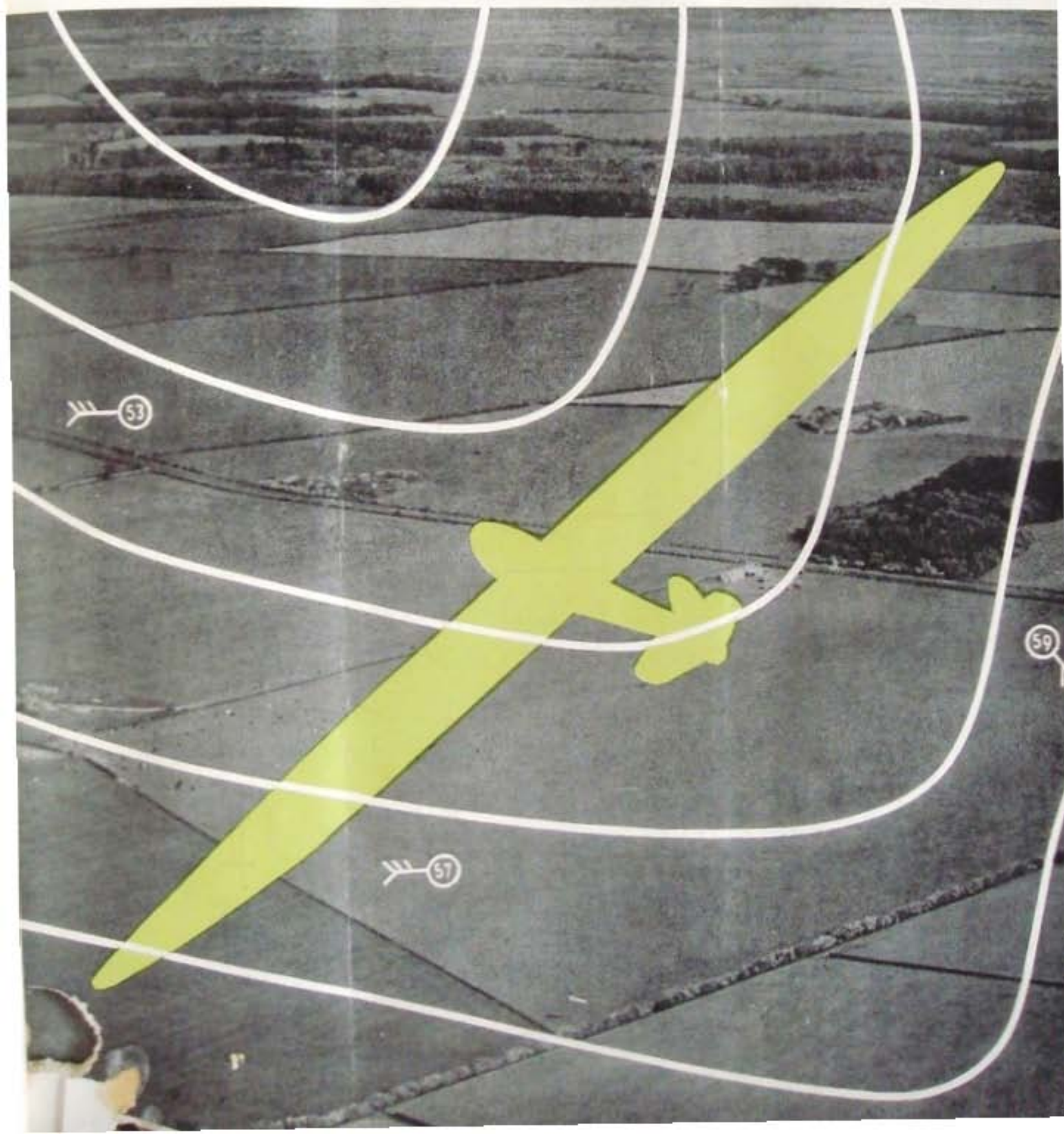
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EDITED BY ALAN E. SLATER





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# THE SAILPLANE *and* GLIDER

*Official Organ of The British Gliding Association*

Editorial Offices: 13, VICTORIA STREET, LONDON, S.W.1 Telephone: ABBey 2615-6-7

Vol. 8 No. 3

MARCH, 1937

Published Monthly—Price 1/-

## Editorial

AT the first meeting of a newly-appointed Executive Committee of the Soaring Society of America, according to the official report, "all agreed that an illustrated printed magazine similar to the British SAILPLANE AND GLIDER would be highly desirable if it could be swung." The swinging process has now begun—or should we say, is in full swing—with the issue of the first number of "Soaring," the new American magazine dealing with motorless flight, produced at 1614, Delaware Avenue, Wilmington, Delaware.

The new journal is to be welcomed. For some years the SAILPLANE AND GLIDER used to call itself "The only journal in the world solely devoted to motorless flight." Then we dropped the claim in deference to the German journal *Der Segelflieger*, which, however, has gradually become less and less "solely devoted" to the subject of its title and has now, with the February issue, changed its name to the more appropriate one of *Luftsport und Jugend*.

The first Editorial of "Soaring" begins with the words: "At times like these, with European countries looking at one another with knives in their teeth, we find the Glider ever playing a more important part in their respective policies of Preparedness"; and goes on to develop this theme with the object of enlisting popular support for Gliding. Our outlook has been somewhat different; on the rare occasions when this journal has indulged in philosophising, we have always stressed the view that soaring flight is its own justification; that it is an end in itself, not a means to some other end. Soaring pilots are explorers in a new world which, only fifteen years ago, was practically unknown, and one of the chief functions of this journal is to chronicle the course of their discoveries. The early history of this "exploration" is admirably summarised and illustrated in a supplement to the January issue of "Soaring."

The progress of soaring flight in America and Britain has, during the last few years, been roughly parallel. It would be an admirable thing if more frequent contacts between the two movements could be made. We commend to American visitors to Europe the suggestions made in the "Open Letter" on another page, especially the one in the postscript.

## Primary Instruction for Birds

According to a correspondent of *The Times*, the Royal Society for the Prevention of Cruelty to Animals has to dispose of some 200 birds annually, handed over to its care by order of magistrates or by owners of caged birds who do not wish to keep them any longer. But when such birds are liberated it is often found that they are at first unable to fly or to get their own food.

The Society has therefore decided to build a flying school for the liberated birds. It will consist of two big open-air cages rising to a height of over 70 feet. One aviary, it is stated, will be for rescued foreign birds which cannot be released, and the other "will be the flying school proper, where the English wild birds which have lost the use of their wings through being caged will be able to practise and perfect their flying until they are fit to be given unqualified liberty."

Several bird experts will be employed, and an observation room will enable the birds to be watched without being disturbed (here is a hint for gliding instructors). It will cost the Society £300 to build, equip and maintain the school for the first year, a figure which compares favourably with that for a human gliding school, which, however, it will resemble in providing "special accommodation for boarding birds during holidays." Finally, the need of a repair workshop has evidently not been forgotten, for it is stated that there will also be attached to the school a bird hospital.



## From Here and There

**Not Skysailing.**—"Sailing South American Skies" is the title of a new travel book. But a preposition has been mislaid. The author is not a glider pilot; he did his sailing at surface level.

\* \* \*

**Newspaper's Generosity.**—The Manchester *Daily Dispatch*, whose prize offer of £100 for the first sailplane flight from Great Hucklow to Blackpool has still to be won, announces that it has decided to present the Derbyshire and Lancashire Gliding Club with a two-seater sailplane built by Slingsby Sailplanes, to be named "Daily Dispatch."

\* \* \*

**North-eastern Activities.**—A merger of gliding clubs in the north-east of England, which may follow a conference being held in Newcastle on February 28th, will, according to the Newcastle correspondent of the *Morning Post*, "make the area the leading centre in the country for the sport . . . meetings on a large scale to demonstrate the sport are to be held at various places." The Tees-side, Penrith, and Workington Clubs are said to have been invited by the Newcastle Club to take part.

\* \* \*

**Slow Motion Films of Flight.**—At the annual conversation of the Royal Aeronautical Society, held at the Science Museum on January 12th, some slow-motion films of the flight of seagulls, pigeons and humming-birds were shown. The last were particularly striking, the exposures having had to be made at 1,000 per second in order to show details of wing beats which take place at 50 per second. The humming-bird, when hovering, has its body nearly vertical, while the beat of the wings is seen to include a feathering motion similar to the arms of a swimmer just keeping himself afloat on the surface of water. An even more slowed-up film was one showing the air flow over a model in a wind tunnel. This had been taken at the rate of 2,300 pictures per second, the flow of air being made visible by sparks discharged into the air stream.

\* \* \*

**Attacked by Eagle.**—A large eagle attacked a "Caproni" aeroplane returning to Addis Ababa from an inspection flight, according to a Press message from Milan on February 9th. The aeroplane was carrying two airmen and some soldiers, and they fired a machine-gun at the bird, but without hitting it. The eagle, however, struck and damaged the machine and injured the pilot in the forehead with its beak; finally it was hit and crashed out of control. It is reported to have had a span of 11 ft. 4 ins. From accounts of similar attacks which we have read in the past, it would seem that the safest thing for the pilot to do is to keep quite still, so that the bird cannot decide where the "brains" (*sic*) of the machine are situated. Last April the Ulster Gliding Club's KASSEL 20 sailplane was attacked repeatedly by a raven while soaring along Magilligan cliffs, but the bird confined its attention to the KASSEL's wing-tip.

## Yorkshire Instruction Course

The summer training camp of the Yorkshire Gliding Club is to be held this year from Sunday, August 1st, to Saturday, August 14th, inclusive. It will be at Sutton Bank, as before. This camp is specially organised for the benefit of those who are prepared to devote a fortnight of summer holiday to learning to glide or, if already qualified pilots, to add as much as possible to the quantity and quality of their flying.

The fee for the 14-day course is £12 12s., which is absolutely inclusive of all instruction and flying fees (except distance flying by qualified pilots), all meals in the clubhouse, and complete camping accommodation for the period in question; also insurance against damage to club machines or third parties, and full membership of the Yorkshire Gliding Club for the period of the camp.

Last year's training camp at Sutton Bank, it will be remembered, produced excellent results, in that every pupil who stayed the full course obtained both the "A" and "B" certificate, and in addition seven "C" certificates were gained.

Full particulars are obtainable from Mr. H. T. Blakeston, Spellowgate, Driffield, Yorks.

## Gliding Courses in Austria

The gliding school on the Gaisberg, near Salzburg, has now announced its programme for the year. Activities begin on March 2nd and continue until December 23rd. There are four types of courses: (1) For training beginners up to "A" certificate, lasting three weeks; (2) for training beginners up to "B" certificate, four weeks; (3) for training "A" pilots up to "B" certificate, two weeks; (4) advanced course for "B" and "C" pilots, three weeks.

Full particulars are obtainable from Anglo-Continental Express Co., Ltd., 177, Regent Street, London, W.1, who are the sole agents for the school in this country. The charge for a course, which includes travel from London to Salzburg and back, full course of instruction, board and accommodation, and insurance, is £19 18s. for beginners' three weeks' course, £23 6s. for beginners' four weeks' course, and £29 10s. for advanced course. The first advanced course begins on April 6th.

For the advanced course the following types of sailplanes are in use: FALKE, GRUNAU BABY II., H.17, RHÖNBUSARD, and Mg.9 (two-seater). An account of a pupil's experiences, with photos and a map of the site, were given in our January issue.

## Queer Soaring at Dunstable

Owing to the short interval between the publication of this issue of THE SAILPLANE and the last, it has not been possible to prepare the promised "attempt at explanation" of the soaring at Dunstable on January 10th in time for this issue; it will therefore appear next month instead.



## American "Silver C" Flights



A group of American sailplane enthusiasts in Virginia: Lewin Barringer is third from the left, standing, and Don Stevens last on the right. Warren Eaton is seated just behind the front row. The picture on the right shows Richard du Pont at Basking Ridge after his flight of 158 miles from Elmira, which still remains the American distance record.

[Photos sent by Don Stevens.]

**E**IGHT American sailplane pilots have soared 50 kilometres, climbed 1,000 metres, and flown for five hours on end, and have therefore received the international "Silver C" badge and certificate. Their numbers in the international list are:—

- 12 J. K. O'Meara, of New York City.
- 32 Richard C. du Pont, of Wilmington, Del.
- 65 Lewin B. Barringer, of Philadelphia, Penn.
- 236 Stanley W. Smith, of Rochester, N.Y.
- 237 Emil A. Lehecka, of Long Island City, N.Y.
- 238 Henry N. Wightman, of Upper Montclair, N.J.
- 239 Emerson Mehlhose, of Wyandotte, Mich.
- 240 Chester J. Decker, of Glen Rock, N.J.

Martin Schempp, who holds "Silver C" No. 8, should also be mentioned, since he earned it by flights made in the United States, although he has now returned to Germany. He was awarded it in 1932, Jack O'Meara in 1933, "Dick" du Pont in 1934, "Lew" Barringer in 1935, and the remaining five for flights made during the last National Competitions at Elmira.

Mr. O'Meara's performances, which earned him the badge, were 67 miles distance, 4,780 ft. height, and 8 hours 8 minutes duration. Details are not available, but accounts of the flights of most of the other "Silver C" pilots have been either sent to *THE SAILPLANE* or published in the last few issues of the *Bulletin of the Soaring Society of America*. To give some idea of the high standard of skill reached by the leading American soaring pilots, accounts of several of their most noteworthy flights follow, though these are not in all cases the flights which earned them the "Silver C."

### Richard du Pont.

Mr. du Pont was at one time holder of the official World's Distance Record, for though, at the time he set it up, on June 25th, 1934, the late Gunter Groenhoff had made a longer flight, the latter had not been recognised by the F.A.I. The machine was the *ALBATROSS II.*, built by the former Bowlus-du Pont Sailplane Co., and Mr. Don Stevens, who helped to build it, has sent the following account of the flight:—

June 25th was a perfect day for flying off the Harris Hill Mountain, Elmira. Richard took off on a little hop try the new soaring spot out, to find where the best

uplift was and where the down-draft was. Martin Schempp then took off in the *HALLER HAWK* to keep Richard company.

Richard took off at 12.15 p.m. and Martin a few minutes later. At this time big cumulus clouds were forming. Richard kept climbing higher and higher, and Martin right along with him. The last that we saw them they were headed for New York at an altitude of about 3,500 feet, and still climbing.

After two hours Martin Schempp called up and said he had landed at Lake Wesauking, near Towanda, Penna. He said that Richard was still going towards New York. After another two hours of anxious waiting with no word from Richard, we were almost positive that he had broken a record. At last, at 5.5 p.m., a call came in from Richard, and I answered it.

"Where in thunderation are you?" I asked.

"I'm at Basking Ridge, N.J.," came the voice over the phone. "I saw the New York City skyscrapers but couldn't quite make it, and had to land here. Get the trailer and come and get me."

My partner, Ted Bellak, and I drove all night and arrived there the next morning at 7 a.m. We inquired around, asking where the fellow in a glider landed. One fellow said: "Yep, by cracky! I saw that there flying contraption land. She landed over thar at the airport."

We found Richard looking over the maps, and the distance he had flown was 158 miles. Richard said: "Boy, that's a world's record," which was true until about a month later, when it was broken by a 238 mile flight made in Germany.

Richard then told us his experience on the flight. He said: "When Martin and myself caught that cloud, we both spiralled under it. We were both chasing each other's tails so close that we could see the whites of each other's eyes. Finally we separated, but kept each other in sight. When Martin would hit something good (a thermal) I would tear over and get it with him. He would do the same when I got a good lift. Finally Martin got lower and lower till he had to land, but I stayed right under the clouds. I didn't have to worry much because everywhere I went there was plenty of up-draft.

"Finally I saw the Delaware Water Gap ahead and



started to lose altitude fast. I saw a range of mountains facing the wind and headed for them. I got down to within 300 feet of the ground and had to slope-soar on this mountain. I flew over the mountain for about an hour. I noticed a big cumulus cloud forming above me, so I climbed just as much as I could, but couldn't quite make it, so I decided to look for a place to land. Just then the rate-of-climb meter read 3 metres per second, going up. Boy, I had made it! The cloud was drawing me up into it. I gained about 3,500 feet and started for New York again.

"So I started to hop from cloud to cloud and finally, at 4 p.m., I saw the New York City skyscrapers. Boy! what a thrill it was to think that I had soared all this way with no motor to pull me! It certainly was an uncanny feeling. I started to lose altitude again and saw that I couldn't make New York, so I headed for this airport. I kept dropping and dropping, due to the clouds breaking up and losing their lift.

"Finally at 5 p.m. I skimmed along the airport and landed in the middle of it. A fellow came out and asked me where I came from. I told him Elmira, N.Y. He said: 'The hell you did!' I told him I had left there at 12.15 and asked him the time. He said 5.5 p.m. That made 4 hours 50 minutes in the air."

July 3rd was another perfect day for soaring. Ellaire du Pont (Richard's wife) took off in a FRANKLIN UTILITY glider for her first soaring flight (she is a power plane pilot). After she had soared for over two hours, Richard got out the ALBATROSS I. He said he would fly without the hood as he wanted to fly with Ellaire and have a talk with her. He also took an apple tied

to a fifty-foot string to drop to her. He took off and immediately hit a cloud with Lew Barringer (who had taken off in ALBATROSS II. to try for his "Silver C"). The last we saw of them they flew into a cloud at an altitude of about 5,500 feet. We thought they were on their way to New York, so we didn't watch them any more. Pretty soon somebody yelled: "Here comes Richard back!" He landed and said: "I think I just broke the American altitude record." He was right, too. The barograph read 6,224 feet.

DON STEVENS.

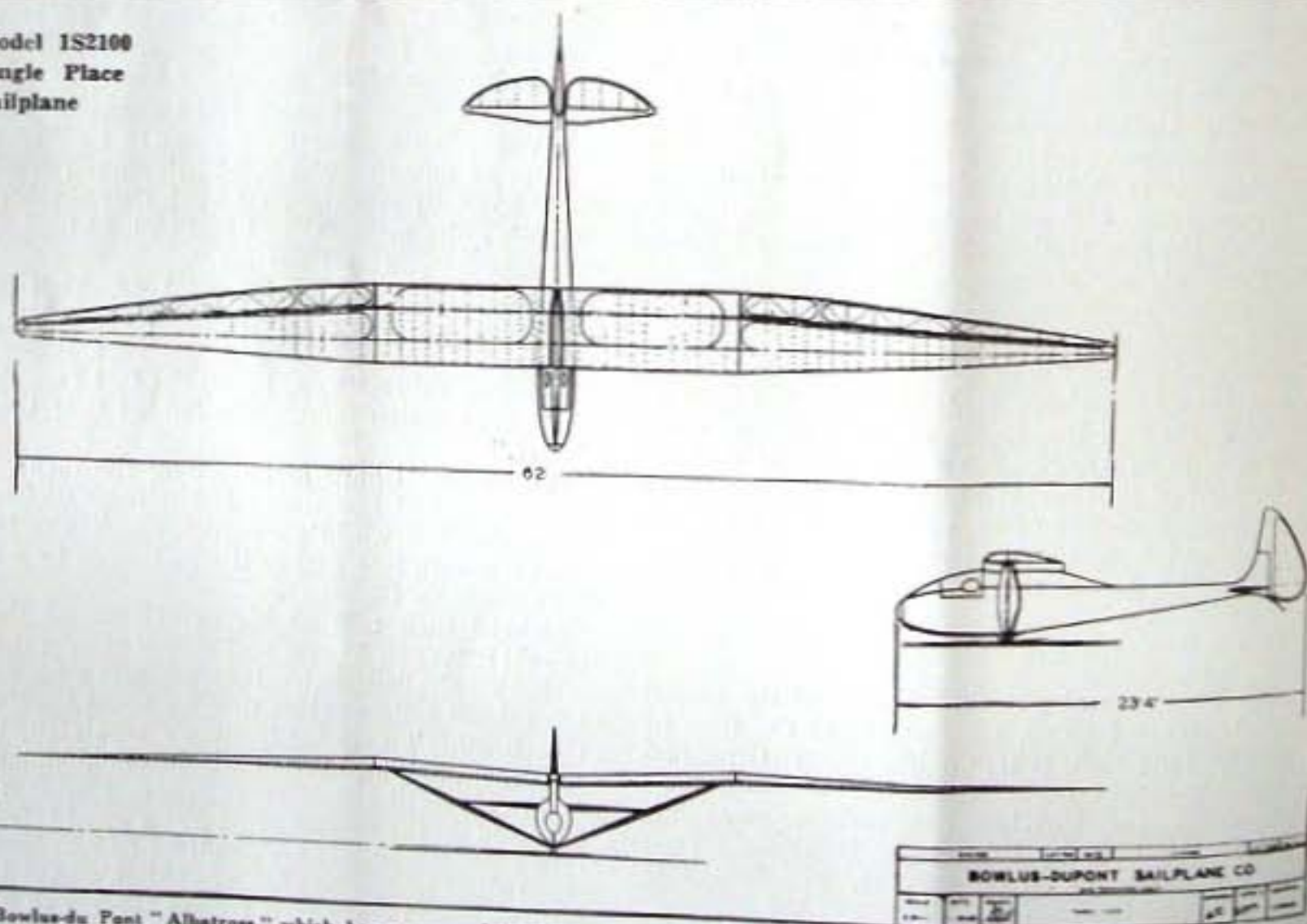
### Lewin B. Barringer.

The flight of Mr. Barringer, mentioned above, did indeed turn out to be a "Silver C" distance flight, for he landed 75 miles away at Ransome, Penn. Don Stevens thus describes how the news came of his landing:—

"After about three hours of waiting, Lewin phoned and said he had landed on the lawn of a nut house. Guys were fishing out of the windows and all sorts of crazy things. He said: 'Hurry and come and get me before I go crazy, too!' So we drove all night again to get Lewin. We had a little trouble finding him."

Besides Elmira, where the annual contests are held, there is another much-used soaring centre at Big Meadows, on Blue Ridge in the Shenandoah National Park, Virginia. At the end of September, 1934, Mr. Barringer made two interesting flights from this site, the first of which suggests similar conditions to those on the first evening of the British Competitions last year, though on a larger scale; while the second, a

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The Bowlus-Dupont "Albatross," which has a span of 62 feet, an area of 205 square feet, and an empty weight of 347 lbs. Monospar wing, with light rear spar to transmit aileron and flap hinge loads to ribs. Differential ailerons: ratio approx. 2 to 1. Flaps are of solid trailing edge type; they reduce the landing speed from 27 to 21 m.p.h. Gliding angle at 34 m.p.h. is given as 1 in 30; at 45 m.p.h., 1 in 20; sinking speed said to be 1.6 ft. per sec.





The "Albatross I," named "Falcon," which has a mahogany plywood skin. It was built for the late Warren Eaton.

cross-country flight lasting over five hours, completed his "Silver C." The pilot has kindly allowed us to reproduce his account from *The Sportsman Pilot*, from which the following extracts are made:—

In the middle of the afternoon of September 28th, after eight days of inactivity at Big Meadows, the gods relented and brought a storm from the south-west. After the rain had subsided a fresh westerly breeze sprang up. We hastened to make ready to take off. Alas, our runway was so wet and muddy that our cars skidded too much to give us traction for auto-tow. Warren decided to use double shock-cord stretched by the double-wheeled truck. I hauled the ALBATROSS II, half a mile down the road and took off in auto-tow from the gravel road. The ship made a comfortable climb before I dropped the rope and sailed out over the edge of the cliff.

The view 2,000 feet below was magnificent, but I was too busy searching for up-currents to give it much attention. Soaring was a struggle at first—I dropped below the edge and worked gradually up again. I found lift where I least expected it and lost it where I was most confident of finding it. Fortunately, as the wind picked up in velocity, this condition quickly corrected itself.

Now we sailed slowly into the teeth of the wind until we were well out over the valley. Each of us went a slightly different direction, yet each of us soon had new problems to contend with as we reached the level of the billowy white clouds that were moving in from the west. I was so taken up with trying to get under what looked to be a good one that I got well to the lee of my particular spur. Suddenly the needle of my variometer dropped down to 2, 3 and then 4 metres per second descent. I put the nose down and sent the airspeed up to 60 while diving to regain the up-wind side of the rocky spur.

Soon Warren and I were flying formation not 50 feet apart. Both headed west, we were standing still, occasionally even drifting backwards, as we climbed steadily upward at about half a metre to a metre per second. The air was smooth and cold—getting steadily colder, in fact. The clouds were now far below, and the grey wooden barracks of the camp were becoming smaller and smaller.

The view all about us was magnificent. In the clear air we could see almost 80 miles east where a smudge

marked the location of Washington. North and south we could see miles up and down the ridge. We could and did study its contours to prepare us for future flights. To the west the sun was sinking toward a bank of clouds on a horizon which was now many ridges away.

The clouds were the most beautiful I had ever seen. Huge, towering cumulus in the east were snow white turning into shell pink against a background of slate-blue sky, while in front of them floated stringers of clouds that were almost black. Wherever we looked—and the extraordinary smoothness of the air and the motionless attitude of our ships gave us ample opportunity to look—nature was painting a marvellous, stupendous canvas for us.

It began to dawn on me that we were high—awfully high. I edged over to Warren and shouted: "How high are we?" He must have been too cold to answer; he simply held up a lot of fingers. I thought I counted six. Six thousand feet above the mountain—that meant close to 10,000 above sea level. No wonder we were cold!

It was getting rather late. We headed down out over the valley to lose altitude. Soon we were only 1,000 feet or so above the camp. Suddenly, without any warning of bumpy air, our variometers jumped from 1 metre per second descent to 2, then 3 metres per second climb. More than half a mile out in front of the mountain and supposedly away from its influence, we had caught a strong thermal. But this was unlike any thermal either of us had ever encountered before.

We were heading straight out, and wherever we flew the air was smooth as glass but going steadily up. Almost before we realised it we were back up over 5,000 feet and still climbing at a rate of more than 500 feet per minute. It did not occur to either of us that if we continued to ride this thermal a few minutes longer we would break the altitude record by a margin of probably several thousand feet.

As I looked about me I saw that the sun was well down. Dusk was at hand and night rapidly approaching. Below us a mantle of clouds was forming between us and our landing place. For an instant I felt something akin to panic. What if the clouds were right on the ground on the mountain! What if it was pitch dark before I could get down to the valley floor! We both started diving earthward. Up went the airspeed



to 50, then 60 miles an hour. Still I wasn't losing any altitude. As a last resort, I turned to those ingenious appendages the Bowlus-du Pont engineers put on these ships—the flaps. Cranking them open and diving at better than 50, I found I could gain on the up-currents at better than a metre per second downwards.

Down in the valley the lights of Luray and Stanley twinkled in the gathering darkness as I continued way out over the valley to get around and under the clouds. As I reached their level and looked back underneath, I breathed a sigh of relief—they were over 1,000 feet above the ridge.

Turning about and diving steadily back to the mountain, I saw a tiny blaze of light as a bucket of gasoline thrown on the smudge flared up into a bonfire. Pin points of light—cars!—were driving up to help light the runway. One more turn, and I cranked the flaps over and dived in at about 50.

Sunday, the last day of our meet, did not look like a promising day for thermals and distance flights, for the sky was overcast with lower scuds. Yet I took off at 8.25 and did not come to earth again till 1.40. Warren, who took off after me, was up 4 hours 45 minutes. Both of us landed in the same field at Front Royal, Virginia, 30 miles from Big Meadows.

Warren's and my soaring flights that day were chiefly interesting in that we again stayed together for a good deal of the time and utilised the lift of both the slope winds and the clouds which were continually blowing in from the south-west and hanging less than 1,000 feet above the mountains. Once I saw a hawk spiralling up on a thermal and followed him. Another time I flew right alongside a buzzard for ten minutes. He seemed to have no fear of the great wooden bird so close to him. I discovered the interesting fact that the ALBATROSS II. in some respects is a more efficient soarer than the buzzard, for I managed to climb away from him.

Unfortunately, the wind died out and it was impossible for either of us to go any further.

[On April 3rd, 1935, Lewin Barringer made a most interesting flight in the ALBATROSS II. from Mongola, near Ellenville, N.Y., to Harrisburg, Pennsylvania, a distance of nearly 160 miles along a practically unbroken ridge. The flight lasted from 8.30 a.m. to 3.15 p.m., and was almost entirely done by slope-soaring. It had been carefully planned beforehand—in fact, Mr. Barringer had made numerous aeroplane trips over the terrain and studied the maps of the Geological Survey. Hence his success.]

### Stanley Smith and Emil Lehecka.

Detailed accounts of flights by these two new "Silver C" pilots are not available. Stanley Smith, flying a RHONBUSSARD named "Trommer Michael" (which suggests a second-hand machine from Germany), flew 34½ miles from Elmira on June 28th last year, getting up to 5,463 feet. Emil Lehecka flew a CADET II. During the same competitions he twice exceeded 5,000 feet, and his longest flight was 39 miles.

During these competitions, by the way, the total soaring time of competitors was 353½ hours, and cross-country flights (counting only those over 5 miles) totalled 1,283 miles.

### Henry Wightman.

As befits a member of a university (Michigan) gliding club, Mr. Wightman, who flew 135½ miles in 5 hours 24 minutes in a Bowlus-du Pont UTILITY glider on July 4th last, has considered every detail of his flight in retrospect and given an account of it which is of unusual interest from a scientific aspect. It was not only the longest flight of the Competitions, but also far exceeded anything else done on the same day, when the only other performance of note was R. du Pont's out-and-return flight of 18 miles each way.

The following extracts are from the pilot's report published in the Soaring Society's Bulletin:

The whole flight was made on thermals. I took off of Harris Hill (Elmira) into an almost west wind before the thermals began to be very pronounced. I got into 8 or 10 thermals at intervals of 10 to 15 minutes apart, in the company of most of the other ships in the air, but never reached an altitude of over 1,500 feet. At about 11.30, while I was at the south end of the ridge, I spotted four ships at about 2,000 feet above the take-off field. I reached the field at about 300 feet and found a thermal still there.

At about 3,000 feet I began making smaller circles, and found it considerably easier to stay in the thermal. At 4,000 feet I climbed right through the middle of the group of four that I had been following. They were flying in all sorts of odd directions that seemed to indicate that they knew something was there, but couldn't locate it. I suspect that they were watching their instruments and didn't see me. Merboth did see me, and we kept together until about 5,000 feet. At that point he appeared to find something else off to one side, but it petered out, and I went into a small cloud about 200 feet above him. The cloud appeared to be disintegrating before I went in, but I climbed to



The site at Big Meadows,  
Shenandoah National Park.

(Photo sent by Theodore Bellah)



The "Albatross II" on its way from California prior to setting up the American distance record. Don Stevens found that the all-metal trailer rode perfectly smoothly, even when towed at 81 m.p.h.



about 5,500 feet in it. About five minutes after I came out it was gone. In that cloud, and the only other two that I went into, the rate of climb was less than it was about 500 feet below the base. There was much smoother air in the cloud than below it.

On that particular day I could make the distance between the clouds with a loss of altitude of about 700 to 1,000 feet. On one occasion, when I found myself about to enter a cloud, I shoved the nose down and flew for about 15 minutes at what was probably over 75 miles an hour. At one point during that time I was climbing over 10 feet per second. I ended up higher than when I started. I could quite often fly in a straight line under four or five clouds without appreciably losing altitude.

I had no idea where I was. Suddenly I spotted, dead ahead, a mountain which appeared to be Storm King, on the Hudson River. I knew that if I could reach that I would not only have the American distance record, but would be in some of the best soaring country that there is. It was about 40 miles away. Dead ahead of me was an area of sky quite free of clouds except for six in a line that extended half-way across the bad spot. In my anxiety to reach Storm King I set out along this line trusting to luck that I would find some way to cover the remaining distance. When I got to the end of the line, the Hudson River, the record and another 100 miles were in sight, and I had to come down.

An element of excitement was added when an anti-aircraft battery of Roman candles and skyrockets opened fire on me from the outer defences of Middletown. They weren't very good shots.

Now for the mistakes in order of their occurrence:—

(1) I made too wide circles in thermals in the beginning of the flight. This defect was caused, for the most part, by the fact that I was afraid to bank, for fear of increasing my sinking speed. I believe that that is rather a common fault.

(2) I found that, in the beginning of the flight, I had a very strong tendency to judge my speed by the ground while circling. As soon as I managed to stop such practice, things became much easier.

(3) I stayed with each cloud too long in the beginning. I could have cut off possibly as much as an hour from my time if I hadn't waited when I didn't need to.

(4) I didn't wear enough warm clothes. I found that most of the time the lift under a cloud did not extend vertically downward but sloped ahead of the cloud down wind at an angle of about 20 degrees

to the vertical. As I rose, I kept losing the lift while travelling down wind, and on the down-wind side of the circle. I would find the centre again by travelling straight up wind again, and then continuing the circle about 75 to 100 yards up-wind from where I had lost the lift. At about 4,000 feet I would find myself under the front edge of a cloud that I had passed at a low altitude and found no lift. Very close to the base of the cloud I would find the lift directly under the middle. At 1,000 feet or so below the base the lift appeared to be under the down-wind side of the cloud. I noticed some weak downdrafts on the opposite side of the cloud to the lift, but they were not strong enough to make it necessary to go around them.

The main thing that I should have noticed and didn't until it was too late was that all the clouds formed over rough and hilly country. When I got to Middletown, where the country is very flat, there were no more clouds. I was born and have lived a large part of my life in the same section where I landed, and I have noticed, even before I knew anything about soaring, that the sky would be clear over me while all around there were cumulus clouds. I have since discovered that on good soaring days the sky will be clear 50 to 75 per cent. of the time over the flat ground, while the surrounding clouds are over the hilly country that surrounds the flat section. However, every now and then the sky will fill up with clouds that last for one-half to one hour. Meanwhile the clouds over rough ground have not changed their character. The more wind there is the more pronounced is this effect.

It appears to me that the turbulence of the air over the hills is continually throwing warm air from the ground to a considerable height, where the temperature difference is enough to start rising currents, while on flat ground it is necessary for the ground to heat the air to a greater extent before it starts to rise. Then it all goes up and its place is taken by cool air which must wait to be heated. Hence the periodic nature of cumulus over flat ground, and their continual existence over rough ground.

With all of this in mind, I could have gone around the stagnant area either by thermals or by ridge soaring, or waited for the clouds to form where I wanted to go. They did form 15 minutes after I landed and kept it up periodically until 10.30 at night, while I sat under the wing of the ship and watched them go towards a new record.

(To be concluded with accounts of flights by Emerson Mehlhose and Chester Decker.)



## Thermals in Other Climes

There are many parts of the world where soaring could be done, but where the possibilities are not yet known because nobody with any knowledge of the subject has ever been there to investigate. As the world's soaring pilots increase in numbers, and some of them inevitably go travelling, this ignorance is slowly being broken down. It is to be wished that more information on the lines of what follows could be sent to *THE SAILPLANE* by readers who are in a position to do so.

### In North Africa.

Biskra, in Algeria, holds an important place in the history of soaring flight, for gliding trials were held there as long ago as January, 1923, and a world's duration record (at that time) of seven hours was put up.

Recently Mr. J. W. S. Pringle, of the Cambridge University Gliding Club, visited Algeria and French Morocco, and found that there should be excellent soaring conditions over the escarpment of the Middle Atlas, some 200 miles inland. Here there is a north-west slope 1,000 feet high, up which the wind blows all the summer. Storks build their nests on the edge of this slope and just float out from it and become airborne without effort, and all the birds one sees are adepts at thermal soaring. The up-current rises to a tremendous height, for the cloud base is at about 10,000 feet, and above this level the cumulus clouds, which form a line along the range, grow to such a size they become cumulo-nimbus and disgorge rain. The curious thing is that, although the rain can be distinctly seen falling from the cloud base, it all evaporates before reaching the ground, except for an occasional extra large drop.

At any rate, a sailplane which became unbalanced in one of these clouds would have plenty of room to recover from a spin; but if the pilot had to take to his parachute, one wonders if he would ever come down.

### The West Indies.

During a holiday in the West Indies, principally Trinidad, Mr. J. P. Dewsbery found the most excellent thermal conditions, as shown by the pelicans which soared together in thermal currents in great numbers. But, though obviously a sailplane could do the same, there was nowhere on the island for it to land without getting badly broken up. If, however, a seaplane glider could be towed up off the water to a sufficient height, it could soar all day and return safely to the sea in the evening. If a suitable and not-too-expensive machine could be built, he might consider taking it out there next time he goes.

### Off African Coasts.

The problems of finding thermal currents over the sea, when its surface is warmer than the air above it, is still a problem. The air undoubtedly does ascend under such conditions, often in strips at regular intervals, as students of soaring flight have proved—from Sir Hiram Maxim (see his "Artificial and Natural Flight," published in 1908) to Professor Georgii, who

noticed long cloud streets over the South Atlantic when returning from the South American soaring expedition three years ago.

Similar streets of cloud were reported by Mr. Wills during his recent voyage to South Africa. He says they often formed in the evening, but were low and very shallow, and certainly didn't look as if the up-currents which produced them were strong enough to support a sailplane.

Long processions of cumulus clouds have often been described in the trade wind regions of the North Atlantic, but Mr. Dewsbery, on his West Indies trip, saw nothing of the sort that looked good enough to be soarable. (By the way, will the gentleman who once promised *THE SAILPLANE* some photos of these clouds kindly send them?)

It is worthy of remark that no-one has ever reported having seen birds soaring in thermal or cloud currents over the ocean. It would be a useful service to science if sailplane pilots who go for sea voyages could confirm this. It may be only that nobody ever looks for them.

### Along the Nile.

Captain Heath, whose GRUNAU BABY sailplane is approaching completion, is suddenly having to leave this country and go to Egypt. Work on the GRUNAU is being hurried up so that he can take it with him. He has been told by air pilots who have flown in Egypt that they invariably lose 200 feet of height on crossing the Nile, and this has given him the idea that, just as Peter Riedel found compensating up-currents on either side of the down-current along the Elbe valley when soaring from Berlin to Hamburg, so there should likewise be a line of rising air on each side of the course of the Nile. As the GRUNAU is stressed for aerotowing, there will be an opportunity to test the theory.

If ever the idea catches on in Egypt to such an extent to cause congestion along this great soaring highway, there is comfort in the thought that there will be two traffic lanes.

## Gliding Certificates

The following gliding certificates were granted by the Royal Aero Club on February 22nd:—

### "A" Certificates

No.	Name.	Club.	Date.
634	W. J. Douglas	London	13.1.37
635	E. A. J. Koch	London	6.12.36
636	R. B. Durose	Midland	20.12.36
637	P. M. H. Thomas	Cambridge Univ.	16.12.36
638	M. H. Maufe	Cambridge Univ.	6.12.36
639	J. P. Lassam	London	20.9.35
640	A. M. Aitken	London	10.5.36
641	R. C. H. Pinchen	London	13.9.36
642	C. H. Naylor	London	6.12.36
643	C. P. Abbott	London	9.8.36

### "B" Certificates

No.	Name.	Club.	Date.
637	P. M. H. Thomas	Cambridge Univ.	16.1.37
640	A. M. Aitken	London	13.8.36
638	M. H. Maufe	London	6.2.37
627	W. E. Crease	London	10.2.37



## Correspondence

### An Open Letter to the Soaring Society of America

DEAR SOARING SOCIETY,

It is really too bad that we aren't, after all, coming this year to Elmira, as we had hoped, but we are going to make a strong effort to come in 1938.

It is too bad for us, but I believe that it is for you too, because I think you could learn more from British machines and the British gliding movement than you ever have or will from Germany. This may be a hard saying, but let me elucidate.

If you look at the figures of soaring pilots in each country you will find that they fall naturally into two groups. Away ahead of everyone else come Germany, Russia and Poland. These three countries run gliding largely as an offshoot of military and State aviation, with all that that implies.

Leading the long group of also-rans comes Great Britain. But in this second bunch the enthusiasts have more or less to "glide by themselves." No doubt they are mostly assisted, but to a comparatively small extent; and they are run on the lines of private flying.

If you wished to extend your flying clubs and increase the number of your private owners, would you send a commission to examine, say, the German Air Force? The comparison is, of course, exaggerated, yet the identification of a highly subsidised, militarised gliding movement, with a sporting and amateur, relatively slightly assisted movement, is in some degree as inaccurate. And you have got to develop your movement along *our* (successful) lines. Yet from the talks I have had with various American enthusiasts it is clear that your whole attention is fixed on German methods and German machines.

Does it surprise you to learn that for a fraction of the \$100,000 spent on Elmira alone, we in England have created a permanent network of thriving and growing gliding clubs, turning out an increasing number of soaring pilots each year?

Does it surprise you to know that our secondary training machines, the KIRBY KADET or the TOTTERNHOE, have a better performance than your FRANKLIN trainer, and could be landed, duty paid, and assembled by any group of two or three enthusiasts at a cost of about \$350, against the FRANKLIN'S \$650?

Does it surprise you to know that the workmanship and finish of a standard British glider or sailplane is better out of all comparison to any standard machine from Germany or anywhere else? No one is aware of any of these things, but once they find out, British machines and equipment take a large share of the market. I shan't forget the sadness in a certain South African gliding club, which had just landed a German launching rope costing them £16, when I pointed out that my perfectly standard British one cost £6 10s.

You see, it doesn't even occur to people that anyone else makes the stuff. This is no doubt our own fault, because we are, as a nation, rotten bad advertisers.

But, although our machines are suitable, our methods are, for you, even more worthy of study, for we have built up a movement in circumstances closely approxi-

mating to yours; we have struck most of the snags and learnt how to get round them. For years we had to get on without support of any kind, financial or authoritative—in fact, by many we were regarded with positive contempt.

In comparison the growth of the militarised gliding movements has been as different as it could be. Large subsidies, influential national and military support, nation-wide propaganda, teams of workers to rig and launch and instruct each pilot—the whole aim and scope is different.

Well, maybe you will come to agree with me this year, next year, or some time. All I ask is: Come and find out; don't simply call in here for a day on your way to or from the Wasserkuppe. And this means you, Mrs. Warren Eaton, and you, Mr. Enyat. Whilst as for you, Mr. du Pont, before you buy your next quarter-dozen of advanced sailplanes, take a look at Slingsby's HJORDIS II. After which I had better say that I am neither a manufacturer nor financially interested!

Yours sincerely,

PHILIP WILLS.

P.S.—How about sending one or two enthusiasts over to one of our training camps at Dunstable or Sutton Bank this year to see for themselves?

### A Piece of his Mind

SIR,

I should rather like to know why articles are appearing in THE SAILPLANE comparing gliding with power flying, these pathetic attempts to justify gliding being more calculated to excite a power pilot's derision than to further the gliding movement.

Gliding should not require justification. Like yachting it is a good sport, but it is idle to compare a yacht with a liner or cruiser, or an amateur yachtsman with the commander of an ocean-going vessel.

Why "motorless (or real) flying"? This reminds me of a religious maiden aunt's: "If we were meant to fly, we should have been given wings." Why not introduce ornithopters and hop just like a bird? Go flap your wings.

In your article "Progress," it is amusing, perhaps, to note the difference in performance between power planes of twenty-five years ago, and sailplanes of to-day, and that the latter are now alleged to have reached the huge speed of 68 m.p.h., the speed of a plane in 1910. So what? If, by 1962, a sailplane has done 400 m.p.h., has crossed the United States continent (without condescending to be towed) at an average of a mere 300, or has flown to Australia (Channel permitting) in two or three days, it will be worth talking about. A sailplane may by then have performed a "pole squat" of 1,000 hours, but who will care?

The comparisons may be entertaining, but it is a pity that the "25 years' handicap" (your words) is sometimes so naively advertised by the outlook of the gliding world.



For example, several power pilots have received the impression that the gliding world can hardly credit the fact that flying could have happened before the advent of the gliding clubs. This may be an exaggeration, but the impression is strengthened by the many instances of power pilots being refused the use of certain sailplanes flown, nevertheless, by *ab initio* "gliders" scarcely competent to turn the machine in the desired direction.

This is no exaggeration, as I have in mind definite incidents of this kind, and these foolish things are apt to produce such letters as "Power Flying and Soaring" which appeared in *The Aeroplane* of February 3rd, 1937, and with which I am in agreement. (The writer of the letter is unknown to me.)

Further, power pilots are amused to find that simple

manœuvres, hardly worthy of the term "aerobatics," become the subject of conversation for a week or so if performed by a glider, and wonder how long the midnight oil would burn if a sailplane pilot dared a half roll.

Perhaps this accounts for the delightful statement in "Progress": "The actual flying, which many considered the most important activity of the new movement."

Certainly "flying" in a bar does become monotonous, and possibly explains why one hears of quite a number of glider pilots, formerly strict adherents to the motorless religion, who are graduating to machines having "little engines."

Cheerioh, I'll be seeing you (from above).

A. H. CURTIS.

## Among the Books

### II—THE FLIGHT OF BIRDS

**R**OSSITTEN, the little fishing village on the shores of the Kurisches Haff in East Prussia, is doubly famous for its connection with flying.

In July, 1896, Professor Thienemann first set foot in the place; he was entranced with the variety of bird life to be found there, and on the first of January, 1901, inaugurated the famous bird-ringing station, later to become world-famous for its contributions to knowledge of bird migration. For this narrow spit of land turned out to be the main highway for migration movements between northern and western Europe.

In May, 1924, Rossitten was again in the world's news, for the late Ferdinand Schulz set up what was then a world's duration record by soaring over the neighbouring sand dunes for 8 hours 24 minutes. Two years later a gliding school was established among the dunes, and it is, like the bird observatory, still going strong.

Passing through Königsberg on the way to this gliding school in 1930, we picked up Professor Thienemann's book, "Rossitten," which describes his life's work. The edition was published in 1928, at a time when human gliders had mastered the art of soaring over slopes, but had not yet tried thermal currents.

For sixty miles along this part of the Baltic coast there is an almost continuous line of dunes, rising in places to 200 feet. Their steep sides face south-east, from which direction the winds blow specially frequently at the spring and autumn equinoxes, just at the time when migration movements are in full swing. Among the birds which the Professor watched in flight are many soaring species such as buzzards and storks. He was also on friendly terms with the gliding men, as we found when there.

Yet from beginning to end of the book there is not the slightest sign that the author saw any connection whatever between the soaring of the gliders and the flights of his soaring birds. The gliders are dismissed in a few words in his introductory chapter; he just

mentions that they have established a school and admits that he knows they fly in up-currents. When he describes the birds soaring, as he frequently does, it is evident that he neither knows nor cares how it is done.

To take one instance: He gets a report that 30 or 40 of his storks, journeying to the south, were seen to interrupt their journey and indulge in an orgy of circling, and he concludes that they were looking for somewhere to land, but changed their minds and continued their flight. It just doesn't occur to this world-famous expert on bird flight that the storks had merely struck a good thermal and were using it to gain height without effort and give their muscles a rest.

#### Bird Migration

We still cherish the hope of persuading ornithologists, some day, to try and understand how birds soar. Meanwhile, there are many soaring pilots who are interested in bird migration—particularly in the question of how far the birds make instinctive use of air currents to help them on their way. Mr. R. G. Robertson, for instance, has suggested that soaring birds, when they migrate, instinctively choose routes over which the best up-currents are likely to be found, and that if such birds cover long distances entirely by soaring, it should be possible for sailplanes to "migrate" along the same routes at the same time, and thus, by daily stages, cover equally long distances.

The latest book on bird migration is that by A. Landsborough Thomson, published at 5s. in the "Bird-Lovers' Manuals" series of Messrs. H. F. & G. Witherby, Ltd. This gives in compact form an up-to-date account of the whole subject.

Although there are many observations which suggest that birds may time their departure on migration to suit the best soaring conditions, all are capable of an alternative explanation, which, of course, is the one offered by ornithologists.



For instance, while migration flights often stretch over a wide front in some regions, birds tend to follow well-marked features such as coasts and river valleys. It is true that bands of thermal lift tend to form where there are sharp contrasts, such as between sea and land, or between damp valleys and the dry hills bordering them. But it is equally true that these places are just where the birds are most likely to find food.

Though birds have an instinctive urge to start migrating at certain definite times of the year, the exact date varies within limits, and appears to be determined by weather conditions. It has been found that a high barometric pressure is the chief determining factor. To a soaring pilot this at once suggests good "thermal" weather, but the explanation given is otherwise: it is that the birds object to migrating in strong winds, whether favourable or unfavourable in direction.

It is curious that the date of departure does not appear to be much influenced by the wind direction. The fact that birds fly low in contrary winds, and are thus more easily observed, once led a famous ornithologist to state that they disliked a following wind because it "ruffled their feathers"; but this is no longer believed, even by ornithologists.

Small birds, as a rule, prefer to do their migrating by night; large birds—which category includes, of course, the soaring birds—by day. Again, the reason assumed is not that soaring is easier by day, but that the smaller birds fly by night for self-protection, when

the larger birds can't see them at it; further, their days are largely occupied in feeding.

The northward spread of a species in the spring often coincides with a definite isotherm—that is, the temperature must be above a certain minimum. Thermals? No; the reason is that in cold weather birds need more food to maintain their body temperature, and there is only a limited amount available and a limited number of hours of daylight in which to get it. Moreover, it is not the individual birds which follow the isotherm; those of a species which nest in higher latitudes are later in leaving their winter quarters; they do this to avoid catching up with their isotherm too soon.

Any student of soaring flight in connection with bird migration is hampered by the fact that it never occurs to writers on birds to distinguish between those which flap and those which soar. Yet undoubtedly, with some species, soaring flight plays a part in migration. Dr. Thomson quotes an observation by Admiral Lynes off Alexandria during September, 1906:—

"For an hour or so during the forenoon, for several days in succession, there was a considerable stream past the ship of white storks. . . . On reaching the far shore of the gulf (our side), they stayed their progress a little to assemble, wheeling around and mounting higher and higher, about five thousand strong—an impressive spectacle. Gradually they drew away, still circling round and still apparently rising, until finally, perhaps half an hour after the last of the pack

had passed the ship, the whole concourse of storks became lost to view at an immense height over the hills in the direction of Aleppo."

And for evidence that storks make use of thermals in their northerly, as well as southerly, migration, we may quote (not from the book) an extract from a letter to *The Times* (29.9.33) by L. Vera Risdon: ". . . in early spring every year thousands of storks fly up the coast of Palestine from south to north. They come down in large flocks for food and water, but are always moving on northwards, sailing slowly in great circles—a most beautiful sight."



The Brown Pelican, which has an appearance reminiscent of the ancient Pterodactyl, is an even heavier bird, with a weight of 25 lbs. It flaps its wings at a rate of only six times per five seconds. Note the "slotted" wing tip. Its relation, the White Pelican, is more noted for its soaring capabilities.

Photo by E. H. Matern. Courtesy Nat. Assoc. of Audubon Societies. Reproduced from "Bird Flight," by Gordon Aymar, published by John Lane, The Bodley Head. Block by courtesy of "Popular Flying."



### Bird Flight in Pictures

"The East Indian gentleman who declared that he was not interested in horse racing because it had been demonstrated long ago that one horse runs faster than another, was expressing an indifference comparable only to that of the ornithologist who neglects the subject of flight on the grounds that it is common knowledge that birds fly."

So writes Gordon Aymar, the author of a new book on "Bird Flight," published by John Lane at 12s. 6d. As far as we know, this is the first book on the subject in the English language in which sailplanes are mentioned. And the author actually got a sailplane pilot, the late Warren F. Eaton, to "read the manuscript with an eye to technical errors." He admits, further, that: "During the last fifteen years great progress has been made by sailplanes, in gliding and soaring, and from a study of their behaviour some light has been thrown on the soaring of birds." Would that more bird-lovers had seen the light!

The author has collected a host of facts about the evolution, biology, migration, and the manner, speed and height of the flight of different species of birds. At the end is a bibliography of 40 books and articles on the subject.

But the most striking feature of the book is the wonderful collection of 200 photographs of birds in flight. They must have taken some collecting. There

are photographs of birds flapping, soaring, diving, taking off and landing; sometimes a series showing the changing attitude of the wing during these manoeuvres. There is one which must be a record for shortness of exposure; it is a photo of a Mourning Dove, taken by Professor H. E. Edgerton and K. Germeshausen with an exposure of 1/75,000 of a second.

The only thing we miss—and we may be sure the author would have included it if there were such a thing—is a photograph of a sailplane and a bird soaring in the same up-current. Nothing else would do so much to carry conviction to the book's ornithological readers. As it is, the author has done his best by stating in the text that on one occasion Lewin Barringer (the American "Silver C" pilot) "soared beside a Turkey Vulture for ten minutes and finally outclimbed him." But when the famous American ornithologist, T. Gilbert Pearson, wrote: "From Mr. Aymar's *Bird Flight* I have learned more about the flying bird than I have otherwise gathered during fifty years of ornithological work," he was, it appears, referring to the pictures. He should have read the text, too.

### Postscript

We will conclude this review by quoting what Sir W. Beach Thomas wrote in an article in *The Observer* three years ago:—

"Mr. Orville Wright once told me how he and his brother watched the birds for hour after hour every day for years and learned almost nothing. Then the moment their machine mounted into the air they discovered the influence of the air currents."

Ornithologists, please note.

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An English writer, some years ago, expressed his belief that the power of soaring flight comes from "living an absolutely pure life and intense religious concentration." While this may (or may not) be applicable to human soaring pilots, it must, says Gordon Aymar, "have caused this writer some concern to fit such a bird as a Vulture into his scheme." Here is the African Vulture, a well-known soaring species, which, as described on the next page, recently matched its performance against that of a "Kirby Kite" sailplane.

Photo courtesy Underwood and Underwood. Reproduced from "Bird Flight," by Gordon Aymar, published by John Lane, The Bodley Head. Block by courtesy of "Popular Flying."





## Broadcasting

### Gliding Explained.

A TALK on "Gliding," by Miss Naomi Heron-Maxwell, which was to have been given last August, was broadcast as a luncheon-hour "Sports Talk," in January. According to a popular daily, Miss Heron-Maxwell was going to explain that "there can be few thrills to compare with that of being catapulted off the top of a hill, with nothing but a joy-stick to guide you through the elements!" However, Miss Heron-Maxwell, not being employed on a newspaper staff, knew something of the subject—being in fact a "Silver C" pilot—so listeners were treated to a very lucid description of the various kinds of soaring: hill-soaring, thermals and cloud-hopping, and storm-riding.

Some good advice was given to sailplane pilots who fly without parachutes (if any happened to be listening): "Unless there are blind-flying instruments in a machine, it is impossible to tell when in a cloud whether one is upside-down or right-side-up. It is like being in a white fog, and there is so much violent movement in the air that one can carry out the most complicated aerobatics without knowing anything about it. Therefore the best thing to do when approaching the base of a cloud is to shoot away at high speed and not turn round until the edge of the cloud has receded well into the background. . . I once saw a machine bid farewell to one of her wings under such circumstances, and although the pilot saved his life by jumping out with his parachute, the thought that I might one day have to do so myself with everything falling to bits round me has made me exceedingly cautious."

The report of the talk in *The Listener* of January 13th was illustrated with Mr. Richardson's fine photograph of a KIRBY KITE soaring along Dunstable Downs, reproduced from *THE SAILPLANE* of last August.

### Soaring Among Vultures.

A short broadcast after the evening news bulletins on January 13th was given by Mr. P. A. Wills, in which he explained what he had learned about the flight of vultures by actually soaring among them in a KIRBY KITE sailplane during his recent visit to South Africa.

As a result of his observations, Mr. Wills discovered that the vultures, who have to be on the wing all day and every day, parcel out the air into areas about half a mile square. Bird A, while patrolling his own territory, keeps a sharp watch on his neighbours B, C and D. They are all on the look-out for two things, food and thermals. If A either spots a kill or finds a thermal, B, C and D immediately dash in and join him, and their neighbours in turn follow suit. And if Mr. Wills happened to be soaring, he would fly over and join them too—if it was a thermal—and found that they would accept him as one of themselves, without a trace of fear. What was unexpected, however, was that this was no one-sided arrangement, for, said Mr. Wills,



Miss Naomi Heron-Maxwell, who recently gave a broadcast talk on Gliding, is here seen (centre) at Darmstadt, where she obtained her "Silver C" certificate last year. In the photograph are two other possessors of the "Silver C," both well known in this country: Fraulein Emmy von Roretz, who also obtained it at Darmstadt, and Mr. R. G. Robertson, who obtained it in England.

"if I found a thermal on my own, in less than a minute there would be a swish and a large brown bird with a wicked face would come whizzing in and join me, and in no time I would be one of half-a-dozen or more birds, wheeling so close that I could sometimes see their eyes." If the thermal took him higher than about 2,500 feet, the birds would usually leave him.

These observations suggest that the vulture has a comfortable range of vision of half a mile, either vertically (for spotting a kill below) or horizontally (for seeing if the next bird has spotted one). Even the KIRBY KITE sailplane was apparently assumed by the birds to have a similar range of vision when looking for a meal, for it was found that if the machine gate-crashed into the territory of bird A, he would move along one place to B; presumably B would then move to C, and so on all along the line, perhaps down to the coast, 400 miles away.

The talk was published in *The Listener* for February 3rd.

### Two-way Radio for Gliders.

The Yorkshire Gliding Club, it is announced in the Press, hopes during the summer to introduce two-way radio-telephonic communication between pilots and the landing ground. It will be the first time such a thing has been done in this country. (An attempt to broadcast from a sailplane in flight was proposed for the B.B.C. broadcast given from the London Gliding Club last November, but was found impracticable at the last moment.) It is stated that the instrument will be used for the instruction of pupils, and will also be an advantage to pilots while on distance flights.

### Another "Flying High" Broadcast.

The B.B.C. informs us that on March 29th, at 8 p.m., another broadcast will be given on the lines of "Flying High," which was given last November and represented a war-time concert party of the Royal Flying Corps, complete with "tarmac" noises off. More and better noises are promised.



## Coming Events

**Easter.**—Yorkshire Gliding Club, Open Meeting and informal competitions, Friday, March 26th, to Monday, March 29th. Derbyshire and Lancashire Gliding Club, meeting from Saturday, March 27th, to Tuesday, March 30th (according to the local Press).

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**Whitsuntide.**—Yorkshire Gliding Club, Open Meeting and informal competitions, Saturday, May 15th, to Tuesday, May 18th. German model sailplane competitions at the Wasserkuppe.

\* \* \*

**"Istus" Meeting.**—A meeting of the International Commission for the Study of Motorless Flight will be held in Salzburg at the end of May, concurrently with an international soaring competition on the Gaisberg, near Salzburg, from Wednesday, May 26th, to Monday, May 31st.

\* \* \*

**Yorkshire International Rally.**—Yorkshire Air Services County Club are holding an International Rally on June 4th, 5th and 6th. The programme includes a visit to Sutton Bank on June 6th, and the Yorkshire Gliding Club are in consequence holding an Open Meeting on Saturday and Sunday, June 5th and 6th. Full accommodation for both sexes will be available, also all meals, etc. Many well-known German gliding men are expected at the Rally.

\* \* \*

**International Meeting.**—The meeting organised by the "Istus," to which a British team is expected to be sent, is from Sunday, July 4th, to Sunday, July 18th, at the Wasserkuppe, Rhön Mountains, near Fulda. Each nation may enter five machines, and more than one pilot per machine; there are two classes, for "Silver C" and "C" pilots respectively. The German national soaring competitions will probably follow this meeting.

\* \* \*

**August Bank Holiday.**—Yorkshire Gliding Club Open Meeting, Saturday, July 31st, to Monday, August 2nd.

\* \* \*

**Instruction Camp.**—At Sutton Bank, organised by Yorkshire Gliding Club, Sunday, August 1st, to Saturday, August 14th, inclusive. For particulars see elsewhere.

\* \* \*

**Yorkshire Contest Meeting.**—Open Contest Meeting at Sutton Bank, held by Yorkshire Gliding Club, Saturday, August 14th, to Sunday, August 22nd. It is hoped to have aero-towing facilities available.

\* \* \*

**B.G.A. Competitions.**—At the last Council Meeting of the British Gliding Association it was decided to hold the Annual Competitions at the site of the Derbyshire and Lancashire Gliding Club at Camphill, Great Hucklow, from Saturday, August 28th, to Sunday, September 5th, inclusive.

## News from the Clubs

### London Gliding Club

**Saturday, February 6th.**—A good W.S.W. wind until 4 p.m., when it began to fade out. Till then there was good soaring, the machines in use being two club GRUNAU, KADET, TOTTERSHOE, DAGLINGS, WHITE WREN, GREEN WREN, Davis's SCUD, Baker's GRUNAU, HISCOX's KITE, and RHÖNSPERRE. In the last Descent, just returned from a holiday in the West Indies, actually took up a barograph, but only made 800 feet as there were no thermals. He and Baker found best lift over Whipsnade, but it was best opposite the hangar according to HISCOX. There were some long-drawn-out cumulus, but they didn't affect the lower air.

A KADET pilot hit the hill with a wing and cartwheeled, just after making a turn—not, apparently, as the result of a stall, but simply through under-estimating the machine's span. One-third of a wing was broken, and the other tip and the nose dented, but nothing else gave way on this stoutly-built machine.

**Tuesday, February 9th.**—A party of half a dozen came over from Cambridge and got out four machines: TOTTERSHOE, FALCON, GRUNAU BABY and their own GREEN WREN. Three of these got up to 600 feet in the fierce west wind, while the other scraped along the hill with its nose well down "to prevent it going backwards." Part of the time a bird diagnosed as a kestrel kept the GREEN WREN company, evidently doing its best to justify its reputation as an "improved wren."

**Wednesday, February 10th.**—Some good soaring until, about 4 p.m., the lift temporarily vanished and everyone sank below. This was curious, as the wind continued to blow as hard as ever, and the wind-sock at the top streamed out horizontally while the sock at the bottom hung limp. It was as if a mass of dead air had suddenly settled on the lower ground, with its surface lapping the hill-top, so that the wind merely blew horizontally across it without providing any lift. Before long the lift returned as mysteriously as it had gone.

Dr. Edmunds in the Slingsby GRUNAU got round three times beyond Dagnall, so good was the lift at first. He noticed bits of meat lying about in the lion and tiger pits at the Zoo, which gave the comforting thought that, "if anything should happen," they had already assuaged their appetites.

Two "C" flights were made in the nacelled DAGLING; the first was faultless, as seen from below; the second may have been equally faultless, but was seen from the air, which always makes everything lower down look as if it is creeping along the ground.

**Saturday, February 13th.**—Descents from the top in hardly any wind; the longest was 1 min. 50 secs. in TOTTERSHOE.

In the evening another very successful dance was held, with the New Victoria Band as before, and a cabaret entertainment included, given by performers from the Luton Hippodrome.

**Sunday, February 14th.**—A soaring wind sprang up about 2.30, and an indefinite cloud base, which had been down on the hill, rose to 100 or 200 feet above it. The wind shifted about between W.S.W. and S.S.W., and not everybody could keep up. HISCOX, flying through the haze at 200 ft., encountered Dent similarly engaged, and had to make a quick dive and quarter-roll. Rumour had it that their wings had touched, until first-hand information from the pilots revealed that they had been at least 50 yards apart.

**Saturday, February 20th.**—A stiff W.N.W. wind, with some excellent-looking clouds—very like those on March 18th, 1934, when three distance flights were made. But this time they did not provide much lift at hill-soaring levels.

Dent did a flight of 5 hours 10 mins. towards a "Silver C." He has once exceeded the 1,000 metres, but unfortunately without a barograph, so has still the altitude and distance flights to do.

Sproule turned up from Yorkshire, took Baker's GRUNAU up to 1,000 feet and looped it.

**Sunday, February 21st.**—Yesterday there was over 20 hours' soaring; to-day 37 hours, bringing the total for the week up to 60 hours 39 minutes. There was said to be a record number of machines in the air at once; as usual in such cases, everyone counted a different number, and four different people assured us that the maximum was 11, 12, 13 and 14 respectively. As the belt of lift was half a mile wide, and people were getting heights up to 2,000 feet, there was plenty of room.

The day started well before breakfast, when Greig went up in a GRUNAU, Collins in the FALCON, and Dent in his KITE. The sky was clear when they started; after a bit scraps of low cloud formed, and Dent found that there were patches of extra lift when no clouds were overhead, and vice versa. For instance there would sometimes be a short "street" of cloud; while





K. W. Turner, in a "Grunau Baby," works his way along Dunstable Downs towards Whipsnade Zoo (February 9th).

was approaching there would be a heave upwards (perhaps from a gust?) which would raise the machine an extra 100 feet; then as the clouds came over the air would go "flat." This contrasts with other pilots' experiences, when such bits of cloud, even if not real cumulus, seem to provide extra lift if the sailplane is not far underneath. Dent got up to 1,400 feet; he said the clouds were below 2,000 feet.

Later the cloud base rose higher, well above the 2,000 feet reached by the RHÖNSPERBER. Baker in his GRUNAU also got to 2,000 feet. Sproule flew Hiscox's new KIRBY KITE, having brought it from Yorkshire the previous day; he looped it to show it was up to standard.

Two more "C" flights were done.

**Saturday, February 27th.**—Our resident instructor being away on a well-earned holiday, opportunity has been taken to repair and renovate the winch which hauls machines to the hill-top. So launches were by winch from the bottom this week-end. To-day, in a fierce S.W. wind, five launches and three flights were made in the Slingsby GRUNAU. Two of the three pilots, Stephenson and Greig, chose this blustering day for their first experience of winch-launching.

**Sunday, February 28th.**—A blizzard with winds gusting up to 65 m.p.h. at Manchester, 88 m.p.h. at Pembroke, and 98 m.p.h. at Holyhead; trees and telegraph posts were blown down across main roads, vessels in distress off the coasts wireless for help, and steamers were blown ashore, whole districts cut off from the "grid," buses and cars abandoned in snow drifts, and a train lost for six hours, the Isle of Wight ferry suspended, no air services could reach Croydon, and all Imperial Airways services to the Continent were cancelled.

At Dunstable, flying took place as usual.

True, there weren't quite so many machines up as last Sunday, only the Slingsby GRUNAU and CAMBRIDGE II. being got out and winched up. In the CAMBRIDGE Furlong flew, or was tossed up and down, for 50 minutes with a snow-covered wind-screen (except for the peep-hole on each side). When he came down and dismantled, much snow was found to have oozed through into the centre section. In the GRUNAU Dent, Stephenson, Grant, Wilkinson, and Edmunds soared for periods of about 20 minutes over the north-west slope, being too busy with the controls to notice the cold. The last two or three frequently disappeared into cloud. Often a squall would blow up snow from the club

ground to a height of three or four feet, and Dr. Edmunds, in landing, found his goggles became covered with drifting snow just as he got within two feet of the ground, and he had to land "blind." All ground transport to-day was done with not less than four men holding the machine down.

### Summary of Flying.

Date.	Ground-hops.	Winch launches.	Hilltop launches.	Flying Time.
				h. m. s.
Feb. 1, Monday	9	—	—	— — —
" 3, Wednesday	7	—	—	— — —
" 6, Saturday	21	—	34	14 28 0
Feb. 8, Monday	13	—	—	— — —
" 9, Tuesday	—	—	6	6 29 0
" 10, Wednesday	—	—	20	3 56 16
" 13, Saturday	14	—	17	— 17 14
" 14, Sunday	50	27	11	5 58 29
Feb. 17, Wednesday	—	—	8	2 50 0
" 20, Saturday	—	—	27	20 49 0
" 21, Sunday	16	15	46	37 0 0
Feb. 27, Saturday	—	5	—	1 0 0
" 28, Sunday	—	6	—	2 26 0

### Certificate Flights.

February 6th.—Maufe, "B."  
 February 10th.—Crease, "B"; Gardiner, "C"; Thomas, "C."  
 February 13th.—Cowley, "A"; Lewis, "A."  
 February 14th.—Matthews, "A"; Miss Strangways, "A."  
 February 20th.—Dent, part "Silver C" (duration).  
 February 21st.—Maufe, "C"; Pasold, "C."

### Totals.

Week ending	Launches	Flying Time	Certificates
February 7th	81	14 hrs. 28 mins.	1
February 14th	158	16 hrs. 41 mins.	7
February 21st	112	60 hrs. 39 mins.	3
February 28th	11	3 hrs. 26 mins.	—

## Yorkshire Gliding Club

**Saturday, December 5th.**—Wind W., 20 m.p.h. The KIRBY KITE was flown for 20 minutes by Sproule and the KADET for 15 minutes by Gurteen.

**Saturday, December 19th.**—Wind S.W., 25 m.p.h. Lingford arrived, feeling very energetic, and did 1 hour and 10 minutes in the G.B.

**Sunday, December 20th.**—The weather was not so good, but Stedman and Wordsworth did 15 mins. and 8 mins. respectively in the G.B.

**Saturday, January 2nd.**—Wind S.W., 35 m.p.h. Christmas is over and the New Year is starting well. Gurteen was launched in the KADET and landed after 45 minutes.

**Sunday, January 3rd.**—Wind S.W., 35-45 m.p.h. Low cloud. The G.B. was flown by Pick (A. O.), Wordsworth, Lingford and Shaw, the maximum height attained being 1,000 ft. FALCON I. was flown by Gurteen, and FALCON IIIS by Heath, taking Hartness as passenger for dual. Darkness descended very early, and the FALCON IIIS tail was slightly damaged in the bushes on landing.

**Sunday, January 10th.**—Wind S.E., 15 m.p.h. Hartness hopped the HOLS.

**Saturday, January 16th.**—Wind W., 15 m.p.h. After much rushing about Gurteen was launched in the FALCON, landing after 30 minutes. Shaw was launched in the KITE and Sproule in the G.B. for 44 minutes and 30 minutes respectively. As darkness began to fall the Watson family and other members rolled up for the "before the party" preparations.

**Sunday, January 17th.**—Definitely not a good day for flying. Rain and a howling wind. Everyone settled down to think about the Christmas dinner which was to be served at 5 p.m. Various members spent some time in the bunkhouse in anticipation of dancing there later in the day. Damsels from afar were imported to amuse our stalwart birdmen, and more than 50 people, filled with goodwill (amongst other things), had a riotous time.

**Sunday, January 31st.**—Sutton Bank was snowbound. The drifts were well over the walls and the few members who ventured out had to leave their cars at the end of the lane and walk up to the clubhouse.



**Saturday, February 6th.**—Wind S.W., 30-40 m.p.h. Members full of the joys of spring turned up early.

Flying was as follows:—Wordsworth in G.B., 55 mins., 750 ft.; Gurteen in FALCON, 2 hours 7 mins.; Sharpe and Michell in FALCON IIS, 38 mins., 1,200 ft.; Shaw in G.B., 1 hour 17 mins.; Sproule in KIRBY KITE, 30 mins.; MacMurdo in KIRBY KITE, 20 mins.

**Sunday, February 7th.**—The HOLS was hopped by Hartness and Michell, both qualifying for their "A" certificates. The FALCON was circuted by Alderson, Bruce, Heath, Tuck and Gurteen, and the G.B. by Holdsworth, Stedman and Wordsworth.

**Sunday, February 14th.**—Wind S.W., variable. A very dull morning, but a much brighter afternoon.

Flying was as follows:—Sproule in KIRBY KITE, 1 hour 5 mins.; Gurteen in FALCON, 1 hour; Sharpe in FALCON IIS, 30 mins., with passenger; Barker in SCUD III., 45 mins. (this is the first soaring flight of SCUD III.); Stedman in G.B., 45 mins.; Slingsby in KIRBY KITE, 15 mins.; Watson in FALCON, 50 mins.; Holdsworth in G.B., 30 mins.; Sharpe in FALCON IIS, 25 mins., with passenger; Sproule in KIRBY KITE, 30 mins.

Unfortunately the old Morris somehow got stuck in the mud, and I understand Holdsworth spent the whole of Monday (his day off) digging it out.

**Saturday, February 20th.**—Wind west, 30-35 m.p.h. Hastwell and Wordsworth soared the GRUNAU.

**Sunday, February 21st.**—Wind N.W., 30-35 m.p.h. Activities commenced early, some members having been on the spot overnight, but it was our unlucky day.

Holdsworth was launched at 10.45 a.m. (landing at 12.15) in the GRUNAU, but later in the day this machine was put out of commission.

The total flying time of the FALCON I. reached 2 hours 43 mins., but unfortunately, through misjudgment on landing, she cart-wheeled on to her back and was extensively damaged.

Barker soared his SCUD III. from 2.35 to 3 p.m., reaching 1,200 ft.

FALCON IIS was flown by Sharpe and Hastwell, each taking passengers, Sharpe getting a height of 1,800 ft.

R. C. Pick and Gurteen each tried the KADET for 25 and 15 minutes respectively.

**Easter.**—An open meeting with informal competitions will be held from Saturday, March 27th, to Tuesday, March 30th. Visiting pilots and private owners will be very welcome.

**Visiting Pilots.**—The following is extracted from the Yorkshire Gliding Club's programme for 1937, which was included in last month's SAILPLANE AND GLIDER:—

"Private owners of sailplanes visiting Sutton Bank with their machines are assured of a very genuine welcome at all times, and those who wish to spend a gliding holiday with the club will find the best of facilities at their disposal. Complete residential accommodation is available in the clubhouse at all times (Full Board per day, 7s. 6d.; En Pension per week, 2 guineas—minimum seven consecutive days). A Ground Engineer and winch driver will be in constant attendance, and hangar accommodation can be arranged at all reasonable times. It is hoped to have aerotowing facilities available during 1937.

"At the Easter, Whitsuntide and August Open Meetings all visiting pilots are made honorary members of the club for the period of the meeting, and at other times a small charge is made for temporary membership, hangarage, etc. Approved visiting pilots may fly club machines by arrangement on taking up a short-period membership."

## Midland Gliding Club

February has been another disappointing month, and apart from one week-end's flying there has been no activity at the Mynd.

**February 20th and 21st.**—An 18 m.p.h. westerly wind made flying possible, and both Wynne and W. G. Edwards flew the KITE and FALCON I. respectively on Saturday afternoon, and on Sunday a total of 10 hours' flying was completed during the day.

Although the clouds were low the morning conditions were quite pleasant, apart from an occasional rain squall, and there were as many as five machines in the air at one period. At about mid-day a very unpleasant hail squall drove the two-seater PROFESSOR and KITE up to the north end of the Mynd and eventually forced them to land in fairly quick succession. Wynne handled the PROFESSOR very prettily in spite of the weather conditions, and at the moment is inclined to look on it as his own personal property.

Just after mid-day rain and low cloud, together with a falling wind, made flying rather unpleasant, but did not prevent Dr. Gifford from being launched in the KITE for the first time. The process of launching Gifford is almost a ceremony, there being a long succession of howls from the pilot until the business of flying the machine takes his breath away and stops further noise.

Few people saw it actually happen, but very shortly afterwards rumour had it that Dr. Gifford had landed somewhere towards the north end of the Mynd. A rescue party armed with a bungy set out to locate him and found the KITE fuselage broken in two with the nose portion inverted. Gifford looked half-hatched in the cockpit and could not move until assisted. Happily his injuries were no greater than a bleeding nose. Apparently he had attempted to make a down-wind landing on the brow of the hill after being caught in a terrific down-draught, and somehow things did not work quite as he had hoped. This is a sad story, because the KITE had only just been returned from Slingsby's after at least a month's absence.

Another exciting incident was the breaking of the bungy when the two-seater was being launched by the horse hired for the occasion. The bungy and shackle shot back at the two-seater and narrowly missed Wynne's head. Happily nothing was damaged other than the leading edge and a little downy growth on the side of Wynne's cheek.

During the day Overall and Whalley were successful in making their first solos in FALCON I. Both these achievements caused considerable enthusiasm, particularly in the case of Whalley from the Hereford Club, who has waited for this moment for months.

A cheerful note was struck on February 19th when the second club dance of the season was held in the New Inn's Hotel, Handsworth. This was a very jolly affair which several members of the Derbyshire and Lancashire Gliding Club attended. Mr. and Mrs. Meads, Mr. and Mrs. A. L. Slater, and Mr. and Mrs. Thompson were notably present, and we did very much appreciate their enthusiasm in travelling very considerable distances for such an occasion.

## Southdown Gliding Club

### Annual Report.

From the club's "Sixth Annual Report," which we have received, the following information is extracted:—

The year 1936 has marked a turning point in the club's history by reason of its establishment, at long last, of this society in its own home. Buildings valued at considerably more than their actual cost have been erected, and comprise a hangar, capable of housing eight fully rigged gliders (or many more if the wings are detached), a workshop with wood and metal-working benches, a club room with canteen counter, an office, a lavatory, a kitchen store, and a power house for generating electricity. The Lawford Memorial Fund reached a total of over £50 during the year, and this amount was expended upon furnishing the club room and sundry amenities.

The new buildings were formally declared opened on Saturday, August 1st, Mr. Gordon England introducing the Mayor and Mayoress of Brighton, who respectively opened the buildings and unveiled the memorial. Mr. Robert Kronfeld (who is a club member) flew over from Hanworth in a Super-Drone ultra-light-aircraft and generously gave exhibition sailplane flights. Prior to the opening all energies were concentrated upon the completion of the club's new home; but immediately afterwards the great benefits of not having to de-rig machines, and of having proper accommodation for all aspects of club activity were readily felt and appreciated, and flying began again in earnest.

In August the general secretary made a tour of the principal gliding clubs and reported upon recent changes in current gliding practice. It was decided to develop the use of winch launching for all grades of club flying, and to appoint instructors in charge for each week-end. Flying records, in the particular form required by the Air Ministry, were begun in September, and for the last four months of the year these show a total of 784 launches. Several certificate flights were officially observed, but only one, a "B," applied for the issue of his certificate. This is a matter of regret, since, through the generosity of Mr. R. F. Dagnall, the chairman of the club, the sum of £50 is payable into club funds under claim by certificate winners, at the rate of £2 for a "B," and £3 for a "C." The club was represented at the annual competitions organised by the British Gliding Association. In the matter of donations, Mr. Dagnall gave also a cash sum of £50; and the treasurer has received gifts from other members totalling over £60; while a good Chrysler car, now being converted as



winch, was presented by Messrs. L. E. Hatcher, Jameson, and Copeland.

Club machines now comprise an R.F.D. training machine, an R.F.D. soaring-practice secondary machine, a dual-control optional one or two-seater sailplane (B.A.C. 7), with special skid type landing gear, and the R.F.D. high efficiency sailplane. Members' machines include two GRUNAU H.'s, a PRÜFLING, and the TURN sailplane. Two other privately owned machines are under construction. Club transport comprises three Morris retrieving cars, one Chrysler auto-tow car, one Chrysler winch car, two trailers, and a hand trolley. There is under order a complete set of winch gear designed by the chief ground engineer, Mr. G. A. Little.

During the year the club's claim to be subsidised out of the Government grant was finally recognised by the Subsidy Committee of the British Gliding Association, and grants were received in respect of the club's expenditure upon new buildings, lease costs, site improvements, and glider parts.

The statement of accounts discloses a very favourable position, with loan account reduced to £150, a cash balance of some £70, and club assets of a value approaching the £1,000 mark. Membership now totals nearly 50, with a gradually increasing number of inquiries from month to month.

In the matter of club activity, Beginners' Groups are given special attention on Saturday afternoons (conditions permitting), and workshop practice meetings are conducted on Saturday evenings. During the season of longer hours of daylight, flying is also carried on in the evenings.

The committee look forward with confidence to another year of progress.

At the seventh Annual General Meeting the following officers were elected: Chairman, R. F. Dagnall; Hon. Gen. Secretary, A. York Bramble; Hon. Treasurer, Dr. V. C. Hackworth; Chief Ground Engineer, G. A. Little, B.A.; Chief Instructor, G. A. Little; Flight Secretary, G. Rubick; Club Delegate, G. A. Little; Canteen Secretary, G. Rubick; and the following to complete the Committee: Messrs. Stevens, Cox, Hatcher (W. L.), and Dunning. The Transport and Power Engineer, R. Goodwin, was co-opted to serve on the committee *ex officio*. Official repairers, Messrs. Rubick & Dunning, of Worthing. Assistant instructors, Messrs. Rubick, Stevens, Davis, Filmer, Hatcher (L. E.), and Jameson.

## Newcastle Gliding Club

**September 6th.**—Strong winds abated at 5.30 p.m., then CRAMCRAFT was used for training until dusk.

**September 13th.**—An early start was made and ab initio had the time of their lives. A mild sensation was caused when CRAMCRAFT was taken up in a climb reminiscent of Stedman in the CITY OF LEEDS. The winch car operators were distinctly worried until the pilot cast off and turned. They then recognised Allan's lanky legs silhouetted against the sky, and knew that the situation was well in hand. Coates, our extra heavy-weight (a burden to the club), attained 80 feet, beating his previous record by 79 feet 11 inches.

**September 19th.**—In order to speed up training, O'Grady and Miller organised a "Mainly for Beginners" class to be held each Saturday afternoon. Ten members turned up and stayed overnight. A damaged fuselage put an end to flying, but, thanks to efficient organisation and a really stout Ground Engineer, a spare fuselage was covered and doped in the Newcastle workshop by midnight, and arrived at Meot Law early on the Sunday morning.

**September 20th.**—Bad weather prevented flying until 6 p.m. Bell got his "A" with 35 seconds in CRAMCRAFT.

**October.**—A very dull month, with duller notes than those above, and to save the Editor the trouble we have scratched them out ourselves.

**November 1st.**—On this day we moved to winter premises at Cramlington Aerodrome, which has many advantages: (1) Six machines can be housed in the hangar fully rigged; (2) there is a 15 minutes' bus service; (3) it is only 10 miles from Newcastle; and (4) it is an "A" and "B" winch site. A convoy consisting

of 12 vehicles caused much excitement, and at times congestion, on the public highways.

**November 7th.**—Due to putting our new house in order and sorting gear, etc., flying did not commence until 4 p.m. O'Grady made several test flights and Hick finished the day with a spectacular down-wind landing at about 50 m.p.h.

**November 8th.**—With the Ground Engineer lecturing at the Tees-side Gliding Club, and the Secretary operating the lantern, and the Chief Instructor leaving early, the rest of the local lads were free to do some spectacular work—and they nearly succeeded. Allan took P.4 machine up to 400 ft., and when the cable dropped off he was hanging at 45 degrees. He immediately went into a spin and brought it out in a masterly manner. Later, Burningham handled the machine so well that a lady was heard to remark: "There is nothing very thrilling about gliding." We are glad that members do not play up to their public.

**November 14th.**—The eagle eye of our G.E. (Alex. H. Bell) discovered a slight fracture in P.4 strut. However, our new Slingsby Primary (P.5) had arrived, and this exceedingly well-finished machine was put in commission at once.

**November 15th.**—No flying due to heavy rain. Mrs. Miller provided tea for 20 people three times. When will her husband get the beer in the bar?

**December and January.**—As the notes writer has started a stay-in strike we have engaged a new "news" staff, but the detailed notes for these months remain a blank.

Tests were made on an experimental method of bungy launching for sailplanes, devised by Mr. O'Grady. This consists of a hand-operated winch and the tests were quite successful. It will be employed on one of the soaring sites available to the club, and described in detail later.

Work is well in hand on the KIRBY KADET at the club workshop in Newcastle, but we would like to have this place used more often each week, and thereby get full value for the rent.

**February 14th.**—Between 1 p.m. and 5.30 p.m. 56 launches were made by winch and auto-tow. A crowd of spectators saw the DAGLING doing circuits and a competition in "S" turns between Wood and Taylor, who both got their second legs towards their "B's." Previous tickets taken in this period are Angus, Wood, Taylor and Coates. Bell is previously mentioned.

## Cotswold Gliding Club

Owing to extremely bad weather the Cotswold Gliding Club was able to do very little flying in January. On the only day on which flying was possible, at Kencot Hill Farm, a breeze from the south-west made conditions ideal for primary training. About 20 launches were made. One member with only one previous ground-slide to his credit caused great excitement by pulling the DICKSON off into a "Fury"-like climb; a stall followed, and a broken landing wire, which was quickly repaired.

Although so little flying has been possible various members have turned up each week-end and put in useful time overhauling and renovating the DICKSON, which is now in perfect trim.

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