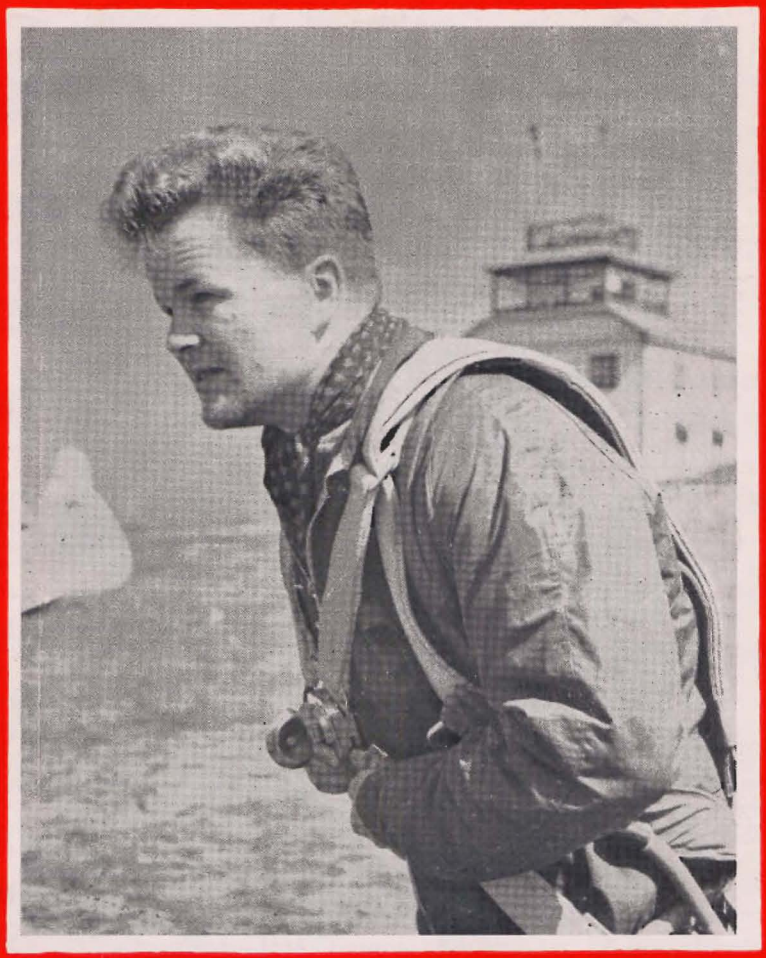
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The First Journal devoted to Soaring and Gliding



MAY/JUNE 1955

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COVER PHOTO :
Mr. Seppo Relander is ready for a Training Flight. Photo : Jussi Soini, Finland.

Editorial

OUR next issue, the July/August one, will be appearing on July 18th—in time for the National Contests which are being held this year from the 24th July to the 1st August at Lasham Airfield, a few miles from Alton in Hampshire. Lasham is the headquarters of the Surrey Gliding Club, the Army Gliding Club, the Imperial College Gliding Club, and the Gliding Club of the Crown Agents for the Colonies, all of which apparently live together in peace and harmony.

Would that we could say as much for some of the other Clubs scattered around the world. 'The —— Club is as usual reft with internal dissensions.' 'In the —— Club the majority of the members rarely if ever fly at all. They do, though, waste three hours of the best flying weather screaming at each other over lunch. . . .' No names, no pack drill ; but the writers will recognise their phrases.

What a pity it all is ! *Why* do we fight so often ? Is it because glider pilots one and all are individualists, slightly outside the ordinary run of the mould and therefore all that more difficult to fit together ? Like other individualists we tend to work better and in closer harmony under a benevolent dictatorship. Committees are too vocal when most of us hold such decided opinions, and though we are fundamentally friends united by a common passion, all too often we are equally disunited by a common exasperation and resemble rather a litter of healthy lion cubs than little birds in their nest agreeing.

Once before in these pages we made a plea for mutual tolerance. That it can work was evident at our disastrously weather-bound World Contest of last summer, but perhaps we need a leavener like the British weather to unite us among ourselves. Next time you find yourself saying 'The old hands hog all the flying,' or 'The new members don't do a hand's turn of work between them,' think on these words and be tolerant—if you can. The restraint will at any rate be good for your soul, and perhaps the self-control may be equally good for your flying.

STOP PRESS NEWS

TWO NEW BRITISH RECORDS

U.K.—15th May. Lorne Welch has crossed the English Channel yet again. In 1950 he flew from Redhill, Surrey, to Brussels in a single-seater sailplane. Yesterday he flew from Lasham, Hampshire, to Louvain, Belgium—a distance of 250 miles—in the new Slingsby two-seater 'T-42,' with Frank Irving as co-pilot. This is the first two-seater crossing of the Channel to be made.

Welch and Irving took off at 10.55 a.m. and reached Dover by lunch time. Here they found lift to 8,000 feet and took 20 minutes to cross the Channel, reaching the coast of France with 4,000 feet in hand. With cumulus clouds and a strong wind they eventually touched down at Louvain after being in the air for 5 hours 40 minutes.

This gives Lorne Welch the British two-seater distance record over his own previous best of 151 miles.

Thunder and hailstorms combined with a bitter wind to provide two other good flights over the weekend. On Saturday Col. Deane-Drummond reached 19,000 feet in an 'Olympia,' and on Sunday Geoffrey Stephenson climbed to 10,000 feet. (Geoffrey Stephenson is the British Gliding Association's candidate at the French National Contest, to be held at Poitiers from June 25th to July 10th).

U.S.A. Flying again at Bishop, California, Cdr. Nick Goodhart, R.N., of Great Britain, has reached 37,000 feet from an aerotow to 13,000 feet thus bettering his own 30,500 feet at Bishop in January, and Philip Wills' 30,400 feet in New Zealand in December (a British altitude record). All three flights were made in standing waves, the Californian ones being over the Sierra Nevada and the New Zealand one over Mt. Cook in the South Island.

The July/August issue will be published on July 18th.

Brazil's Second National —Soaring Contest

By
GEORGE MÜNCH



Opening day of the 2nd National Soaring Contest in Brazil. In foreground a 'Leister Kaufmann' modified from two- to one-seater. The next sailplane, first in the line, is a 'Spalinger S-25A' two-seater. Other machines are national designs

THE aerodrome of the Aeroclub Bauru got the honour of being chosen as the place for the Second National Soaring Contest.

Bauru is situated in the centre of the state of Sao Paulo and some 280 km. away from the capital of the state called by the same name. The contest took place between the 26th January and 5th February.

The 13 pilots flew in two groups (classes) A and B—the first high performance, and the second training sailplanes. Entries in Class A and B were :—

CLASS A

Pilot.	*Aeroclub.*	*Sailplane.*
Acacio Mauricio	Bauru	Spalinger S-25A
Benedito Cesar	,,	Elfe (wingspan 9 m.)
Manoel Procópoi	,,	Leister Kaufmann
José Kovacs	S.J. dos Campos	Kranich I
George Münch	,, ,,	Prototype BN-1

CLASS B

Paulo P. Lopes	Bauru	Grunau Baby II
Aldo V. da Rosa	S.J. dos Campos	,, ,,
L. S. Cavalcanti Lins	,, ,,	Neiva B
Breno B. Junqueira	,, ,,	,,
J. Gabriel	Juiz de Fora	,,
Sisson Tavares	,, ,,	,,
João Tavares	,, ,,	Grunau Baby II
Paulo Guimarães	,, ,,	,, ,,

After the opening ceremony on 26th January, weather continued well and so it was possible to start the contest next day.

13 sailplanes lined up for the 1st task :—

27th January. Speed on goal flight same goal for both classes. The 13 pilots were asked to reach the aerodrome of Garça—65 km.

CLASS A

Pilot.	*Sailplane.*	*km./h.*	*Points*
1. José Kovacs	Kranich	61.0	1,000
2. George Münch	BN-1	60.0	990
3. Benedito Cesar	Elfe	47.6	872
4. Acacio Mauricio	Spalinger	55	358
5. Manoel Procópio	L. Kaufmann	35	268

CLASS B

1. L. S. Cavalcanti Lins	Neiva-B	48,8	1,000
2. Aldo Vieira da Rosa	Grunau Baby	48.2	993
3. Paulo Guimarães	,, ,,	48.2	917
4. J. Gabriel	Neiva-B	32.6	825
5. Paulo P. Lopes	Grunau Baby	30.8	805
6. Breno B. Junqueira	Neiva-B	55	405
7. João Travares	Grunau Baby	25	123
8. Sisson Tavares	Neiva-B	15	29

It was a big and happy surprise to everybody in the contest, that nobody crashed or damaged his sailplane by the short landings in spite of the rough landscape some 50 km. around Bauru (coffee plant-

ations and steep hills). This contributed of course very much to the big success of the contest.

28th January. Speed out and back to Garça (130 km.) for CLASS A and speed on goal flight to Marilia (90 km.) for CLASS B.

CLASS A

Pilot.	*Sailplane.*	*km./h.*	*Points*
1. George Münch	BN-1	54.5	1,000
2. José Kovacs	Kranich I	51.7	980
3. Acacio Mauricio	Spalinger	28.5	816
4. Benedito Cesar	Elfe	65	307
5. Manoel Procópio	L. Kaufmann	35	118

CLASS B

1. Aldo V. da Rosa	Grunau Baby	44	1,000
2. Paulo Guimarães	,, ,,	32.2	956
3. Paulo P. Lopes	,, ,,	65	492
4. Breno Junqueira	Neiva-B	55	422
4. João Tavares	Grunau Baby	55	422
4. Luiz S. Cavalcanti L.	Neiva-B	55	422
5. Sisson Tavares	,,	25	211
6. J. Gabriel	,,	15	149

29th January. Speed over triangular circuit for CLASS A (117 km.) and speed out and back to Araribá (70 km.) for CLASS B. (The distance of each leg of the triangular were 36, 45 and 36 km.).

Pilot.	*Sailplane.*	*km./h.*	*Points*
1. George Münch	BN-1	56.3	1,000
(New Brazilian and probably South American record)			
2. José Kovacs	Kranich	46.2	958
3. Acacio Mauricio	Spalinger	70	316
4. Benedito Cesar	Elfe	36	233
5. Manoel Procópio	L. Kaufmann	32	227

CLASS B

1. Aldo V. da Rosa	Grunau Baby	40.4	1,000
2. Breno Junqueira	Neiva-B	26.7	881
3. Luiz S. Cavalcanti L.	,,	26.7	864
4. Paulo Guimarães	Grunau Baby	22.2	841
5. J. Gabriel	Neiva-B	35	516
6. João Tavares	Grunau Baby	25	323
7. Paulo P. Lopes	,, ,,	23	315
8. Sisson Tavares	Neiva-B	18	236

30th January. Free Distance for both Classes.

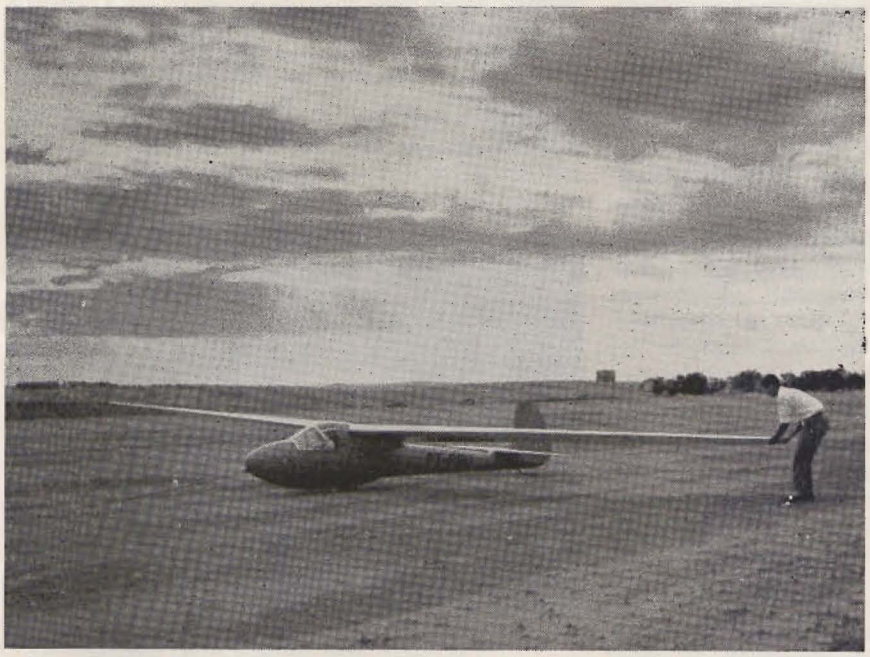
CLASS A

Pilot.	*Sailplane.*	*km.*	*Points*
1. George Münch	BN-1	333	1,000
(New Brazilian record)			
2. Acacio Mauricio	Spalinger	182	547
3. José Kovacs	Kranich	160	480
4. Benedito Cesar	Elfe	32	—
4. Manoel Procópio	L. Kaufmann	32	—

For the first time in Brazil somebody reached and passed the 300 km. and completed the Golden ' C.' George Münch who flew the national-built high performance sailplane ' Barros Neiva-1 ' (BN-1) declared independent to the task the distance to Santos (South Atlantic coastline—333 km.) as a goal flight. The distance was made in 4 hours, giving an average speed of 83 km./h. This way he also earned the first leg to the Diamond ' C.' During this flight he reached the absolute altitude of 4.800 m. (3.600 m. gained).

CLASS B

Pilot.	*Sailplane.*	*km.*	*Points*
1. J. Gabriel	Neiva-B	132	1,000
2. Breno B. Junqueira	,,	120	909
3. Paulo Guimarães	Grunau Baby	92	697
4. Aldo V. da Rosa	,, ,,	90	682
5. João Tavares	,, ,,	84	636
6. Luiz S. Cavalcanti	Neiva-B	35	212
7. Paulo P. Lopes	Grunau Baby	22	—
7. Sisson Tavares	Neiva-B	—	—



Left: The Brazilian built high performance sailplane (Barros Neiva 1) ' BN-1 ' which broke three national records. Wing span, 16 m. Wing loading, 21 kg./m².

This day several saturated cumulo-nimbus clouds with broad rain areas cut the way to the south and more or less all of the contestants were forced to land after 150 to 180 km. Unfortunately, most of the pilots of Class B landed in small rough fields in the middle of abandoned mountainous land far away from good roads, villages and civilisation. Gabriel and Breno who managed to cover the biggest distances returned to Bauru only the next night.

31st January. Rest and retrieving.

1st February. ,, ,, ,,

2nd February. Speed over triangular circuit for CLASS B (53 km.). CLASS A didn't start this day.

Pilot.	*Sailplane.*	*km./h.*	*Points*
1. Aldo V. da Rosa	Grunau Baby	45.5	1,000
2. João Tavares	,, ,,	40	569
3. Paulo P. Lopes	,, ,,	38	504
4. J. Gabriel	Neiva-B	25	284
5. Breno B. Junqueira	,, ,,	20	233
5. Paulo Guimarães	Grunau Baby	20	233
5. Sisson Tavares	Neiva-B	20	233
6. Luiz S. Cavalcanti	,,	15	194

Only Aldo da Rosa with his open ' Grunau Baby ' which he already flew in the 1st National Contest, managed to come through the 3 legs. Cloud flying helped him to pass over certain areas on his way. All other pilots of his class made at least one leg. Cloudbase had been up to 900 m. only, making it difficult for training sailplanes with bad gliding angle and low cruising speed. Most pilots had no blind flying instruments or didn't have experience in flying on instruments. So most didn't overcome areas where updrafts were missed for longer time.

3rd February. Free Distance for CLASS A and Goal Flight. Pilot's Choice for CLASS B.

CLASS A

Pilot.	*Sailplane.*	*km.*	*Points*
1. George Münch	BN-1	314	1,000
2. José Kovacs	Kranich	270	860
3. Acacio Mauricio	Spalinger	114	363
4. Manoel Procópio	L. Kaufmann	—	—
4. Benedito Cesar	Elfe	—	—

CLASS B

Pilot.	*Sailplane.*	*km.*		*Points*
1. Aldo V. da Rosa	Grunau Baby	114	(114)	1,000
2. Paulo Guimarães	,, ,,	47	(47)	412
3. J. Gabriel	Neiva-B	24	(24)	211
4. Paulo P. Lopes	Grunau Baby	65	(33)	198
5. Breno B. Junqueira	Neiva-B	18	(18)	158
6. Luiz S. Cavalcanti	,,	80	(30)	119
7. João Tavares	Grunau Baby	155	(35)	86
8. Sisson Tavares	Neiva-B	75	(30)	33

4th February. Free Distance for CLASS B.

CLASS B

Pilot.	*Sailplane.*	*km.*	*Points*
1. Paulo Guimarães	Grunau Baby	114	1,000
1. Paulo P. Lopes	,, ,,	114	1,000
2. Aldo V. da Rosa	,, ,,	91	798
3. Sisson Tavares	Neiva-B	90	789
4. J. Gabriel	,,	25	219
5. Breno B. Junqueira	,,	—	—
5. João Tavares	Grunau Baby	—	—
5. Luiz S. Cavalcanti	Neiva-B	—	—

This time the youngest contestant Paulo Pinho Lopes, who became 17 one month before the contest, made the best flight together with Paulo Guimarães who was placed 2nd in the final classification.

The final results were as follows :—

CLASS A

Pilot.	*Sailplane.*	*Points*
1. George Münch	BN-1	4,990
2. José Kovacs	Kranich I	4,278
3. Acacio Mauricio	S-25A	2,400
4. Benedito Cesar	Elfe	1,412
5. Manoel Procópio	L. Kaufmann	613

CLASS B

1. Aldo W. Vieira da Rosa	Grunau Baby	6,675
2. Paulo Guimarães	,, ,,	5,056
3. Paulo Pinho Lopes	,, ,,	3,314
4. J. Gabriel Ferreira	Neiva-B	3,204
5. Breno B. Junqueira	,,	3,008
6. Luiz S. Cavalcanti Lins	,,	2,811
7. João Tavares	Grunau Baby	2,159
8. Pedro Sisson Tavares	Neiva-B	1,531

5,399 km. were flown by 13 sailplanes. Three new national records were established : 333 km. free

(*Continued at foot of page 5*)



The Swiss ' Elfe ' with a 9 m. wingspan

MIDGET GLIDERS

By FRED HOINVILLE

SOME attempt has been made to discredit the ' Minimidget ' (25 foot span class) movement, on the grounds that cheaper per-hour soaring is obtainable with expensive high-performance sailplanes.

Figures can be quoted to prove anything, and by selecting the right figures, it is quite easy to prove that argument correct. It is correct, IF . . .

IF you have £2,000 of capital lying idle and are willing to spend it on a sailplane.

IF you don't have any crashery. (A bad crash could put your costs up by £20 per hour).

IF you can afford the time and money to do 200 hours of soaring per year. Have you ever considered how much time you would need to spend at the airfield to get all that in one year? How many weekends no soaring is possible? How much you would need to spend on launches and retrieves? (You wouldn't use such a sailplane for local circuits). How little time you would have left for minor details like earning a living, or other pastimes.

IF you can afford to own and operate a Super Sailplane, by all means buy one. We envy you.

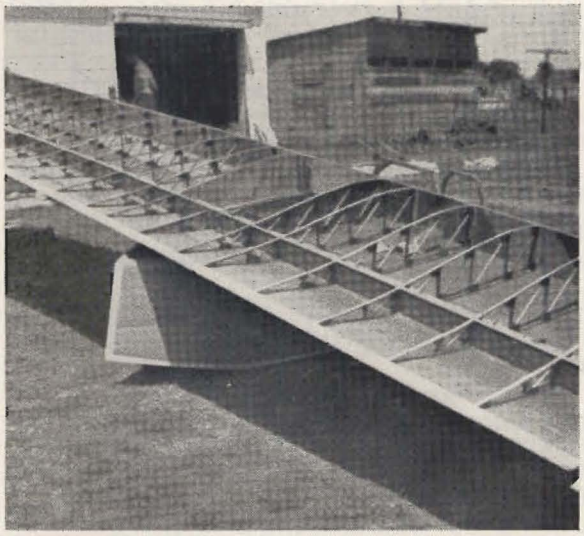
The ' Minimidget ' movement is for people who can't buy the super job for a start. Few young men can spend £2,000 at once, but the ' Minimidget ' can get them into soaring now, at a price they can afford. Maybe they'll save up and buy the Super later on.

Crashery can never be eliminated. Even the best pilots sometimes have accidents. Therefore it is wise to own a sailplane that you can afford to lose.

It has also been argued that a ' Nelson Hummingbird ' is the ideal sailplane and can give the cheapest soaring of all. I agree entirely, and would love to own one, IF... The same IF's, only bigger. Say £4,000?

The ' Horten X ' has been claimed to be the ' most practical sailplane.' Again I would agree, IF . . .

(1) IF no accidents occurred. Although it may be true that the human body is a poor shock absorber, surely the human skull and neck are even less resilient? Is it fair to quote rocket-sled test figures for one end but not for the other? Or to compare a free fall from horseback with a 50 foot nosedive in a prone-pilot glider, where the pilot is ' cramped, cabined and confined,' and can't even use his arms or roll with the fall?



The EPB-1 Backstrom (rear view)—' Minimidget No. 1 '
Photo : Hoinville

My observation shows that in any serious crash, it's the bones out in front that get broken . . . so don't stick your neck out. Ankles mend, skulls don't. Jarred spines are mendable, not messy.

(2) IF it can be launched and landed by leg. But can it? The original ' H-X ' has been flying a year or more, but no pilot has succeeded in leg-launching it, because the wind wouldn't co-operate. Too little wind—no launch. Too much wind—danger of being overturned on the ground. Landing also, on stiff legs as on skis, sounds a bit hair-raising to put it mildly.

An attempt has been made to compare the landing of a ' Horten X ' with that of a bird, but . . . a bird's legs are designed to carry its own all-up-weight landing loads, and it folds its wings on landing, to avoid being blown over.

Luckily the ' H-X ' could be converted quite simply for a normal seat and skid, so should not be dismissed. Its construction time is rather high, owing to the delta planform, but it gains lightness from the same design. Therefore it could become a valuable addition to the ranks of the ' Minimidget,' when made safe enough for average pilots to fly.

A suggestion has been made that we Hoinville's want a 25-foot span ' to popularize weekend midget races.' Thanks for the idea, chum, but where did you get it? Certainly not from us!

It has been claimed that a 25-foot ' Minimidget ' with straight rectangular wing would be ' a confounded nuisance ' to transport in one piece. This claim was based on what happened to a crescent-wing, a delta-wing, and a 40-foot wing. Need I say more?

The claim has been made that the ' H-X ' (2,000 hours to build) can be made more cheaply than

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BRAZIL'S SECOND NATIONAL SOARING CONTEST—*concluded from page 4*

distance, and also goal flight, and speed, over 117 km. official triangular course (average speed of 56.3 km./h.)

The ' BN-1 ' proved to possess excellent qualities. The constructor, José Carlos Barros Neiva, a veteran soaring enthusiast, who built also the two-seater ' Neiva-B ' has already six ' BN-1's ' on order : three requested by the government and three by private demand.

The Brazilian Federation of Soaring (F.B.V.V.) intend to send two ' BN-1's ' to the next World Championships to be held in 1956.

' Hoinville's so-called ' cheapest ' sailplane,' (650 hours to build), provided it is ordered in lots of 200. But what if the ' EPB-1 ' (my ' cheapest ' sailplane) is ordered in lots of 200 also ?

However, to get the most benefit from the ' Minimidget ' class, it must be home-built, or at most built from kits, not purchased ready made.

The wisdom of excluding the ' EPB-1 ' (26 feet 6 inches span) from the ' Minimidget ' class is questioned. Well, Backstrom designed and built the ' EPB-1 ' as a preliminary, and a test-bed for his design ideas, intending all along that production models (the ' EPB-2 ') should be exactly 25 feet. The over-weight prototype was given an extra 18 inches of span to keep the wing-loading down during the tests.

Now, we must either stick rigidly to our 25 feet limit once we accept it, or enlarge the limit to 26 feet 6 inches if we decide that the ' EPB-1 ' is sufficiently small. Either way, we *must* have a limit, or the class ceases to exist.

I would be quite happy with a 26 feet 6 inches limit since it has been proved in flight. Also, I am not worried about weight limits. I believe (the ' H-X ' also demonstrates, at 85 lbs. weight) that the weight can be kept very low, but I am content to let weight take care of itself. Any midget built for speed, with high wing-loading, would rot in the hangar 99 days out of 100, and as this is well known, I do not expect that heavy midgets will result ; rather, that they will become lighter each year.

There is an idea that small sailplanes are not suited to English or European conditions. From my own experience and observations, and from reading descriptions of flights by English and European pilots, I believe that the idea is wrong.

Thermals are non-political, being hot air of an entirely different breed. I have read of and experienced many good thermals in the old world, and have observed that in most old-world countries, landing conditions are so much safer that cross-countries are easier than in Australia, where it is frequently dangerous for large gliders to come within 5,000 feet of the terrain.

The ' Kranich II ' has made many good flights in England and Europe. Couldn't the ' Minimidget ' class, with its very small turning radius and equal glide angle, probably do better, and do it more often ?

One writer is glad that the F.A.I. has not yet recognised ' Class ' records and contests. Yet surely, wasn't this recognition the one thing that turned yachting into a popular sport, and brought car racing within the reach of non-millionaires, to name just two of many sports that owe their whole existence to class divisions ?

Certainly, a Super-Hot ' Minimidget ' could cost more than a plain variety, but could it ever cost as much as a Super-Hot 18 metre job ?

Hotting-up a fixed span ' Minimidget ' will be a matter of real skill, but isn't it true that for the last 15 years the unrestricted sailplane has done little more than grow bigger ? Wouldn't laminar flow have been needed sooner, and so developed sooner, if size had been restricted in 1939, as was intended when the ' Olympia ' was designed ?

In all sports, size restriction has had two notable results. It has made cheaper equipment available for non-competitive sportsmen, and better equipment for competitors.

What produced the ' VJ ' and ' Snipe ' and ' Moth ' baby yachts and their thousands of yachtsmen ? What produced the ' Austin-Healey ' and similar cars ? You know as well as I do. Wasn't it Class recognition and competition ?

THE ' MINIMIDGET '

Fred Hoinville writes (30/4/55) :—

Al. Backstrom has just written to say that construction drawings of the *new* ' EPB-1A ' (Flying Plank) are almost ready and may be available by the time this appears in print. Span of the ' EPB-1A ' is exactly 25 feet, which will remain as the fixed ' Minimidget ' class limit.

Weight will be from 120 to 160 lb., depending on materials used.

Backstrom will sell plans in the Dollar area, where the price is likely to be $25. His address is :

514 W. Church Street,
Grand Prairie,
Texas, U.S.A.

Those unable to obtain dollars may buy the plans for Sterling from me :—

Fred Hoinville,
Aircraft Owners' and Pilots' Association,
Box 2912 G.P.O.,
Sydney, N.S.W.,
Australia.
(Mark envelope ' Minimidget ')

The Sterling price will probably be about the same except in Australia and New Zealand, where it may be lower.

Backstrom has made a grand gesture to the gliding movement. He will take no profit from Sterling sales, nor will I. I propose to put such profits into a fund to provide trophies for the best ' Minimidget ' flights each year. If possible, this will be done on a World basis, and will apply to any design with span not exceeding 25 feet.

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N.B.—One or more friends may be introduced and readers who do not wish to cut their copy may send addresses on plain paper.

THE SAILPLANES OF THE INTERNATIONAL CONTEST OF LEZNO, POLAND

Translated by Walt H. Pratt

By J. NOIRTIN
(Captain of the French Team)

THE International Contest which was held at Lezno, Poland, from June 13th to June 27th, 1954 is probably the most important international soaring event which has occurred since the end of the war, permitting the comparison of the different Central European countries' techniques.

A considerable effort was made by the Polish Aero-club in the realisation and the finishing of a modern sailplane which could also answer the needs of soaring in our country.

Russia took part in the contest with her world-record sailplane ' Antonova ' which was not utilised to its best possibilities.

The Hungarians and Rumanians presented planes with very fine lines. The Czechoslovakians as well as the Germans had at their disposal a classical plane—the former experimented with one of the first sailplanes with a laminary profile.

1.—The Sailplane ' Jaskolka '

The Polish sailplane ' Jaskolka ' was the big winner of the International Contest of Lezno, being first in the general rating and in three speed tests ; seven planes of this type were among the first ten.

It is a plane with a semi-high wing, having dihedral ; the thickness does not exceed 11.6% of the depth of the profile at wing-root.

The profile is strictly flat for 40% on the upper surface of the wing over all the wing-span, while the under surface of the wing is convex.

The leading edge of the profile is strongly cambered downwards.

It is probably this particular shape which gave the impressioning climbs and the suppleness of its extra-ordinary evolutions.

The flight of the plane recalls effectively the one of the ' Swallow,' whose name was not given to it by chance.

The wing-spar is fitted between two main fuselage frames, blocked by a vertical press in the axis of the machine and laterally by a horizontal pin with take-up of play.

This solution eliminates the stress-transmission via the fittings and the wood-metal liasons.

The important junction between the wings and the fuselage is used to lodge the pilot's elbows who is very comfortably installed.

The ailerons are in two parts, of split type, and commanded by rods and are differentiated for 60%.

These ailerons are the only parts of the wings which are fabric-covered, as are also the camber-flaps which can be positively locked from 15° to 25° and allow, in conjunction with the diving brakes of scissor type, extremely short landings.

The pilot's cockpit is spacious, the after-part of the cockpit moves on three longitudinal slides.

The instrument panel can easily be removed to allow the fitting-in of the equipment and the bottles of the inhalator.

The landing gear consists of a skid and a central wheel which can be half-retracted.

The horizontal tail-plane can be folded vertically.

2.—The Sailplane ' Antonova '

This plane, constructed in Russia, is extremely classical. A large and spacious cockpit is joined to the back of a very streamlined fuselage.

The wing with a bi-convex profile of 15% thickness consists, because of its great aspect ratio, of a central rectangular section, fabric-covered aft of the spar. This section has a width of 3 m. 060 and comes with the fuselage, this being also the case of tail-plane which measures only 2 m. 310

This procedure has the advantage of reducing considerably the stress supported by the fitting of the trapezoidal parts of the wings, but can only be used in countries where all pick-ups are done by air-towing.

The diving brakes consist only of flaps with hinges on the upper surface of the wings.

Take-off and landing are done on skid.

The plane has a heavy wing-loading, but it has a great fineness, sinking only 2 m. at 150 km./h.

It is conceived for use in thermals ranging in force from 5 to 7 m./sec.

This plane won the fourth test which was the fastest of the contest. The world record man Ilcheko obtained with it a speed of 79.700 km./h. on a fixed goal distance of 305 km.

The three sailplanes ' Antonova ' entered in the competition were 11th, 12th and 15th in the general rating and 2nd in the international rating ; despite the relatively weak thermals they finished almost all of the distances. Under normal atmospheric conditions for central countries, this plane would have been a dangerous competitor for the ' Jaskolka.'

The Sailplane ' Junius 18 '

(18th of June)

The Hungarian ' Mezo ' was rated second in the general rating with the sailplane ' Junius 18,' which was in fact the most serious competitor for the Polish winner ' Makula.'

Its best performance was in the fixed goal speed-test of 305 km. where it was placed third with a speed of 76 km./h.

The sailplane ' Junius ' is an amelioration of the plane ' Futar.' It has a semi-high wing of trapezoidal shape and a slight dihedral. The profile is bi-convex. The fuselage is of monocoque construction having a very studied shape in order to give the best air-flow.

In the fuselage is lodged a water-ballast of 80 litres.

The flaps which existed originally on this plane have been eliminated.

The diving brakes are of scissor type.

The landing gear consists of a skid and a fixed central wheel.

4.—The Sailplane ' Super-Fergetec '

The sailplane ' Super-Fergetec ' is a single-seat adaption of the multi-seat high performance sailplane ' Fergetec.'

The cantilever wings are entirely of wood, the profile is N.A.C.A. 23.012.

The flaps have been eliminated as they constituted a discontinuity of the profile.

The wings are rectangular until 2 m. 60 from the wing-root and trapezoidal at the wing-tips.

The landings are done on skid and wheel.

This plane was unsufficiently manoeuvrable to give interesting performances in the relatively weak conditions of the contest of Lezno.

5.—The Sailplane ' Sohaj 2 '

This plane is constructed in Czechoslovakia ; it is much used by the clubs and soaring centres of this country who dispose of 500 machines of this type.

It is exported to other countries and the East German team was entirely equipped with material of this type.

Already presented at the World Championships at Madrid 1952, where a Belgian pilot was second, the ' Sohaj ' is not unknown to us.

It is related to the French ' Air-102 ' with a reduced wing-span of 15 m. and a bi-convex profile. It is very agreeable to pilot, but it has been surpassed in the contest of Lezno.

6.—The Sailplane ' Laminar XLF-207 '

The sailplane ' Laminar ' is a Czechoslovakian construction still in the experimental stage.

It is a plane with a semi-high wing, having dihedral, and whose maximum depth lies at one-third of the wing-span.

The finish of this machine from the point of view of skin and lacquer is irreproachable.

During our return a version of the wings mounted on the fuselage of the ' Sohaj ' was presented to us at Brclavi. It was unavailable for the contest but would have given much better results.

7.—The Sailplane ' IS-3 '

Among the planes which departed from the ordinary, it was the sailplane of the Rumanian Finescu which caused the biggest surprise by winning the last fixed-goal speed-test of 105 km. with a mean speed of 72,900 km./h.

The empennages of this plane are supported by a tubular beam of duralminium.

The cantilever wings are trapezoidal.

Technical Data of the Various Sailplanes

Nationality—POLAND.

Type, ' Jaskolka ' ; Wing area, 13.6 m². ; Wing span, 16 m. ; Aspect ratio, 18.8 ; Length, 7.430 m. ; Empty weight, 243 kg. ; Total weight, 342 kg. ; Wing loading, 25.2 kg./m². ; Max. gliding ratio, 28 at 82 km./h. ; Min. sinking speed, 0.74 m./sec. at 65 km./h. ; Min. flying speed, 45 km./h. ; Sinking speed at 100 km./h., 1.25 m./sec. ; Sinking speed at 130 km./h., 2.30 km./h.

Nationality—U.S.S.R.

Type, ' Antonova ' ; Wing area, 13.5 m² ; Wing span, 16.240 m. ; Aspect ratio, 19.5 ; Length, 6.400 m. ; Total weight, 400 kg. ; Wing loading, 29.6 kg./m². ; Min. sinking speed, 0.80 m./sec. at 80 km./h.

Nationality—HUNGARY.

Type, ' Junius 18 ' ; Wing area, 13.5 m². ; Wing span, 15.80 m. ; Aspect ratio, 18.5 ; Length, 6.800 m. ; Empty weight, 206 kg. ; Total weight, 306 kg. ; Wing loading, 22.6 kg./m². ; Max. gliding ratio, 27 at 75 km./h. ; Min. sinking speed, 0.75 m./sec. at 65 km./h. ; Min. flying speed, 60 km./h.

Nationality—HUNGARY.

Type, ' Super Fergetec ' ; Wing area, 18.96 m². ; Wing span, 18 m. ; Aspect ratio, 17.08 ; Length, 8.100 m. ; Empty weight, 350 kg. ; Total weight, 450 kg. ; Wing loading, 23.73 kg./m². ; Max. gliding ratio, 29 at 85 km./h. ; Min. sinking speed, 0.74 m./sec. at 80 km./h. ; Min. flying speed, 70 km./h.

Type, ' Junius 18 ' (with water ballast) ; Empty weight, ×80 kg. ; Total weight, 386 kg. ; Wing loading, 28.5 kg./m². ; Min. sinking speed, 0.90 m./sec. at 65.

Nationality—CZECHOSLOVAKIA.

Type, ' Sohaj ' ; Wing area, 14 m². ; Wing span, 15 m. ; Aspect ratio, 16.07 ; Length, 7.130 m. ; Empty weight, 185 kg. ; Total weight, 295 kg. ; Wing loading, 21.07 kg./m². ; Max. gliding ratio, 27 at 80 km./h. ; Min. sinking speed, 0.72 m./sec. at 67 km./h. ; Min. flying speed, 54 km./h. ; Sinking speed at 100 km./h., 1.5 m./sec.

Nationality—CZECHOSLOVAKIA.

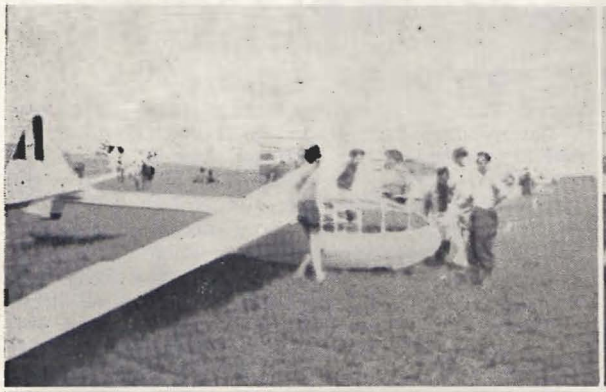
Type, ' Laminar ' ; Wing area, 15. m. ; Wing span, 15.6 m. ; Aspect ratio, 16 ; Length, 6.79 m. ; Total weight, 325 kg. ; Wing loading, 21.66 kg./m². ; Max. gliding ratio, 31 at 80 km./h. ; Min. sinking speed, 0.68 m./sec. at 74 km./h. ; Min. flying speed, 63 km./h. ; Sinking speed at 100 km./h., 1.06 m./sec. ; Sinking speed at 130 km./h., 1.80 m./sec.

Nationality—RUMANIA.

Type, ' Futar ' ; Wing area, 13.5 m². ; Wing span, 15.80 m. ; Aspect ratio, 18.5 ; Length, 6.500 m. ; Empty weight, 210 kg. ; Total weight, 310 kg. ; Wing loading, 22.9 kg./m². ; Max. gliding ratio, 28 ; Min. sinking speed, 0.85 m./sec. at 80 km./h. ; Min. flying speed, 60 km./h.

Nationality—FRANCE.

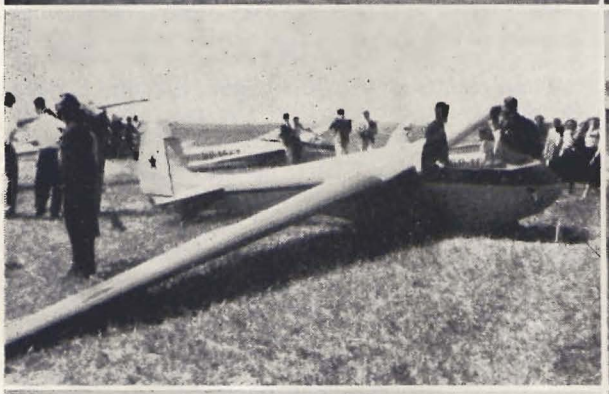
Type, ' Air-102 ' ; Wing area, 18 m². ; Wing span, 18 m. ; Aspect ratio, 18 ; Length, 8.00 m. ; Empty weight, 273 kg. ; Total weight, 365 kg. ; Wing loading, 20.2 kg./m². ; Max. gliding ratio, 23 at 68 km./h. ; Min. sinking speed, 0.75 m./sec. at 60 km./h. ; Min. flying speed, 52 km./h. ; Sinking speed at 100 km./h., 1.75 m./sec. ; Sinking speed at 130 km./h., 3.25 m./sec.



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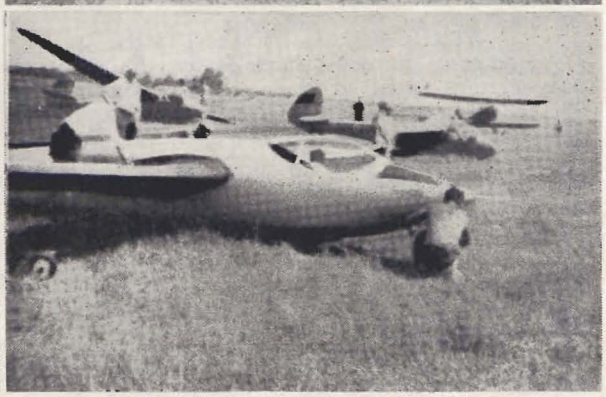
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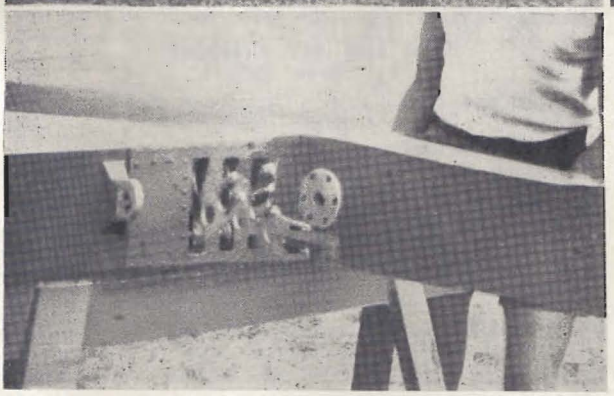
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(1) *Rumanian sailplane ' IS-3 '*

(2) *A view of the ' Laminar '*

(3) *Russian sailplane ' Antonova-9 '*

(4) *The ' Sohaj ' of the German team*

(5) *Hungarian sailplane ' Junius-18 '*

(6) *Hungarian sailplane ' Super Fergetec '*

(7) *View of the important wing-fuselage fittings with main spar. Note the automatic command couplings. (Sailplane ' Jaskolka ')*

THE 'BREGUET 901' SAILPLANE

(*A photograph of the 'Breguet 901' appears on page 12.*)

THE high performance 'Breguet 901' sailplane has been designed to answer the requirements of gliding conditions in France, and also to compete successfully with sailplanes more specifically adapted to the better conditions encountered in countries on the continent of Europe.

The problem confronting the manufacturers of the 'Breguet 901' sailplane was to produce a machine with the minimum sinking rate at a low horizontal speed, together with excellent aerodynamical qualities for such high speeds as are necessary in distance flights.

This objective has been realized by the following features :—

1. Wing aspect ratio 20—Laminar flow airfoil.
2. Flap reducing the flight speed without affecting the sinking speed. Circling in narrow up-current is then possible.
3. The structure has been designed to realize a low wing loading, in spite of the very high aspect ratio of the wing and the laminar flow airfoil. The safety coefficient permits, however, flight in clouds.
4. On account of the low wing loading, comparatively important ballast tanks (166 lb.) ensure great flexibility of operation for the aircraft. It is possible to take the utmost advantage of meteorological conditions with the qualities the sailplane possesses.
5. Low drag fuselage with a completely 'flush' canopy.

STRUCTURAL DESCRIPTION

A mid-wing cantilever single-seater, the 'Breguet 901' features a wood structure of conventional design. The following points must, however, be emphasized :

1. The leading edge, made of plywood 'klegecel' sandwich, complies with the accurate contour requirements of the laminar flow airfoils. It gives, also, a high tension rigidity, improving the efficiency of the ailerons.
2. Efficient dive-brakes to be used in landing as well as high speeds.
3. The flight controls for elevator and ailerons are rigid with Argon soldered aluminium levers. The saving in weight in respect of conventional cable controls is substantial.
4. The retracting wheel is equipped with a hydraulic brake. Its location enables the pilot to perform very short run landings. The local reinforcement of the fuselage around the wheel allows wheel up landing with only minor damage to the structure.
5. The layout of the cockpit has been designed for the pilot's comfort (adjustable pedals, adjustable seat, ventilation). With a view to simplicity of access for maintenance or control-radio, blind flight instruments and oxygen equipment are provided.
6. The wing fuselage assembly is extremely easy and rapid on account of quick disassembly pins. The horizontal tail can be folded.
7. Two persons may easily handle the machine on the ground.

FLIGHT TESTED PERFORMANCES

These performances are summed up in the polar curve. They have been measured in recent flight tests.

The maximum lift/drag ratio is 36 ; the minimum rate of sinking is 118 ft./min. for a speed of 45 m.p.h. with empty water tanks. With filled ballast tank, the rate of descent is 374 ft./min. for a speed of 93 m.p.h. This shows that the glider may successfully be used in the low speed thermals so frequent in France. If these conditions improve, however, the glider may be adapted and then have excellent horizontal speed.

At high speed, a flap displacement of —4 still improves the characteristics and the behaviour of the machine.

With fully extended flaps the minimum rate of descent is 128 ft./min. The corresponding speed is 37 m.p.h.

These results of a thorough aerodynamical investigation have contributed to the production of an excellent machine.

CHARACTERISTIC SPEEDS

Maximum speed at safe load	140 m.p.h.
Maximum speed with extended airbrakes	124 m.p.h.
Maximum speed when towed	87 m.p.h.
Maximum speed with extended flaps	87 m.p.h.

During the tests the 'Breguet 901' won the French record trip flight, with chosen goal. It was piloted by G. Pierre. Later, piloted by Rousselet, it broke the French speed record for triangular flight.

CHARACTERISTICS

Gross weight :	
Without water	694 lb.
With water	860 lb.
Wing area	161 sq. ft
Wing loading :	
Without water	4.30 lb./sq.ft.
Wing span	56 ft. 10in.
Wing aspect ratio	20
Wing taper ratio	0.33
Length	23 ft. 4 in.
Horizontal tail area	22.3 sq. ft.
Vertical tail area	11 sq. ft.

(*By courtesy of 'Indian Skyways*).

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By Hanna Reitsch

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NEW WEST OF ENGLAND GLIDING CENTRE

BRISTOL CLUB'S AMBITIOUS PROJECT

ONE of the most momentous steps in the history of British Gliding has just been taken by the Bristol Gliding Club. Some 85 acres of land has been purchased to form a permanent gliding site at Nympsfield on the Cotswolds. After operating on a rather insecure basis since 1946, at Lulsgate Bottom Aerodrome, near Bristol, the future of the Club is now assured and it is planned to develop the site into a West of England Gliding Centre.

Only one other Club in England actually owns the land from which it operates, and that is the London Gliding Club, which in 1931 purchased land on Dunstable Downs near Whipsnade. The Bristol Club is very proud to have been chosen by the Kemsley Flying Trust for the task of forming this second permanent home of British Gliding.

Faced with the possibility of losing Lulsgate when it becomes the new Bristol Airport, the Club has been searching for many months for a suitable site. Many have been found, but in all previous instances, it has not been possible to obtain possession, generally as the land was wanted for vital agricultural purposes. Eventually Longwood Farm situated on the well known beauty spot at Nympsfield and Uley was discovered—and through the good offices of Mr. L. F. Dalby—a large field comprising over half of the original farm has been purchased. The land is not considered to be useful for anything but grazing, but the Club plans to help the national effort by taking grass crops from parts of the field which will not be under constant use, and by arranging sheep grazing throughout the winter.

The site offers many advantages from the gliding viewpoint, as during the summer months the surrounding countryside is ideal for the production of rising air currents or ' thermals ' in which sailplanes can rise to heights of 10,000 feet or more. By stepping from one thermal to the next, flights of many miles across country can be made. At present, the Club distance record for a sailplane flight is 91 miles, but it is confidently expected that this will be beaten very quickly. Additionally, upward currents of air will be formed by west or northerly winds being deflected upwards by the appropriate portions of the escarpments which can be reached from the club site. Lengthy duration, training and pleasure flights can be made under these conditions, during which the pilots will have the added pleasure of the magnificent view across the Severn Valley.

Facilities on the site will include a Club house, which will be converted from an existing barn, to include dormitory, kitchen and workshop facilities, besides a comfortable lounge. A hangar will also be erected to house the Club's present and future fleet of training and high performance sailplanes, with their ancillary launching and road retrieving equipment.

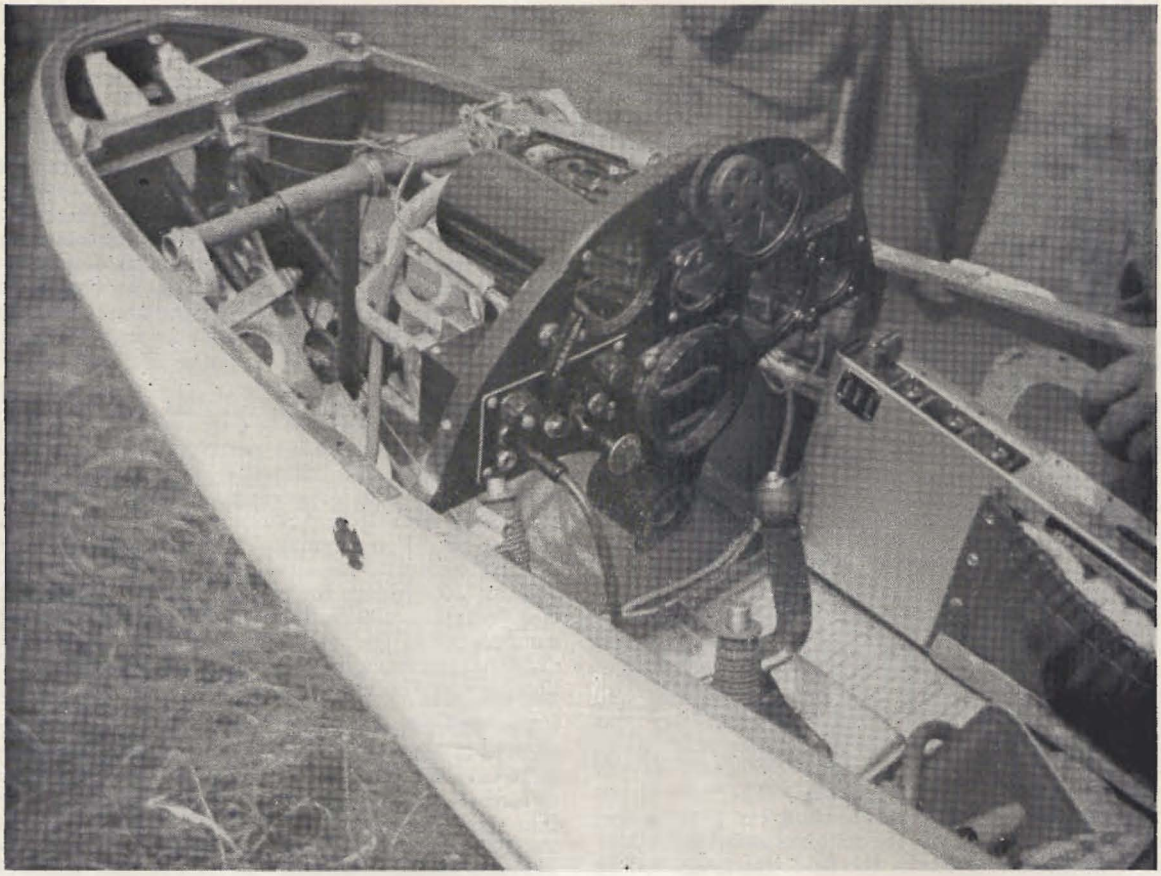
The site is also quite close to Gloucester and Cheltenham, and as both of these places have aeronautical industries, it is probable that the Club's present nucleus of Bristol members will be strengthened by many others and it will begin to approach the ideal of a West of England Club. Not that aeronautical training is essential for glider pilots, for any normally active man, or woman, is a potential pilot. Experience at Lulsgate has shown that about four hours' instruction in the air, and about 40 flights in a dual control two-seater trainer are required before the first solo.

In keeping with the current gliding policy, members are trained from the start in dual control two-seaters, of which the Bristol Club possesses two. First solo flights are made in a ' Slingsby Tutor ' sailplane, and as proficiency and experience are gained, the pilot progresses first to a ' Slingsby Prefect ' sailplane, then to an ' Eon Olympia ' high performance type, and ultimately to be a two-seater pilot, when he or she can take friends for pleasure flights. Instructing is undertaken voluntarily by Club members, who after a minimum of 50 hours' experience, and a practical examination, have been awarded the B2 Instructor's Category by the British Gliding Association.

The Club is organised on an entirely voluntary basis as is every civilian club in the country. Members undertake maintenance and repairs and renovations to aircraft, ground equipment and buildings in order that their gliding may be obtained at minimum cost. Establishment of the site at Nympsfield will involve the expenditure of several thousand pounds, and with no assistance from the government, all of this money eventually will have to be earned by the Club. To keep costs to a minimum, working parties of members will visit Nympsfield during the summer of 1955 to help prepare the clubhouse and hangar. The land itself is being prepared professionally to be sown with grass, and allowed to consolidate, so that full scale operations by the whole Club may start by Easter 1956. Until then, normal Club activities, which include running Gliding Holiday Courses for non-club members, will be continued at Lulsgate.



Die deutsche Monatsschrift für den Segelflug in aller Welt.
Bringt Beiträge über Konstruktion und Bau von Segelflugzeugen und Motorseglern, über Wettbewerbe, Flugerfahrungen, Meteorologie, usw.
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What price gliding? 'Breguet 901' with the tid off seen at the World Contests, Great Hucklow, Derbyshire last year.
Photo : P. J. Hollbrook



WORLD'S YOUNGEST 'B' CERTIFICATE

Left : The Boy Glider pilot, Rashid, aged 9, is the youngest pilot in the world to go solo in a glider and qualify for International 'B' certificate. He is now a regular flier at the Poona Gliding Centre. He cannot unfortunately be put on the 'Grunau' and other high performance machines, because it is rather hard to make fittings to the controls for him to reach. Till then poor Rashid will have to feel satisfied by flying the 'Primary' up and down at Fursungi which has been christened as 'Fursungi Fairy Land'



Argentina and U.K. get together at last year's World Contest, Great Hucklow, Derbyshire.
Photo : P. J. Hollbrook



Right:
'Here comes Mummy, Rick.' Fred and Ricky Hoinville watch Grace bringing the 'Grunau' in to land at Camden.
Photo : Alex Aidott

By WALT H. PRATT

A BUSY WEEK IN FRANCE

THE week from April 11 to April 18 saw some of the best soaring performances yet of this year and in many ways it was a repetition of the Easter Week of 1954 when France climbed to the top rank with 11 holders of the Diamond ' C.'

It started with the flights of the two young soaring pilots of the Aero-Club du Dauphiné from Grenoble to Turin across the highest ranges of the Alps and in the course of which they climbed to an altitude of 5,400 metres.

Three days later, on April 14, the chief pilot of the National Soaring Centre of Challes les Eaux was able for the first time to climb over the top of Mont Blanc with a sailplane. He reached the altitude of 5.900 metres and only the lack of oxygen forced him to come down. The plane he used was a ' Bréguet-900.'

On the same day at the National Centre of St. Auban, famous for its wave-flights, the instructor, Gabriel Margerit, reached the absolute height of 9,100 metres in a ' Bréguet-901.' This is yet the best altitude-performance for France though he did not beat the existing height-record which is held by Rousselet with 8,391 metres.

The next day, April 15, also at St. Auban, the Chief Pilot Landi, head of the Experimental Section of the Light and Sport Aviation Service realised a mean airspeed of 74 km. 300 on a triangular circuit of 104 km. He also used a ' Bréguet-901.'

Again the existing French record of 72 km. 486, established also by Landi, was not bettered as the latest performance did not exceed the 2 km. necessary.

Up in the north, at the National Centre of Pont Saint Vincent, April 14 saw three distance flights of over 300 km. representing two Gold ' C ' and one Diamond ' C ' legs. April 15 saw another Diamond ' C ' goal flight leg, and so did April 17. Among the three flights on April 14, was the Gold ' C ' leg of a German visitor, Herr Kupnik.

Then came the weekend, April 16 and 17, 1955, during which the Soaring Centres in the Paris Region distinguished themselves.

On the 16th, the world two-seater Goal Flight record of 353 km. 600, established by the Polish feminine team Adamek and Sitarska in 1953, was beaten by the French team, Francine Abadie and Jacqueline Trubert. In the two-seater sailplane ' C 25-S ' they left the soaring centre of La Ferté Alais at 11.30 and landed six hours later at Cognac, a distance of 373 km.

The flight also beat the existing French two-seater goal flight and straight distance record (feminine) established in 1954 (April 17, what a coincidence) by F. Abadie and J. Charpentier with 321 km. 374.

But the next day, the French feminine two-seater record for straight distance was overset again by the team Choisnet-Abelanda who flew from the soaring centre of Beynes to the town of Saint Georges des Agouts (Char. Maritime), a distance of 440 km.

The same day, April 17, the masculine team of Kirchroth-Lerat set up the new French multi-seat record for straight distance. They rallied in a ' CM-7 ' the town of Muron (Char. Maritime) from the soaring centre Persan-Beaumont. A flight of 438 km. The former record belonged to Mm. Nessler and Beugnet with 423 km. 209.

During those two days, other distance flights were made of which below are the details :—

Soaring Centre Beynes.

April 16 : 1,056 km. Among which are 1 Goal flight leg and 1 Silver ' C ' distance leg.
April 17 : 1,334 km. 1 French record and 1 Silver ' C ' distance leg.

Soaring Centre Chavenay.

April 16 : 668 km. 1 Gold ' C ' distance leg, 1 Diamond ' C ' goal leg.
April 17 : 1,044 km. 1 Diamond ' C ' distance leg, 1 Silver ' C ' distance leg.

Groupe l'Air (flies also at Chavenay).

April 16 : 710 km. 1 Diamond ' C ' goal leg, 1 Silver ' C ' distance leg.
April 17 : 810 km. 1 Gold ' C ' distance leg.

Soaring Centre Ferte Alais.

April 16 : 3,305 km. 1 World record, 4 Diamond ' C ' distance legs, 1 Diamond ' C ' goal leg, 1 Silver ' C ' distance leg.
April 17 : 2,317 km. 2 Diamond ' C ' distance legs, 1 Diamond ' C ' goal leg, 2 Silver ' C ' distance legs.

Soaring Centre Lognes.

April 16 : 1,450 km. 2 Gold ' C ' distance legs, 2 Diamond ' C ' goal legs.

Soaring Centre Meaux.

April 16 : 325 km. 1 Diamond ' C ' goal leg.
April 17 : 877 km. 1 Gold ' C ' distance leg, 1 Diamond ' C ' goal leg. 2 Silver ' C ' distance legs.

Soaring Centre Plessis.

April 16 : 306 km. 1 Gold ' C ' distance and Diamond ' C ' goal leg.
April 17 : 1,298 km. 1 Diamond ' C ' distance leg, 1 Silver ' C ' distance leg.

Soaring Centre Persan.

April 16 : 940 km. 1 Gold ' C ' distance leg, 1 Silver ' C ' distance leg.
April 17 : 1,170 km. 1 French record, 2 Gold ' C ' distance legs, 1 Silver ' C ' distance legs.

Soaring Centre Cherence.

April 16 : 440 km. 1 Silver ' C ' distance leg.
April 17 : 148 km. 1 Silver ' C ' distance leg.

Total. 18,198 km.
1 World record.
3 French records.
8 Diamond ' C ' distance legs.
10 Diamond ' C ' goal legs.
9 Gold ' C ' distance legs.
13 Silver ' C ' distance legs.

(The different legs do not account for the total distance travelled across country as the total of km.

includes also the different attempts which did not succeed).

On April 17, the Chief pilot Landi was able to join for the first time, during the course of an experimental flight, the two National Soaring Centres Saint Auban and La Montagne Noire, by sailplane. This flight of 330 km. leads over a highly mountainous region and was accomplished in thermals and waves.

Well, this gives you an idea of what was accomplished here during that weekend and you can imagine that neither pilots nor transport teams lacked work. We are hoping the weather will continue to show us goodwill and not let us down as it did last year when the summer was catastrophic.

SPORTING AVIATION IN 1954

THE French National Aeronautic Federation recently held its Annual General Assembly. Created in 1929 and disolved during the war, it was reconstituted in 1946 with the object to co-ordinate the efforts of the French aero-clubs for the propagation of aviation among the French youth and to decide on the national instruction programmes.

It is the only private aeronautical organisation allowed to organise in the midst of the aero-clubs and in the frame of the governmental decrees all the activities which form the sports of the air :—

Aeromodelling.
Soaring and motor-flight.
Parachute jumping.
Preparation for the Air Force.
Post-military training.
Aeronautical propaganda.

The following statistics for 1954 have been released : 361 aero-clubs are grouped in the Federation and the following number of licences have been issued :—

Licence A for all aeronautical activities ..	11,963
,, B for soaring and parachuting ..	3,559
,, C for modelling	4,423
	19,945

Every member of an aero-club has to obtain one of these licences each year, depending on the activity which he intends to follow.

The 361 aero-clubs are grouped into 13 regional committees which are responsible for the activity, the distribution of the State-loaned motor- and sailplanes, and the execution of the governmental instructions in each region. These regional committees are formed by 6 to 29 clubs except for the Paris region where the total of clubs is 104.

Motor-flight activity of the 361 *clubs for* 1954.

			Paris Region :
Flight hours	133,859.80 ..	37,284.35	=app. 30%
Licence 1. Degree	1,595 ..	480	= ,, 30%
,, 2. ,,	630 ..	194	= ,, 30%

Soaring activity of the 361 *clubs for* 1954.

			Paris Region :
Flight hours	60,551.79 ..	18,707.58	=app. 30%
Launches	216,332 ..	42,508	= ,, 19%
'B' Certificates	1,102 ..	277	= ,, 24%
'C' Certificates	719 ..	215	=app. 30%
Silver 'C' Legs	736 ..	226	= ,, 30%
Gold 'C' Legs	106 ..	65	= ,, 60%
Diamond 'C' Legs	41 ..	23	= ,, 50%

Some 20,300 hours have to be added to the above total and which were done in the five National Soaring Centres.

800 sailplanes of various types have been announced in the Clubs and 270 in the Soaring Centres. A third of these 1,070 planes must be considered as under repair and thus not in a state to be flown.

The following instructor-personnel has been announced :—

State-employed instructors	26
Club-employed instructors	32
State-subsidised instructors	32
Unpaid instructors	53
	143

These totals do not include the personnel of the National Soaring Centres and the personnel placed at the disposal of the clubs in the Paris Region.

In the totals of motor-flight and soaring activities above, I have purposely underlined the activity done by the clubs of the Paris Region to show the tremendous amount of work which is done by them.

I am sorry to announce that the Air Festival of Poitiers which was to take place from June 27th to July 7th has been called off. This decision was announced last week by the French National Aeronautic Federation. No reason was given for this.

It is rumoured also that the race Paris-Biarritz will not take place either. But no official announcement has yet been made.

NEW RECORD ?

TWO young soaring pilots of the Aero-Club du Dauphiné crossed the Alps on April 12th. Jean Poncet in a single-seat sailplane 'Air-100' and Jean-Louis Ferier with a 'Milan,' the French 'Weihe,' took off at 11 o'clock from the Airfield Jean Mermez, near Grenoble, and profiting by the favourable updrafts flew together over the massif of the Meije, the 'Barre des Ecrins,' which has a height of 4,103 m., and several other important summits. During the course of their flight they were able to reach 5,400 m. At 16.00 hours they landed in the vicinity of the town of Turin in Italy.

Jean Poncet who is 23 years old, is holder of the Silver 'C,' while Perrier, also 23, holds the Gold 'C.'

This feat, accomplished by two young people, is comparable to the flight made by F. Noin who crossed the Alps in a single-seat sailplane 'N.2000' to Italy from the National Soaring Centre of St. Auban during 1953 and the one of J. P. Weiss from St. Girons-Antichan across the Pyrénées to Montflorite in Spain during 1954.

It seems that a third pilot, Mr. Hugo Bertoncelli, accompanied the two planes until over the massif of the 'Bourg d'Oisans' with a 'Kranich' and set a new altitude record with 5,200 m. This news still needs confirmation.

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Research to Aid Weather Forecasting

GREAT BRITAIN, the United States and Sweden are actively developing a new mathematical method for weather forecasting made possible by the evolution of high-speed electronic digital computers undertaking millions of calculations an hour.

The new method, ' numerical forecasting,' is used to calculate a broad pattern flow of barometric readings for pressure maps and will improve the speed and accuracy with which weather charts and forecasts can be made.

Each country, working on its own lines, has reported a similar degree of success with the new method.

So promising is this considered that in Great Britain, by recommendation of the Director of the Meteorological Office, Sir Graham Sutton, the Forecasting Research Division of the Central Forecasting Office at Dunstable is being expanded by the transfer to it of mathematical experts from other meteorological sections, to speed up research into the new method for which it has been made responsible.

In addition, the Meteorological Office has sent one of its mathematics experts to the U.S.A. to study developments there. He is Mr. E. Knighting, B.Sc., a principal scientific officer from the Forecasting Station at Shoeburyness, who will spend a year studying the American technique of operating the new method.

The Central Forecasting Office will eventually be the operational centre for mathematical forecasting in this country, but meanwhile time is being ' bought ' on an electronic machine at Manchester University to solve the equations involved in the research carried out here. ' Flow patterns ' can be quickly worked out of air movements over the whole of N.W. Europe, for interpreting millions of varied and detailed reports of meteorological observations from all over the Northern hemisphere.

Calculations entailing 30 million ' orders,' which in turn involve 10 million additions and subtractions and one million multiplications and divisions, can be made with such electronic machines so quickly that results can be provided within the designated time-limit of one hour necessary for the forecaster to ' keep ahead of nature.'

From them the pressure map only is produced. On this, the ' weather ' must still be put in by the forecaster, but to speed this process also new apparatus has now been devised on which the complete weather chart can be transmitted in facsimile by radio or land-line instead of in the form of statistical data which has to be entered on weather charts by each receiving station. There will be regular transmission of charts from the Central Forecasting Office at Dunstable to airfields.

FOUR NEW AUSTRALIAN RECORDS

MERVYN WAGHORN, of the *Sydney Soaring Club*, set a new Australian distance record on January 2nd when he flew 303 miles from Narromine (N.S.W.) to Wangaratta (Victoria) in 8½ hours.

The flight was made in the Sydney Soaring Club's ' Olympia ' sailplane.

The previous record of 259 miles was set on December 25th, 1951, by Keith Colyer.

Waghorn was launched by aero-tow at Narromine, having declared Benalla (325 miles) as a goal.

During the early part of the flight an average cross-country speed of better than 40 m.p.h. was easily maintained.

After crossing the border between N.S.W. and Victoria soon after 5 p.m. thermal activity weakened and Wangaratta was reached at 4,500 feet after a long glide.

Flying past Wangaratta, Waghorn saw that the fields ahead were too small to permit an aero-tow retrieve so he turned back to land at the town.

He said afterwards he was under the impression that Wangaratta was a little more than Diamond distance (311 miles) from Narromine.

After landing, Waghorn got in touch with members of the Gliding Club of Victoria at Benalla aerodrome who assisted with the retreive.

On December 29th, Waghorn gained a Diamond with a goal flight of 206 miles from Narromine to Wagga in the ' Olympia.'

(In January, 1952, Waghorn climbed to 16,500 feet which brought him within 100 feet of Diamond height).

On January 5th another pilot of the *Sydney Soaring Club*. Selwyn Owen, established a new Australian record for an out-and-return flight when he flew the ' Olympia ' from Narromine to Wirrinya and return, a total of 207 miles.

The previous record of 144 miles was set in 1953 by Ric New, of Perth.

Owen, who also holds the Australian Goal record of 206 miles, was Australia's representative at the International Gliding Championships held in England last year.

Two new Australian altitude records for two-place sailplanes were set during the training course held at Gawler in December by the *Adelaide Soaring Club*.

A trainee pilot, Bruce Hoffman of Tanunda, and the club's C.F.I., Brian Creer, flew to 12,600 feet in the ' Falcon,' with a gain of 11,800 feet.

These figures set new records for absolute altitude and gain in height respectively.

The course was attended by eight trainees from all parts of South Australia and also from Victoria.

Of these, four were complete ab initios and three had ab initio training with other clubs.

During the course a total of 64 hours was flown from 368 launches.

Although club members were not encouraged to intrude on the course they were allowed to fly when they did not interrupt the course flying.

Andy Wozniakowski found the ' Gull ' without a pilot on two days and took it up to 7,200 feet for 3 hrs. 8 mins. and 7,600 feet for 2 hrs. 23 mins.

Cliff Gurr took the ' Gull ' to 10,500 feet for 1 hr. 32 mins. to set a new club absolute altitude record for single-seaters.

The club feels that the course was a very successful one and it has learned a lot from it.

Also, this course has proved that there is considerable latent interest in the sport in South Australia.

The Press and radio showed keen interest in the course and the public reaction to this publicity is an indicator to what can be expected in the way of interest in any future courses that may be held.

Courtesy ' Australian Gliding '



Canada's first ' AV-36,' one of four being built by members of the R.C.A.F. Gliding Club of Calgary, Alberta. Ready for first test flight June 1954

News in a Few Lines . . .

Australia. In a ' Grunau IIb ' in West Australia, Reg. Currell reached a height of 15,900 feet from an auto-tow to 800 feet.

Germany. Fourteen-day glider courses are being held from the 3rd May through to the 17th September at Juist. Training costs DM180, board and lodging DM 5.50 per day. ' Sea, sand dunes, sunshine, wind, sailplanes.' The famous Wasserkuppe school is doing courses from the 1st May to the 30th October, and the Greding Gliding Club, on the Nuremburg-Munich road gives 12-day courses at an inclusive price of DM180. All these include beginners, more advanced, and soaring tuition.

Holland. The National Contests this year will be held at the Terlet Gliding Club from the 23rd July to the 7th August.

France. The first sailplane to cross the Pyrenees was an ' N-2000 ' (the French version of the ' Olympia ') piloted by Jean Paul Weiss. He took off at mid-day from Autichan and landed at Huesca after 2 hrs. 45 mins. in the air.

Austria. A national height record of 3,148 metres has been allowed to Dr. Franz Josef Koepf, flying a ' Weihe.'

Russia. An inadvertant record was made by parachutist Joseph Adamuk near Minsk. Jumping out at 800 metres he was caught in a strong thermal, swept up to 3,000 metres, and finally landed after being ' airborne ' for 1 hr. 55 mins.

Jugoslavia. The 6th National Contests will be held this year from the 3rd—17th June.

Switzerland. Gliding courses will be held from now until 16th October at the Birrfeld-Brugg Flying School.

U.S.A. The Civil Air Patrol is arranging an exchange of five of its members with five young Swiss glider pilots. This exchange will take place at the end of July and will be for three weeks including travelling time.

Belgium. The Belgian Air Force is arranging free gliding instruction for serving airmen.

U.S.A. The 22nd American National Contests will be held at Elmira from the 2nd to 14th July. From the 2nd to 4th July Elmira will celebrate its Silver Jubilee as a gliding centre. In 1930 the first height record (700 m. gained) was made by W. Eaton and the distance stood at about 50 km. The present records for this club are an absolute height of 13,300 metres and a distance of 880 km.

Switzerland. Max Schachcumann has taken delivery of his new ' Super-Elfe,' designed by Dr. Werner Pfenninger and built by Rudolf Saigesser of Wildegg.



Camberra, ' Currawong ' and Lent, Parkes, N.S.W., Australia

Photo : F. Hoinville

SOARING NEWS FROM BELGIUM

By Armand van Ishoven

ON the 17th April, Doctor Gildemyn, a pilot of the gliding section of Ghent Aviation Club, broke the Belgian fixed goal distance record by flying his club's ' Sohaj ' from Ghent to Chartres, a distance of 325 km. (207 m.). The flight started at 11.00 and lasted till 17.50 hours.

Dr. Gildemyn took part at the Championships at Madrid in 1953 with the same machine. It is interesting to note that on the same day the French two-seater free distance records, both masculine and feminine, were also broken.

Later this year the National Belgian Gliding Centre will be transferred from Temploux to St. Hubert aerodrome. It is hoped that this centre, which only provides basic training, will later on be supplemented by one or two performance centres.

Record Entry Expected for 2nd A.T.A.F. Gliding Championships

A RECORD entry is expected for the 2nd Allied Tactical Air Force Gliding Championships, to be held at Scharfoldendorf, Germany, from May 23rd to June 8th.

The Belgian Air Force, which gained prizes in last year's contest, is likely to enter a strong team, and for the first time the Royal Netherlands Air Force may compete.

Clubs which have so far entered for the championships include R.A.F. Stations Fassberg, Sylt, Hamelin, Wahn, Wildenrath, Geilenkirchen, Oldenburg and Bruggen.

OVER MOUNT COOK

Excellent Gliding Conditions Promote Record Flight

BY JOHN DREW

THE popularity of glider flying in recent years has shown New Zealand to possess favourable conditions for this sport, but it has taken the recent record performance of the former world champion glider pilot Mr. Philip Wills to emphasise the outstanding possibilities for record flight in sailplanes in the Dominion.

Famed throughout the United Kingdom for his glider flights Philip Wills needed the aid of New Zealand's glider weather in order to put up what was in fact one of the highlights of his career when he broke the British Empire altitude record by soaring nearly six miles over the high peak of Mt. Cook while attending the Canterbury glider club instructional camp at Simon's Hill in the heart of the McKenzie Country.

As Mr. Wills points out the ' standing wave ' which took him to the greatest height yet reached by a glider pilot in New Zealand was only a minor air lift compared with those frequently encountered over the Southern Alps, yet this wave alone could have carried the sailplane to well beyond the present world altitude record of 45,000 feet. It was only the excessive cold which reached about 40 degrees below zero and which cracked the thick perspex cockpit canopy of the ' Weihe ' sailplane which prevented Mr. Wills from going up to considerably greater height. He is of the opinion that record breaking conditions can frequently be met with in the area.

The value of his performance is emphasised by a comparison with the British best gain of height performance which he surpassed by a margin of some 9,000 feet. The British figures of about 19,500 feet were established by Flight Lieutenant Bedford in 1951. Mr. Wills, who used oxygen throughout his flight, was launched into the air by a high powered winch drum and cable and gained by his own skilful usage of up-lifts a total of some 28,200 feet ; and with but a bare additional 3,000 feet he would have broken the world record for absolute unassisted height gain.

The glider camp now in progress at Simon's Hill in the heart of the Mackenzie Country is the third annual camp of its kind to be held there and this year most of New Zealand's growing community of glider pilots are attending it.

This year's camp may prove an historically memorable one for some years to come because Philip Wills' 30,000-feet flight may well prove the highest to which a New Zealand glider pilot may reach until a more modern sailplane than the ' Weihe ' is imported into the Dominion.

Kettering & District Gliding Syndicate

HAVING commenced operations in the Autumn of 1953 with one ' Nacelle Dagling,' one winch, one decrepit and very sick retrieving car, plus a lot of enthusiasm, we can now look back on nearly 16 months' gliding. Although not possessing high efficiency machines (we have seven ' Kirby Cadets,' plus of course the faithful ' Dagling ') we have obtained ' A ' and ' B ' Certificates for nearly all members of the group.

We are not a large club—our total membership being 12—means that everyone has quite a fair amount of work to contend with : batting, winching, driving, and of course flying. The C.F.I., Mr. T. Philips, who is an ex-A.T.C. Instructor, flying his ' belly hooked ' ' Cadet ' is still constantly getting 1,300 to 1,400 feet from a winch launch and, if conditions are in the least unstable, can be seen happily floating around the upper ether much to the chagrin of the not-so-experienced members.

At our home base, Sywell Aerodrome, near Northampton, which is of course a flat site we have had several semi-soaring flights on the ' Cadet ' using our ' Phillips ' variometer which in our opinion is extremely sensitive. Having cautiously felt our way in the past year we are soon hoping to start construction of a two-drum winch, also aquire a medium performance sailplane at a low price. The latter item being the most difficult thing to find on this earth !

A.G.C.

GLIDING INSTRUCTION COURSES

THE following courses are available to non-members and full particulars will be sent on application to the Course Secretary.

BRISTOL GLIDING CLUB.—Courses lasting one week, beginning on the following dates : June 6th, 13th,

20th and 27th; July 4th, 11th, 18th and 25th; August 1st, 8th, 15th, 22nd and 29th; September 5th, 12th, 19th and 26th; and October 3rd. Fees: 11½ gns. in June; 12½ gns. July, September and October; 13½ gns. in August. (18, Norley Road, Bristol, 7).

DERBYSHIRE & LANCASHIRE GLIDING CLUB.—June 13th-18th, June 20th-25th, July 4th-9th, July 11th-18th, July 25th-30th, August 8th-13th, August 15th-20th, August 22nd-27th. Fee: £12. 12s. (Camphill, Great Hucklow, Tideswell, Derbyshire). Each course includes six days' flying instruction.

LONDON GLIDING CLUB.—April 18th-29th, May 16th-21st, June 13th-24th, July 18th-29th, August 15th-26th, September 5th-16th, September 26th-October 1st. (Tring Road, Dunstable, Beds.).

MIDLAND GLIDING CLUB.—Courses for 'B' and 'C' pilots and power pilots. June 11th-18th, July 2nd-9th, August 13th-20th, August 27th-September 3rd. Fee: £15. (37, Hugh Road, Smethwick, 41, Birmingham).

SCOTTISH GLIDING UNION.—April 9th-16th, July 2nd-9th July 16th-23rd, July 30th-August 6th, August 13th-20th, August 27th-September 3rd. (Balado Airfield, Milnathort, Kinross-shire). Fee: £14.

SURREY GLIDING CLUB.—Weekly courses between April 24th and May 28th, June 5th and 25th, July 3rd and 16th, August 14th and October 1st. (Lasham Aerodrome, near Alton, Hants.). Fee: £12. 12s.

YORKSHIRE GLIDING CLUB.—May 1st-7th, May 15th-21st, June 12th-18th, June 26th-July 2nd, July 10th-16th, July 24th-30th, August 7th-13th, August 21st-27th, September 4th-10th. Fees: £12. 12s. in May, remainder £14. 14s. (Sutton Bank, Thirsk, N. Yorkshire).

1955 GERMAN NATIONAL CONTESTS

OERLINGHAUSEN has again been chosen as the venue for this year's German National Gliding Contest. The competitions will take place from July 31st to August 14th.

Last year approximately 340,000 launches were made in Western Germany giving a total of about 40,000 hours' flying. Eight glider pilots were killed. The number of machines in Western Germany has risen to 1,200.

WOMAN'S 84-MILE FLIGHT

A BRITISH women's single-seater distance record for gliders was set up on April 9th, by Mrs. Rika Harwood, who flew 84 miles from Lasham, Hampshire, to Ham Street, Kent.

Mrs. Harwood who lives at Surbiton, flew an 'Olympia' belonging to the Surrey Gliding Club. The previous record of 76 miles was set up last September by Mrs. Evie Deane-Drummond, who flew from Lasham to Tewkesbury, Gloucestershire.

MIDLAND CLUB RALLY

THE best flight of the day in a gliding rally organised by the Midland Gliding Club at Church Stretton, Shropshire, on April 9th was made by J. Williamson, flying a 'Slingsby T-42' two-seater. He flew 132 miles to his declared goal at Cambridge.

P. A. Wills, flying a 'Slingsby Sky' flew to his goal at Dunstable—110 miles away. R. Prestwich, flying the 'Skylark' landed at Cambridge after declaring his goal as Leiston on the East Coast.



A dry moment at Camphill during the World Contests last year. Rigging Max Arbayter's 'Orao II.' Right: Arbayter; centre: Constructor Boris Cijan. Photo: H. Schwing, The Hague

NEWS IN A FEW LINES

Edmund Schneider, late of Germany and now of Adelaide, is building a 'Minimidget,' which is rumoured to be approaching completion. It is said to be of about 26 feet span and 112 lb. weight. The one-piece wing is of high-speed section and is rectangular. The fuselage is of steel tube and fabric construction with pod and boom outline. The sailplane is an experiment and no claims are being made for it.

A Glider Pageant held at Geelong, in Southern Victoria, raised about £150, most of which goes to help the formation of a new Geelong Gliding Club. Geelong was once a pioneer gliding centre in Australia, in the days when the well-known Percy Pratt built, flew, and marketed gliders there in the nineteen-thirties. The Victorian Motorless Flight Group moved to Geelong for the Pageant weekend, and put in two days of good soaring and passenger carrying in support, with displays of all kinds of glider flying.

Fred and Grace Hoinville also attended and helped out with 'Brolga,' The Educated Aeroplane. Grace did her usual excellent job on the amplifiers.—F.H.

France. Mt. Blanc (15,770 ft.) was flown over for the first time on April 14th by René Branciart who took his 'Breguet' to a height of 19,357 feet.

India. The Czech firm of Motokov from Prague demonstrated a two-seater training sailplane at the Silver Jubilee Celebrations of the Bombay Flying Club on February 6th.

Pakistan. Polo Week in Lahore was enlivened by a gliding display which was much appreciated by all present.

U.S.A. Betsy Woodward has claimed a single-seater feminine altitude record for a flight to 40,160 feet at Bishop, California. She was flying a 'Pratt-Read,' aerotowed to 12,000 feet. (Bishop airfield lies at 4,100 feet).

Kenya. The Nairobi Gliding Club now owns two 'Kirby Cadets' and the first launches were made in February by auto-tow. A winch and a 'Slingsby T-21B' are under construction.

India. A two-seater sailplane, training type, made by Motokov of Prague, Czechoslovakia, was demonstrated at the Silver Jubilee of the Bombay Flying Club on February 6th.

'THE PLAIN MAN'S GUIDE TO GLIDING'

By Godfrey Lee. Copies of this instructive booklet are available from 'Sailplane' Office, price 6d. per copy, plus 2d. postage please.

SAFETY RULES OF THE SWISS AERO CLUBS

(1) Pay no regard to dangerous requests from your passenger—he knows nothing about aviation.

(2) Do not experiment with unauthorised aerobatics—test pilots have already done that on your behalf.

(3) Never show off to your passengers—the path to glory is not only *via* the air.

(4) It is both necessary and wise to be in full control of your machine, but above all learn to control yourself!

SMALL ADVERTISEMENTS

If you have something to sell or there is something that you need why not advertise with a small advertisement in *Sailplane and Glider*? The cost is not high and full details will be sent on request.

FOR SALE

'SLINGSBY PETREL'—completely rebuilt since the war and fitted with one-piece Perspex cockpit cover. In first class condition, complete with instruments and current C. of A. Price: £250.—Midland Gliding Club Ltd., Long Mynd, Church Stretton, Shropshire.

'FREE FLIGHT' is now on sale to non-members of the Soaring Association of Canada. Price per copy: 25 cents. Yearly subscription: $2.50. From: Peter Stickland, 36, Shortt Street, Toronto 10, Ontario, Canada.

PHOTOGRAPHS are always required for the Front Cover of *Sailplane* and one guinea will be paid for each one published. Prints must have a vertical axis and should be sent with a stamped envelope for return. Address prints to 'Front Cover,' 'Sailplane and Glider,' 8, Lower Belgrave Street, London, S.W.1.

'WINGS FOR PAULINE'

A 16 mm. sound copy of the film 'Wings for Pauline' is available for hire from 'Sailplane.' Price £1. 1. 0. Write for details.

'VUELO SILENCIOSO'

Argentine Gliding Magazine. Monthly. Address: Casilla de Correo 800, Buenos Aires. Price $3 Argentine per copy.

MIDLAND GLIDING CLUB, LTD., Long Mynd, Church Stretton, Shropshire.

★ Summer Gliding Courses will be held as follows:—

June 11th—18th, July 2nd—9th, August 13th—20th, August 27th—September 3rd.

Inclusive fee for each course of 8 days with accommodation, 4 meals per day and all flying, £15.

Full particulars from:—J. W. G. HARNDEN, 37, Hugh Road, Smethwick 41, Staffs. *Telephone*: Smethwick 0941.

Letters to the Editor

SIR,

I am a new reader of your magazine *Sailplane and Glider* and I must say it is very interesting and enjoyable to read about what is happening in other gliding clubs all over the world. I am myself a flying member of the Fursungi Gliding Club, Poona.

Regards the article ' Midget Sailplanes ' in your Jan./Feb. issue of *Sailplane and Glider*, I find it very intriguing, but rather baffling as to the term ' landing on one's legs.' I would be much obliged, and grateful, if you could give a more detailed description with photographs or diagrams of the ' Horten X ' in your next issue of the *Sailplane and Glider*. Not having seen the ' Horten X ' or any likeness to it, and only having experience in flying a ' Primary,' ' T-21-B Slingsby ' two-seater, ' Grunau Baby ' and ' Olympia,' which are the only kind of sailplanes we have in India at present, I think it sounds rather awkward flying from the prone position; I should imagine it would be more comfortable to fly from the sitting position. Is the control column of the ' Horten X ' similar to that of the conventional type glider? As Mr. E. A. Cunningham said in his letter to you, he values his legs, and for that matter everybody does! Would it not be dangerous to land on one's legs especially with a forward speed?

It is really wonderful how much we are able to learn from the birds; we try to fly like them, try to follow them when they are soaring and now as O.W.N. suggests we should practice landing on our feet until we land like them on the ground! I think I still prefer to have a skid! Perhaps as India develops in the Art of flying and manufacturing her own gliders, we too will learn to land like birds.

With best wishes and thanking you in anticipation. —**(Mrs.) June Lunn, The Bishop's School, Poona.**

SIR,

Having just obtained my current issue of *Sailplane and Glider*, my remarks are somewhat belated.

I read with great joy that O.W.N. agrees with my ' pre-issue sentiments.' I also read with less great joy several letters which are anti-midget. I had not thought that so many people were capable of looking a gift horse in the mouth without recognising it. When your article written by Rogelio Bartolini appeared in the magazine, I leapt with glee knowing that at last someone had been genius enough to devise a means to bring gliding within the range of a great many people such as myself.

So happy about the idea was I that I have designed a glider based on the ' Horten X.' Unfortunately, I made a shocking mess of it, so now I am trying again. May I add that this latest attempt is so far proving a much better design?

However should the matter regarding ' Midget Sailplanes ' die, then I can assure you that I shall continue to support it. Three cheers for Dr. Horten!! —**C. M. Orwin, Hornsey, London, N.8.**

SIR,

With reference to Mr. E. A. Wragg's letter in your last issue, I will be very pleased if he makes contact with me.—**J. A. I. Reid (Lieutenant-Commander, R.N.), H.M.S. ' Thunderer,' Manadon, Plymouth.**

SIR,

A glance through almost any copy of *Sailplane and Glider* published during the last few years will show ample evidence of a growing interest not only in ' Midget Sailplanes,' but also in home construction. No less than three letters printed in the Jan./Feb. 1955 issue cover both these subjects and it is quite obvious that they must be considered together.

Don Santee would like to see articles on home construction and I would like to add a loud ' Hear, hear '! The home built ' Midget,' simple to operate and of low initial cost offers the best opportunity yet of making soaring flight available to all.—**E. A. Cunningham, Norwich.**

(N.B.—The Editor regrets several letters must be held over due to shortage of space.

DR. HORTEN

VERY many readers have written to us recently asking for the address of Dr. Horten. We have no recent address, but he can be contacted c/o Club de Planeadores, Córdoba, Pucia, de Córdoba, Argentina. Alternatively readers may send letters to him *via* the government. In that case put c/o Dirección de Aeronaútica Civil, Sección Vuelo Sin Motór, Buenos Aires.

Bulk Orders

The attention of Club Secretaries, etc., is drawn to the fact that special rates are available for bulk buying of *Sailplane and Glider*. Full details sent on request.

Royal Aero Club Certificates

(Issued under delegation by the B.G.A.) **FEBRUARY, 1955**

CERTIFICATES	**'A'** ..	**74 (19247-19321)**
	'B' ..	**76**
	'C' ..	**11**
	Silver 'C'	—
	Gold 'C'	—

'B' CERTIFICATES

No.	*Name.*	*A.T.C. School or Gliding Club*	*Date Taken*
19247	D. A. Wilson	R.A.F. Moonrakers	30.1.55
19248	K. Farrance	No. 23 G.S..	23. 1.55
19249	A. J. J. Potter	No. 143 G.S.	21.11.54
19250	C. M. Fooks	No. 168 G.S.	30. 1.55
19251	T. E. Jardine	R.A.F. Moonrakers	30. 1.55
19252	J. B. Scurrell	No. 104 G.S.	30. 1.55
19253	D. E. Trude	No. 84 G.S..	20. 8.54
19254	R. G. Smith	No. 188 G.S.	2. 1.55

OUR NEXT ISSUE

WE are doing everything possible to make the next issue of *Sailplane and Glider* a very special affair. There are two reasons :— Firstly because we *always* endeavour to make the 'next' issue better than the last ; and secondly because it is the number that will be on sale at the British National Gliding Contests to be held at Lasham Airfield, near Alton, Hants., from July 23rd—August 1st.

Improving the contents of our journal is indeed a difficult business, for *Sailplane* is produced issue by issue under the most difficult circumstances and on a budget that is always stretched to breaking point.

We are gratified that so many people all over the world freely give us their news and photographs, which often involve considerable time and expense on their parts, and so help keep us alive. There are many critics, but it is encouraging to receive the numerous letters of praise.

The July/August *Sailplane* will be published on July 18th and we are endeavouring to obtain enough additional advertising to permit us to include eight more pages. Many thousands of people, providing we are blessed with fair weather, will be at Lasham to witness the contests and how can the spectacle of sailplanes gleaming silver-like, floating gracefully over the countryside of England on a summer afternoon fail to fill them with our desire to fly like birds ?

The July/August issue will contain detailed information of all the clubs in this country, their sites, flying fees, etc., and short histories to help encourage the newcomers. There will of course be plenty for our regular readers, many particularly interesting articles are already in hand and many fine photographs have already been received.

The September/October issue, which will be on sale by September 26th will contain a fully illustrated report of the contests.

We regret that at the time of going to press entries for the contests are not available, but they will be included in the next issue with a programme of events.

'B' CERTIFICATES—*continued*

No.	*Name.*	*A.T.C. School or Gliding Club.*	*Date taken*
19255	I. H. Anderson	No. 44 G.S.	15. 8.54
19256	G. E. Matthews	No. 24 G.S.	23. 1.55
19257	P. J. Welman	No. 146 G.S.	19.12.54
19258	J. L. Sellars	No. 26 G.S.	16. 2.55
19259	A. M. Gannon	No. 188 G.S.	2. 1.55
19260	G. H. Snider	No. 2 G.S.	29. 9.54
19261	J. H. Kinnaird	No. 2 G.S.	21.11.54
19262	A. J. Babbs	R.A.F. St. Athan	5. 2.55
19263	N. M. B. Beddow	No. 42 G.S.	30. 1.55
19246	J. H. Quick	Coventry G.C.	5. 2.55
19265	A. R. Field	No. 125 G.S.	23. 1.55
19266	P. Simpson	No. 168 G.S.	25. 7.53
19267	D. J. Dixey	No. 168 G.S.	13. 2.55
19268	S. M. Wills	Cambridge G.C.	26. 1.54
19269	K. R. Hale	No. 42 G.S.	30. 1.55
19270	P. N. Rosenfeld	No. 104 G.S.	13. 2.55
19271	M. K. Crews	No. 102 G.S.	13. 2.55
19272	R. T. Bullus	No. 23 G.S.	13. 2.55
19273	K. Harries	No. 84 G.S.	6. 2.55
19274	M. J. Gibson	No. 31 G.S.	13. 2.55
19275	I. R. Harvey	No. 92 G.S.	6. 2.55
19276	P. J. Reed	No. 84 G.S.	6. 2.55
19277	B. Tobin	No. 68 G.S.	23. 1.55
19278	R. D. Hardwick	No. 92 G.S.	10. 1.55
19279	W. Hermes	R.A.F. Bruggen	13.11.54
19280	T. D. A. Hunt	R.A.F. Bruggen	7. 4.54
19281	M. F. Dean	No. 45 G.S.	9. 1.55
19282	J. D. Pullen	No. 125 G.S.	30. 1.55
19283	R. St. J. Richards	No. 186 G.S.	10.10.54
19284	J. V. Mason	No. 43 G.S.	3. 10.54
19285	A. O. Ballautine	No. 2 G.S.	4. 7.54
19286	M. J. Pearce	Bristol G.C.	6. 2.55
19287	K. O. King	Cambridge G.C.	20. 7.54
19288	J. F. W. Morgan	No. 168 G.S.	30. 1.55
19289	M. Hobson	No. 104 G.S.	13. 2.55
19290	R. A. Everard	Bristol G.C.	28. 8.52
19291	H. Baillie	No. 122 G.S.	5.12.54
19292	W. Seymon	No. 2 G.S.	5. 12.54
19293	I. W. Strachan	No. 24 G.S.	30. 1.55
19294	A. L. Samuels	College of Aer. G.C.	6. 2.55
19295	J. Beaty	No. 23 G.S.	20. 2.55
19296	R. G. Baines	No. 104 G.S.	13. 2.55
19297	F. H. Cook	No. 49 G.S.	28. 8.54
19298	N. L. O. Green	No. 104 G.S.	20. 2.55
19299	S. G. Storey	No. 168 G.S.	9. 1.55
19300	C. J. Tetley	No. 92 G.S.	15. 8.54
19301	J. D. Webb	No. 24 G.S.	23. 1.55
19302	D. C. Stones	No. 31 G.S.	13. 2.55
19303	D. Wilcockson	No. 24 G.S.	23. 1.55
19304	A. C. Calder	No. 168 G.S.	13. 2.55
19305	D. Lester	No. 41 G.S.	6. 2.55
19306	T. Anderson	No. 123 G.S.	27. 2.55
19307	F. G. Beckett	No. 142 G.S.	13. 2.55
19308	P. J. Roberts	No. 126 G.S.	27. 2.55
19309	D. Williams	No. 122 G.S.	20. 2.55
19310	M. L. McLeod	No. 1 G.S.	18. 7.54
19311	A. D. Clarke	No. 48 G.S.	20. 2.55
19312	K. C. Gledhill	No. 43 G.S.	27. 2.55
19313	H. S. Taylor	No. 123 G.S.	27. 2.55
19314	W. S. Walker	No. 1 G.S.	24.10.54
19315	G. R. Warine	No. 183 G.S.	27. 2.55
19316	R. Jones	No. 68 G.S.	13. 2.55
19317	B. A. Haddon	No. 146 G.S.	13. 2.55
19318	H. G. Brothers	No. 142 G.S.	13. 2.55
19319	R. D. Wiffen	Oxford G.C.	24. 4.54
19320	E. J. Cooper	Bristol G.C.	20. 2.55
3638	D. G. Hawkins	London G.C.	5.12.54
14349	B. G. Leach	R.A.F. Kabrit	18.12.54

'C' CERTIFICATES

19268	S. M. Wills	Cambridge G.C.	20. 3.54
19287	K. O. King	Cambridge G.C.	5. 9.54
19290	R. A. Everard	Bristol G.C.	23. 6.54
19319	R. D. Wiffen	Oxford G.C.	11. 7.54
3638	D. G. Hawkins	London G.C.	6. 2.55
6929	I. M. Ross	No. 7 G.S.	30. 1.55
16855	K. W. Haynes	Coventry G.C.	30. 1.55
17020	W. D. Barrett	Oxford G.C.	6. 2.55
18078	Dawn V. Reynolds	Southdown G.C.	27.12.54
18354	D. P. Timperley	No. 42 G.S.	19. 9.54
18537	L. Heuckel	Surrey G.C.	19. 9.54

MARCH, 1955

CERTIFICATES 'A' .. 68 (19321-19389)
'B' .. 71
'C' .. 14
Silver 'C' 4
Gold 'C' —

'B' CERTIFICATES

No.	*Name.*	*A.T.C. School or Gliding Club.*	*Date taken.*
19312	G. Davies	No. 68 G.S.	13. 2.55
19322	V. S. Gibson	R.A.F. Windrushers	15. 8.54

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'B' CERTIFICATES—*continued*

No.	*Name.*	*A.T.C. School or Gliding Club.*	*Date taken*
19323	M. J. W. Carey	No. 102 G.S.	15.11.54
19324	K. G. Cranness	No. 146 G.S.	19. 2.55
19325	D. Kirkby	No. 188 G.S.	2. 1.55
19326	G. W. Selvester	No. 183 G.S.	27. 2.55
19327	J. I. Croft	Coventry G.C.	27. 2.55
19328	B. Awford	No. 42 G.S.	27. 2.55
19329	K. F. Moorhouse	No. 146 G.S.	13. 2.55
19330	J. T. Hogben	R.A.F. Moonrakers	6. 3.55
19331	M. R. Holmes	No. 42 G.S.	27. 2.55
19332	D. C. Tilford	No. 125 G.S.	27. 2.55
19333	J. A. Houghton	No. 146 G.S.	20. 2.55
19334	J. R. Porteous	No. 2 G.S.	12.12.54
19335	J. M. Gatt	R.A.F. Moonrakers	13. 3.55
19336	C. S. Bell	R.A.F. Moonrakers	13. 3.55
19337	Elizabeth Liquorish	Coventry G.C.	13. 3.55
19338	D. B. Ward	No. 89 G.S.	12. 2.55
19339	M. W. Bailey	No. 48 G.S.	27. 2.55
19340	B. D. Lillistone	No. 130 G.S.	10.10.54
19341	I. Ritchie	R.A.F. Grangemouth	23. 5.54
19342	D. J. French	No. 44 G.S.	20. 2.55
19343	F. D. Hughes	H.Q. Home Command	14. 7.54
19344	A. F. Hurford	R.A.F. Wahu	5. 3.55
19345	A. Haycock	No. 43 G.S.	10.10.54
19346	M. S. Thomas.	No. 102 G.S.	22. 3.55
19347	B. Townsend	R.A.F. Detling	18. 3.55
19348	W. C. MacDonald	No. 7 G.S.	31. 5.54
19349	P. G. Richards	No. 1 G.S.	18. 3.55
19350	R. Wilkinson	No. 22 G.S.	18. 7.54
19351	T. L. Adcock	No. 1 G.S.	17. 3.55
19352	C. E. Bryant	No. 123 G.S.	20. 3.55
19353	I. J. Duncombe	No. 43 G.S.	13. 3.55
19354	L. Gibson	No. 141 G.S.	18. 4.54
19355	G. W. Laing	Bristol G.C.	20. 3.55
19356	I. L. Campbell	No. 102 G.S.	22. 3.55
19357	J. K. Johnstone	Bristol G.C.	20. 3.55
19358	J. R. Simonis	No. 89 G.S.	6. 2.55
19359	A. Nicholson	R.A.F. Moonrakers	26. 2.55
19360	C. W. Wright	No. 125 G.S.	13. 3.55
19361	C. W. Powell	H.C.G.I.S. Detling	11. 3.55
19362	D. G. Berriman	No. 84 G.S.	25. 5.54
19363	B. A. Knight	No. 87 G.S.	2.12.51
19364	M. J. H. W. Stockford	No. 130 G.S.	5.12.54
19365	L. Avery	No. 168 G.S.	30. 1.55
19366	N. J. Price	No. 48 G.S.	13. 2.55
19367	A. J. Drage	No. 44 G.S.	13. 3.55
19368	A. W. Parker	No. 42 G.S.	13. 3.55
19369	N. A. Craven	No. 23 G.S.	27. 3.55
19370	D. Cutts	No. 102 G.S.	22. 3.55
19371	T. N. Seaton-Sykes	R.A.F. Oldenburg	13. 6.54
19372	A. L. Froome	No. 89 G.S.	13. 2.55
19373	G. A. Podd	No. 104 G.S.	9.10.54
19374	C. Horne	No. 122 G.S.	20. 3.55
19375	E. Hotine	No. 122 G.S.	13. 3.55
19376	W. J. A. Lockett	No. 45 G.S.	22. 8.54
19377	J. H. S. Mayo	No. 122 G.S.	20. 3.55
19378	T. W. Thompson	No. 31 G.S.	27. 3.55
19379	P. A. Usher	No. 142 G.S.	27. 2.55
19380	T. T. Weller	No. 183 G.S.	27. 3.55
19381	G. R. Roberts	R.A.F. Fassberg	19. 7.53
19382	A. R. Tapp	Cambridge U.G.C.	15.11.54
19383	L. N. Charlesworth	No. 23 G.S.	13. 3.55
19384	R. G. Dickinson	No. 22 G.S.	20. 3.55
19385	E. McCutcheon	No. 31 G.S.	20. 3.55
19386	J. V. Boyce	No. 102 G.S.	22. 3.55
19387	S. G. H. Hancock	No. 2 G.S.	5.12.54
19388	E. J. Stroud	No. 166 G.S.	20. 3.55
10269	D. R. Stone	R.A.F. Oldenburg	27. 2.55
12416	R. J. Davidson	Fenland G.C.	13. 3.55
14423	E. M. MacKintosh	No. 7 G.S.	6. 2.55

'C' CERTIFICATES

19322	V. S. Gibson	R.A.F. Windrushers	5. 9.54
19343	F. D. Hughes	H.Q. Home Command	6.10.54
19363	B. A. Knight	No. 87 G.S.	3. 8.52
19381	G. R. Roberts	R.A.F. Fassberg	16. 9.53
19382	A. R. Tapp	Cambridge U.G.C.	15. 3.55
2565	A. F. Becker	Fenland G.C.	19. 5.53
11385	F. E. Ord	R.A.F. Moonrakers	20. 3.55
11444	H. A. S. Stewart	No. 104 G.S.	13. 3.55
16147	J. S. Stewart	No. 64 G.S.	31. 8.54
17674	D. L. Page	No. 142 G.S.	19. 3.55
18202	D. Hatch	No. 183 G.S.	20. 3.55
18518	R. Poirrier	R.A.F. Wahu	12. 3.55
19018	K. L. Moorey	Yorkshire G.C.	15. 3.55
19074	M. S. Holtby	R.A.F. Bruggen	13. 3.55

SILVER 'C'

477	K. E. Machin	Cambridge U.G.C.	19. 3.55
478	G. C. Hudson	Cambridge U.G.C.	16. 3.55
479	C. P. Wills	Surrey G.C.	6. 3.55
480	V. C. Carr	London G.C.	19. 3.55

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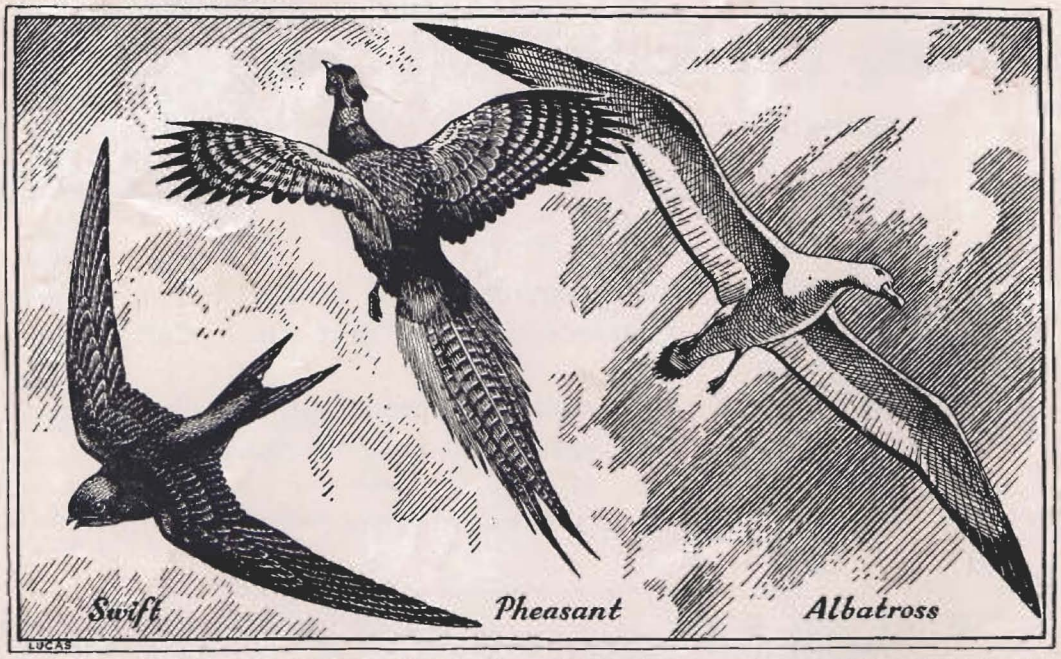
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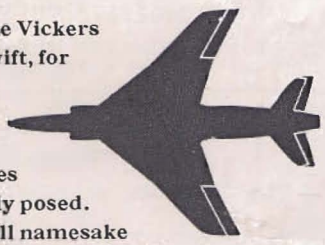
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The pheasant has very different needs. It lives in woodland, feeding and breeding on the ground. Its safety depends on its steep "rocketing" climb. So its wings are short for speed, broad and arched for maximum lift. Man's solution of the same problem, in carrier-based aircraft, is the same: the Hawker Sea Hawk needs the pheasant's short take-off and steep climb; so it has the pheasant's short broad wing shape.



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