



free flight

May/June 1978

Special World Contest Issue

FREE FLIGHT



Issue 3/78 May/June 1978

Official Publication of

Soaring Association of Canada
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Deadlines for future issues:

**Deadline for the July/August
issue is June 12, 1978**

**Deadline for the September/October
issue is August 11, 1978**

**Deadline for November/December
issue is October 13, 1978**

Address changes should be sent to:

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K1G 1T9**

Magazine design by Roger E. Murray,
Graphic Design Centre, Toronto.
Printed in Canada by the National
Sport and Recreation Centre, Ottawa.
Imprimé par le Centre national du
sport et de la récréation, Ottawa.

Cover design for this Special Issue is by
Canadian Team member Jim Carpenter.
The photograph was taken last year at a
contest at Chester, S.C. by Normund
Berzins who was crewing for Jim in the
contest. The hot finisher is Herb Moser,
member of this year's U.S. World Contest
team in his ASW-19.

'37

'52

'56

'58

'70

'72

Letters 3

The Early Years 4

Canada's First Appearance
at a World Gliding
Championships

by Barrie Jeffery & Frank Woodward 6

World Gliding
Championships 1956

by J. W. Ames 8

Committees & Chairmen 11

Memories of the World
Gliding Championships,
Leszno, Poland 1958

by Gordon Oates 12

Free Flight Interviews
Willi Deleurant

16

Escapades

Story & Illustrations
by Christine Firth

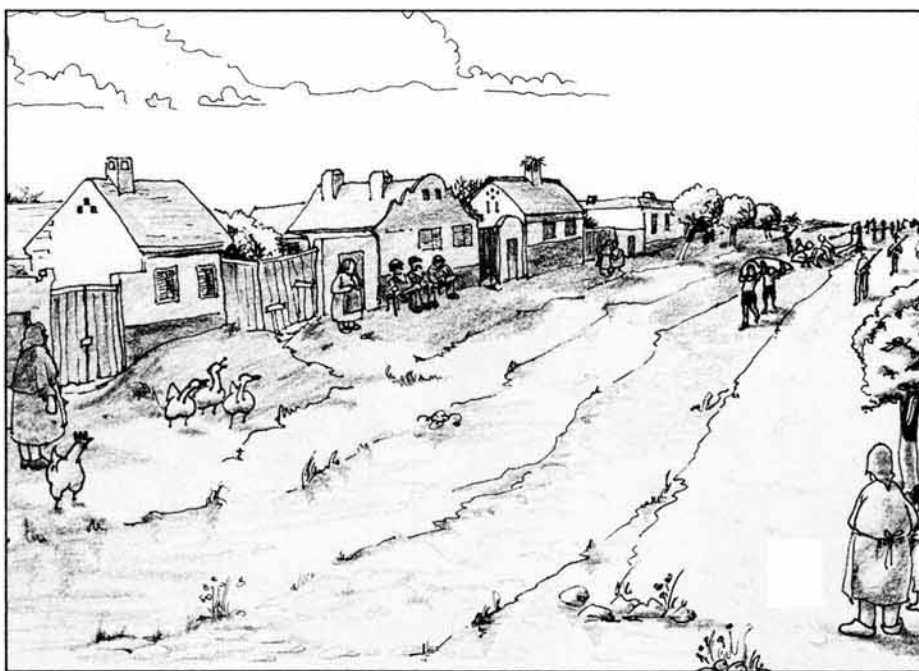
20

An Historical Note on World
Gliding Championships

by T. R. Beasley 27

Club News 30

Class Ads 31

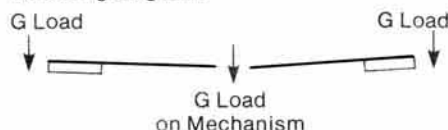


Letters

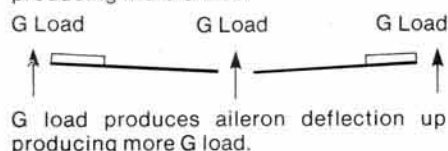
Dear Bob:

I am writing with regard to the article "If you droop, do it safely" in the Jan./Feb. issue of FREE FLIGHT.

The flutter problem mentioned is unlikely to be a result of the "play" mentioned but can be attributed to a much more significant factor (if I read Frits Stevens diagram correctly). The ailerons of some glider types are not mass balanced and as such (to make a long complex story short and simple) depend on aileron circuit stiffness to remove one type of flutter from contention. In this context, if one aileron moves up, its "mass balance" the other aileron moves down. Thus anything which removes this positive linkage is akin to removing a mass balance. The problem in the design quoted is that the droop mechanism is apparently reversible. That is, if both ailerons pushed on the pushrods, the droop mechanism would move to the "droop" position, save for friction in the control cable. When the cable broke, the ailerons were totally free. The flutter mode is easily visualized in the following diagram.



G load produces aileron deflection down producing more G load.



The characteristics are such that a sudden pulse in the design mentioned, significant enough to overcome friction in the cable would "free" the mechanism and flutter would occur. Such a pulse could take the form of a sudden G load as a result of a gust or pull-up as mentioned in the article.

There are two apparent solutions to the problem. One is to mass balance both ailerons and the droop mechanism. The other is to use an irreversible droop mechanism, i.e., screw jack or cam. I note with satisfaction Schreder's HP-18 utilizes

an irreversible cam droop mechanism.

Don Band

Don is close to completing an HP-18 building project. Ed.

Dear Bob:

Ian Oldaker's 'Speed Control in Early & Later Flights' was excellent. (*FF Jan/Feb 1978*) Brief but covering all essential points. However, having seen one friend die from a stall at low altitude, plus having personally seen how easy it is to lose speed at low altitude when things start going wrong, I would like to emphasize a point he made. That is to monitor the A.S.I. every now and then during circuit. This becomes much more critical in an emergency or abnormal situation. With the pilot workload increased under such conditions, the routine becomes easy to neglect. Don't neglect the A.S.I. If anything monitor it more frequently. The odds of walking away from the consequences of a mistake made at low altitude are much better if the mistake does become compounded by a stall.

Lloyd Bungey.

Dear Bob:

Aerobatics are beautiful, but a word of caution; it is not enough for the pilot to be fearless, daring and determined to venture into abnormal flight manoeuvres. It could be like playing Russian roulette or plain suicide unless the pilot has carefully sorted out the ingredients necessary to make aerobatics safe.

In general sailplanes are intended for soaring and gliding, only a few types have been designed and built strong enough to withstand excessive stress and are classified as fully aerobatic. Most of the ships are capable of basic aerobatics; i.e., loops, stall turns, lazy eights and spins. All these manoeuvres have to be done within the limitations set out by the manufacturer.

The aerodynamic quality of today's sailplanes is so perfect that in nose down position the red line is reached within seconds. It sneaks up swiftly without any sign of sensation or warning; the only indication is the needle on the airspeed indicator. As you know the air resistance on the aircraft increases to the square of the speed; i.e., at 150 mph the aircraft is subjected to nine times the forces compared to flying at 50 mph. In combination with speed, the pilot has to control the

amount of G forces for the intended manoeuvre, that is in addition to the stress of speed and the grand total depends on the ability of the pilot. In any case, there is not much room for mistakes, the margin of safety becomes very narrow.

It is not only the sailplane that we have to be concerned with, it's the pilot who "rocks the boat". He must be able to control any situation he manoeuvres himself into.

Let's pause for a moment and look at the difficulty a new student pilot has just to hold the wings level, control airspeed and hold direction; much practice is required to get him solo. A similar effort is required to bring a pilot up to standard in basic aerobatics, he must learn how to cope with G forces, airspeed limitations as well as physical discomfort and disorientation which in fact is again a new experience to him. Therefore he should first acquire as much experience as possible in basic gliding and soaring before venturing into aerobatic training.

I don't want to discourage anyone who has a strong desire to advance, but I feel an obligation to advise you to progress with utmost caution after you have lined up some basic requirements like:

First, a sailplane suitable and airworthy for aerobatics.

Second, a qualified instructor with an aerobatic endorsement, for dual instruction and supervising your flights.

Third, obtain the permission and co-operation of the CFI.

Fourth, have the necessary airspace available (clear of other aircraft), remember the box airspace you require is immense and it must be absolutely "yours". It is your responsibility not to endanger any other aircraft.

Fifth, the pilot must be aware and obey the MoT regulations as well as airport or club rules. He must also be competent to fly the aircraft within its limitations, and not to over-estimate his own skill.

Sixth, proceed with caution and greatest care.

Remember if anything goes wrong, there is only little chance for you to tell your story; in fact most high-speed mishaps end up as fatal.

Aerobatics, often referred to as ballet in the sky, are beautiful to look at and from the pilot's view point give a great feeling of freedom and satisfaction.

Oscar Boesch

Editorial

This issue is mostly about World Championships and the people who participated. Dave Webb has been in seven Championships and at Leszno in 1968 had a 1000 point day. Wolf Mix placed fourth at Marfa in 1970 and tragically died of injuries in an accident at Vrsac in 1972.

We salute all the pilots of past contests; their names are a part of Canadian soaring history:

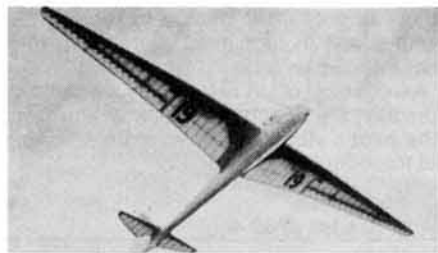
Jack Ames, 1956
Shorty Boudreault, 1952
Frank Brame, 1956
Jim Carpenter, 1974, 1976
Willi Deleurant, 1970
John Firth, 1970, 1972, 1974, 1976
Barrie Jeffery, 1952
Dick Mamini, 1972, 1974
Wolf Mix, 1963, 1968, 1970, 1972
Peder Mortensen, 1965

Dave Webb, 1963, 1965, 1968, 1970, 1972, 1974, 1976
Hal Werneburg, 1976
Frank Woodward, 1952
Charlie Yeates, 1958, 1963, 1965, 1968

Our team at Chateauroux will be Jim Carpenter, John Firth, Dave Webb and Hal Werneburg; Team Captain is Al Schreiter. If you haven't already done so, send a donation today to support our 1978 Championships team.

The Early Years

The 1937 Championships held on the Wasserkuppe were the culmination of all the effort put into gliding development starting in 1920. Aviation had advanced by giant steps during the Great War but gliding had been all but forgotten. Oscar Ursinus, editor of *Flugsport* used his magazine to call flying enthusiasts together to build and fly gliders in the summer of 1920. Under the Treaty of Versailles, aviation in Germany was restricted but here was a way to fly for fun in the good weather from July to



Kranich

September. Twenty-four arrived at the camp near the town of Fulda in the Rhön Mountains; among them were Wolfgang Klemperer, Eugene Von Loessl, Peter Riedel and Wolf Hirth.

Klemperer's glider, the 'Schwarzer Teufel' (Blue Devil) was a chunky, full skinned monoplane which was bungee launched and flew over a mile for a flight time of 2 minutes 32 seconds. Not too impressive when one remembers Orville Wright's soaring flight of 9 minutes 45 seconds in 1911. But they were learning all over

again at the Wasserkuppe and in spite of the death of Von Loessl whose glider broke up in turbulence, the meet ended with optimism.

The next year saw 50 people with 45 gliders flying from the 3117 foot mountain. There were some good gliding flights down the valley by Klemperer in his new 'Blau Maus', the successor to the 'Black Devil' and also by Arthur Martens in the 13.5 m 'Vampyr' which had been designed and built by students at Hanover. But no one won the prize for a five minute flight with a landing not more than 50 metres below the launch point.

That same summer at Hildenstein, Frederic Harth made a twenty-one and a half minute flight and landed back almost at the take-off point. This was the beginning of soaring with deliberate use of rising hill-side air currents or ridge lift.

At the Wasserkuppe in 1922 prizes were offered for the longest duration flight, the greatest distance and the closest landing to a specified point several miles down the valley. August 18th was a momentous day which saw Martens in 'Vampyr' soar 100 metres over the ridge on a flight that lasted an hour and six minutes. A second flight that day gave him a distance of ten kilometres.

Heinrich Hentzen in another Hanover glider 'Grief' had a flight of 2 hours 10 minutes and the following week stayed up 3 hours and 6 minutes with a climb of 300 metres over the ridge.

That same year there were gliding meets

at Combe-grasse in France and at Itford in England. In France a local pilot named Bossoutrot made three circles in a cloudless blue sky gaining height without ridge lift. In England the London Daily Mail offered £1,000 for the longest flight exceeding thirty minutes. This attracted pilots from England, France, Germany and Holland and a total of thirty-five gliders, many of them unable to leave the ground. Anthony Fokker, designer of Germany's First War fighters, came from Holland with a two-seater biplane glider but at the end of the meet the Frenchman, Alexis Maneyrol had won the prize with a flight of 3 hours 21 minutes landing back at the take-off point.

It was difficult to sustain enthusiasm in the following years because long flights back and forth over a hill became monotonous and retrieves from gliding flights down the valley were tedious.



Willow Wren

At Rossitten on the Baltic (now Rybachiy in Lithuanian S.S.R.) Ferdinand Schultz heard of Germany losing the duration record to Maneyrol. He flew in lift generated by winds off the sea rising over the sand dunes and set a new record of 8 hours 42 minutes. He made later flights of 9 hours 30 minutes with a passenger and 14 hours 7 minutes solo. Schultz also had a flight of 57 km to Memel (now Klaipeda) flying at altitudes of 50 to 250 metres over the dunes.

In 1926 Walter Georgii became Director of the Rhön-Rossitten Gesellschaft Research Institute and head of the Department of Flight Meteorology at Darmstadt. He led the effort in how to free the gliders from the hill and learn to use convection lift to permit cross country flying. At the August



Rhönsperber

meeting at the Wasserkuppe, Max Kegel was inadvertently sucked into cloud and his flight ended almost 50 km away!

Robert Kronfeld learned how to transfer from ridge lift to thermals out over the valley and to fly cross country. He also discovered 'cloud streets' that permitted flights back to the start point.

A prize was offered in 1929 for a flight of 100 km from the Wasserkuppe. Kronfeld

in the 20.5 m 'Wien' found lift on a storm front and soared to over 300 metres and landed after a flight of 137 km.

During the Rhon competitions of 1931 Kronfeld flew 165 km to Westfalen. This flight was notable as it was made on a day without cloud or wind. On another day Wolf Hirth and Gunther Gronhoff flew over 160 km using thermal lift and before the competitions ended Hirth had a flight of almost 200 km crossing the Rhine near Koblenz.

The building of gliders continued at the Wasserkuppe and in the annual competitions the distances were ever greater. Heini Dittmar helped Gronhoff build the 'Fafnir' then designed and built the 'Condor'. In the 1934 competitions Wolf Hirth had a flight of 352 km; Dittmar flew 375 and Ludwig Hoffman had a flight of over 400 km! The next year Hoffman extended his distance to 474 km in a seven hour flight. The 1935 team prize was won by Heini Dittmar, Peter Riedel and Hanna Reitsch, the first woman to earn a Silver C.

Distance flying was reaching its limit unless they could climb faster as well as fly faster between thermals. Also the nights were not long enough for the long retrieves that resulted from 400 and 500 km flights. Goal flights and out and return flights made more sense for competitions.

The Olympics were held in Berlin in 1936 with yachting events at Kiel. On opening

was a glider aerobatic display and at Rangsdorf south of the city, a week long soaring meet was held with pilots from Austria, Bulgaria, Hungary and Italy as well as Germany. All of this was preliminary to having gliding competition included in the Olympic Games but the war intervened and the 1940 Games scheduled for London were never held.

A design competition for a new glider for the 1940 Olympics was held and in 1938 the German 'Meise' design by Hans Jacobs was announced as the winner. The 'Meise'



Rhönbussard

was immediately renamed the 'Olympia' and subsequently became one of the most popular sailplanes produced.

The 1937 competitions at the Wasserkuppe became the first recognized International Gliding Championships. There had been a gliding meet at Salzburg a few weeks earlier with teams from several countries; but it was at the Wasserkuppe, the now famous gliding site, where teams from Britain, Switzerland, Czechoslovakia, Poland

two weeks championships.

A marking system was devised to measure pilot ability and a genuine effort was made to score each flight fairly. There was a minimum scoring distance to prevent a series of short glides down the valley and a daily factor based on the average of the best five flights. This allowed for distance flown on a difficult day to score well compared to a longer distance on a good soaring day. There were also points to be scored for height and duration. Barographs and parachutes were mandatory and two seat gliders were permitted although only the British team brought one.

There were ten contest days flown with the gliders bungee launched to try to catch thermals over the valley or slope soar until thermals developed. The gliders then soared off downwind to accumulate points for distance, height and duration.

The German pilots predictably dominated the contest with Heini Dittmar first in the 'Fafnir Sao Paulo'. Hoffman was second, Spate third, Sandmeir of Switzerland was fourth, followed by the remaining two Germans, Schmidt and Hanna Reitsch.

In spite of not placing in the first six, the Polish sailplanes were a surprise to everyone including the German designers. Both the 'Orlik' and 'PSW 101' were very impressive; only the German expensive prototype 'Reiher' seemed better. Already international competition was having a stimulating effect on the development of



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1952 Canada's first appearance at World Gliding Championships

by Barrie Jeffery
& Frank Woodward

In some respect the view from 26 years away is not too sharp, but along with some general impressions the occasional clear recollection remains.

News reports and editorials at home were respectively negative and defensive about the performance of our team. At home, we all happened to have had good flights in distance, height, or duration, with record performances in our logs. In Spain, we set one or two new records for Canada. But all things are relative, and our lowly positions in the final standings told a certain tale.

The airborne members of the team were Albie Pow of London, Ontario and Shorty Boudreault of Ottawa in the single place event, and Barrie Jeffery and Frank Woodward (Ottawa & Toronto) in the two-place event. Crew included Joe Piercy and Blodwen Thomas, now of Ottawa and long married, Dick Noonan and family on the "Diplomatic" level, Peter Shaw, Frank Brame, and several stalwarts recruited in England.

Thanks to the generosity of the R.C.A.F. Air Movements Squadron, the main body of the Canadian contingent arrived in England on June 14th. Some of the team went on to London to pick up Joe and Blodwen and the venerable 1935 London taxi which was to become our trademark later on in the trip. After an uneventful drive down to Paris, and three marvelous days in this gay city, six of us piled back into the taxi and pushed on towards Madrid. During our trip through France we had an opportunity to visit several of the

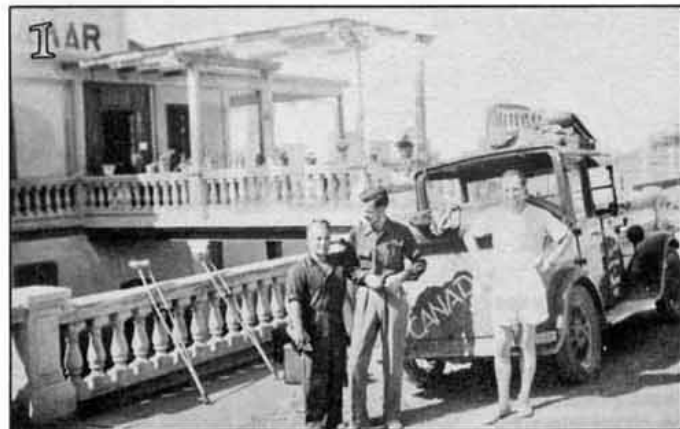
very active French gliding clubs along our route, where we were always welcome.

After a leisurely drive down Spain's east coast, we finally cut across country from Valencia and arrived in Madrid June 29th. The airport which the Royal Aero Club of Spain occupies is called Cuatro Vientos, and is located about 10 miles south of the city on a sun-baked plain. The club was completely fitted out with lounges, bars, and most appropriately, a very fine swimming pool overlooking the runways. Also on the field is a small factory where the Kranich sailplanes are built under licence from Germany.

The moments recalled include unique flying experiences. Spain is not like the rest of Europe; one crosses the Pyrenees into a new-old and different world. Differences are physical, political, personal & palpable. The country over which we flew was arid, sand coloured and ruggedly beautiful. On the practice days brilliant vigorous cumulus, high above the baking central plains, marched in ordered ranks as far as the eye could follow. A log entry shows that in our Kranich we went out 25

miles and back, on a street, in an hour and 10 minutes. The Kranich had a high camber, pre-war low-speed airfoil. Americans at the contest filled the undercamber with balsa riblets and reskinned the lower surface, in hopes of improving the penetration.

We met and talked to Wolf Hirth and Hanna Reitsch. Hirth had been one of the first to fly hang gliders on the Wasserkuppe, in the Rhon Valley, and had a

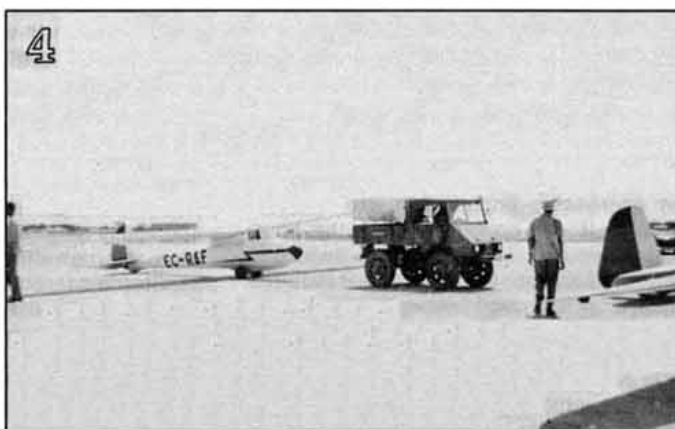


1 L to R: Ovilla (Shorty) Boudreault, Barrie Jeffery, Frank Woodward.

2 Canadian team's Kranich.

3 Kranich flown by Woodward & Jeffery.

4 Weihe flown by Pow or Boudreault.



glider factory. He designed the Wolf, Minimoa and Grunau Baby sailplanes. Reitsch, a slight blonde woman, had reputedly been favoured by Adolf Hitler, in whose heyday she had gained fame as a daring woman test pilot.

She had tested glider airbrakes in terminal velocity vertical dives. She remarked to us that it was wonderful how people could forget the war so soon. But her team mates were not selected for their ability to conciliate, and they left with us an impression of loud aggressiveness. But tragedy struck their team at the end of a 75 mile speed event. An elderly pilot - or so he seemed to us - was fatally injured when his craft was dropped by turbulence on the approach circuit.

We crossed Hanna Reitsch in the air once. Our low-sink craft could be corkscrewed up between the more modern craft, and when we passed Hanna we were treated to her special "smile". She seemed to dis-favour our clockwise circling in an anti-clock crowd.

Once we soared placidly above the bowls

of a long sand coloured escarpment facing the waning afternoon sun, hoping for a breakaway thermal that never came. We landed by a village that perched on the plain exactly at the edge of a vertical precipice. As we approached the plateau from above the void, Woodward sweated out his aerodynamicist visions of the wind licking down over the edge, and taking us suddenly with it, to impact squarely on the cliff face. Fortunately I did not think of this, but kept on plenty of speed anyway.

Other flying memories include an encounter with an interesting whirlwind several thousand feet high over a substantial grey stone or adobe village south east of Madrid, and an exhilarating climb in an enormous thunderhead thermal. We climbed at 5 meters per second to 4000 meters height, and left with plenty of room to make it to the 77 mile speed goal. But Mother Nature had a surprise in store, and a huge down area put us on the ground 10 miles short. Philip Wills set an unofficial British altitude record of over 23000 feet in the same cloud, and he later wrote that by crossing the finish line at 150

mph he announced loudly to all that he had misjudged his approach.

Dick Johnson made the 77 miles in 1 hour 8 min. in his RJ5. Shorty Boudreault earned a bright spot in our otherwise unexceptional results by placing 14th in this event, under conditions which forced half of some 58 competitors down short.

Memory tells me Paul MacCready was there with a multilayered cruise speed selector ringing his altimeter - the first time, probably, that the mathematically optimal speed could be determined in flight. MacCready recently found a new optimal flying speed: 11 miles per hour, in the Gossamer Condor.

Albie Pow had a chance to shine in one speed event, but missed the poorly marked goal and flew 20 miles too far.

In sum, we all had an excellent introduction to world competition. These notes can only hint at a lifetime of memories of an adventurous and unique experience. Others have taken Canada into high levels in world championships, and our pilots may yet go to the top.

World Gliding



Weihe

To most of the participants in gliding activities, gliding is either a pure sport or an engrossing engineering exercise. As a sport it can be ranked with the best. It requires a skill that can be learned and improved throughout a lifetime; it requires team work and good fellowship to become airborne and, once there, is entirely dependent on the individual at the controls; it is competitive in many ways - in competition with nature, with the performance of other pilots at other times and, in direct races, with other pilots under the same conditions. Finally there is a selective element of risk to give it exhilaration. As an engineering exercise, it requires the only advanced form of flying machine which can be conceived and designed in detail by one man in a reasonable time. The Soaring Association of Canada selects a team for the World Gliding Championships. Funds are obtained by appealing to the aircraft industry and other interested firms, by contributions from some of the gliding clubs and by expenses paid on their own behalf by members of the team. About \$4,500 was required in 1956. Due to various reasons including a skiing accident and our inability to borrow a two seater glider of adequate performance, the Canadian team at the 1956 World Gliding Championships consisted of Frank Brame and the writer as pilots, Frank Woodward as Team Captain, Gordon Oates and Eric Best as Crew Chiefs, and Chris Falconer, George Stanley, Lawrence Landry, Dr. Sheila Aldersmith (of England), and F.L. Benjamin and RCAF drivers, J.F. McLeod

and Andrew Larue, of the Canadian Forces in France.

St. Yan, France, was chosen for the 1956 competitions. It lies about two hundred miles south and a little east of Paris and is at the north end of a broad plain by the Loire river. In early July it normally provides good soaring conditions on west and south-west winds with best distances being obtained in flights to the German and Luxembourg borders just beyond Metz. This year it produced a magnificent display of diverse meteorology with weak thermal soaring, small active cumulus clouds, mighty cumulo-nimbus, turbulent ridge soaring near the wooded and rocky slopes of the foot-hills of the Alps, and high altitude wave soaring to the Mediterranean coast. Winds were varied, but frequently blew from the north and north-west.

St. Yan is one of the six civilian schools for powered and gliding flight training, as well as for the training of parachutists, and is specifically used as an aerobatic school. M. Agesilas, the director of the six schools, was executive head of the large staff that was needed for the contest. Included were meteorologists, instructors, tow pilots, starters, observers, scorekeepers, interpreters and many others. In general it was a well organized, excellently run international meeting, in which the French should take just pride.

The contest opened on June 29th with the impressive ceremonies normally associated with the Olympics. The flags of twenty-five nations were raised, national anthems played, teams presented, and some sixty of the world's best sailplanes displayed. The Canadian team, is shown standing by their flag pole.

Frank Brame flew the Geier II, a new sailplane of German manufacture loaned to Canada by its designer. It was of wood construction with a narrow, rather plain fuselage and elegant, high aspect ratio (23:1), shoulder position, laminar flow wings. The prototype had rather small ailerons and minor cockpit annoyances, but was nonetheless an excellent sailplane



Slingsby Skylark 3F

and certainly in the performance bracket required at a world competition.

The author flew the Bréguet 901S, loaned by France. The French Air Ministry has ordered sixty of these sailplanes for use at contests and for specific flying assignments. It is a sailplane of conventional high performance design, particularly well equipped with expensive but desirable refinements. The span is 57 ft and the aspect ratio 20:1. The wing is a NACA 63 series laminar section with powerful spoilers, divebrakes and Fowler flaps. The undercarriage is retractable by a hand lever motion and is equipped with hydraulic wheel brake. Water ballast, to improve performance on high strength soaring days, is carried in rubber sausage shaped tanks in each wing and can be jettisoned in three or four minutes. The fuselage is smaller than comfort demands, but is of aesthetic airfoil shape and provides excellent low drag characteristics with good visibility.

A great deal has been written in many languages concerning the sailplanes at St. Yan. Yugoslavia had perhaps the epitome of current development in the all metal Meteor. Czechoslovakia's Demant and Switzerland's Elfe were excellent examples of the art, and Germany's HKS series with their unblemished wings, having rolling control by tip section camber changing, were worthy of special note. The Zugvogel, flown by Hanna Reitsch of Germany, although of less complex design, gave excellent performance. With the sophisticates were the many

Championships

by J. W. Ames

1956

simpler designs, such as the Sky and Skylark 3 from England. Designs such as these are still the principal steeds of world competitors and serve to demonstrate that it is the pilots who win.

The two seater contest was run at the same time and with the same events as the single seaters, although scoring was separated. The FAI intends that this shall be the last such contest. On this occasion, Nick Goodhart and Frank Foster of England flying a Slingsby Eagle, demonstrated outstanding ability and won the two seater contest as decisively as Paul MacCready won the single.

A week of practice is allowed for in contest planning. Towing is laid on for certain periods each day, meteorological briefings are given and triangular courses that may be used in the contest are specified. On the final day, a full take-off of all sixty machines was arranged. With some twenty Stampe towplanes at work, all sailplanes were airborne in thirty-five minutes. Several national records were established or broken during this period. Canadian records were set when, on the same day, the author was able to claim a trip around the 200 km triangle in just under five hours and Frank Brame completed the 100 km triangle.

Friday, June 30th, the first flying day of the contest, provided a rather complicated meteorological situation and soaring conditions much like those found in Ontario. The Committee declared a free distance day and Frank Brame named the airport at Metz as a goal. He made

the 207 miles without too much difficulty after some unpleasantly low altitude at about the 60 mile mark. This was a new Canadian goal record and added a Diamond to his Gold C, and placed him 20th after the first event. A spoiler mechanism failure just before release made an immediate landing necessary and kept the author on the ground for a valuable three hours. Gliders were scattered all over north-east France, with Quadrado of the Argentine the farthest at 268 miles and MacCready a close second with 242 miles.

July 2nd saw all gliders back on the site, a sky rung with towering clouds, and a fresh north-west wind. Launching was delayed till two pm and was mostly unsuccessful the first and second time around. Finally a major thunderstorm swept over the airport as the sailplanes were hastily hauled into some sort of order and launched for a last try. Twenty pilots flew into the dark underbelly of the cloud and climbed inside in powerful lift. Juez of Spain came out the highest at 26,000 ft and dove for the goal 62 miles away. Ivans of the U.S. and Wills of England were a little lower at 21,000 ft and even then Wills had to ridge soar to find his way into the goal airport of Feurs by St. Etienne. The author went to 7,000 ft in the smooth lift of the cloud, lost the rising air, and spent the next half hour in snow, turbulence and downdrafts before finally breaking clear on course and 20 miles out. Ridges and prayers kept the Bréguet up for another 13 miles, resulting in a sudden landing on the side of a hill, half way to the goal and in 14th place for the day. Frank Brame slid along under the clouds and made a few miles less, but closer to the track for 19th position. In this contest all task events required a landing within 2 km of the track to avoid a point penalty, amounting nearly to the distance that the landing was off the track.

On July 3rd, the north wind at St. Yan was complemented by the classical Mistral wind in the Rhône valley. This is a tur-



Schleicher Rhonlerche II

bulent, ground-hugging wind that sweeps down past Switzerland and builds standing waves from Lyon to the Mediterranean. The Committee set a fixed course from St. Yan to Cuers and beyond the few kilometers to the Mediterranean. The Canadians managed to cross the 3,000 ft hills into the Rhône Valley and soar in weak turbulent thermals over the rough river country to where the Drôme comes in from the east. The Bréguet was ridge soared near wooded and rocky slopes of the foothills, finally gained enough height to dive into the valley beyond, and had to land minutes later almost in the picturesque village of Jaou, 132 miles from St. Yan. Brame was almost as far having come down near Crest on the Drôme. Ivans, Wills and Saradic of Yugoslavia picked up wave conditions after ridge soaring in the same area and eventually reached Cuers with 10,000 ft in hand. MacCready, the master competitor, went beyond Cuers and landed on a jet fighter base after the runway lights came on. The Canadians had gone about two-thirds of the way and placed 23rd and 27th on that day.

It would be better not to have to record the fourth event, on July 5th. Weak and well spaced thermals should have taken the competitors around a 100 km triangle. Seven pilots made the circuit, but many of the experts came down en route and some, together with the Canadians, never attained enough height with favourable conditions to start.

The weather changed by July 6th, and a late starting, free distance day was specified with the west wind favouring the 100

miles to Geneva. When the day ended, sailplanes were scattered from Geneva to well up and down the Rhône and as far back as St. Yan. The writer came down in the hills at Lamure, 32 miles out and 30th. Frank Brame made it over the ridges to Lyon, more than twice as far, giving him 23rd place for that day.

Sunday, July 8th, produced an amusing attempt to race to Beaune, 55 miles north-east of St. Yan. Thirty-eight sailplanes landed on Paray-le-Monial airfield, just five miles from the start. The author on his second try landed in a field about ten miles out with six others, after making two climbs, one from 1,500 to 1,800 ft, and the second from about 1,100 to 1,300 ft. A ridiculous cross country, but fun, and a relief to return and find that no one had gone far enough to make it a contest day. It was on this day that the Canadian Bréguet crew demonstrated excellent speed. A radio message brought them to Paray on the first try, a few minutes after landing. Nine minutes later the truck and trailer rolled off the airfield on the road to St. Yan. Seven minutes after returning, the ship was ready for take-off and being wheeled into launching position. Some 150 launches were made that day for the entertainment of Sunday spectators and pilots alike.

The next day produced perfect conditions in an Ontario sense, and a race to Moulins and return — 78 miles for the round trip. Unfortunately, a large rain-filled storm mass with no well defined lifting portion swept the area at the Moulins end. Thirty-two sailplanes reached the turn with twenty-six coming back part way. Five landed in one field, two pointing home and three pointing for Moulins. Hanna Reitsch was one of these. The author, who had just scraped into Moulins, watched her make the turn at about 400 ft and glide back on course knowing that a field rather than an airport would await her in another two miles. Frank Brame had stretched his glide to the utmost on the way out and landed the Geier with its poor forward

1956 WORLD GLIDING CHAMPIONSHIP RESULTS

Single-Seater Class

Pilot	Nation	Sailplane	Final Place Points
MacCready	United States	Bréguet 901	4,891
Juez	Spain	Sky	3,806
Gorzalak	Poland	Jaskolka	3,576
Brame	Canada	Geier 2	1,889
Ames	Canada	Bréguet 901	1,265

visibility in a roughly furrowed field, thankful that his 'undercarriage' was a long smooth skid and not a wheel. The Canadians were 18th and 32nd that day.

Wednesday, July 11th, was similar to the Cuers race day, but under more awesome conditions. The wave producing Mistral wind was blowing at 40 knots on the ground and 70 knots at a few thousand feet. The clouds were just clear of the ridges to the West of the Rhône and on the hills and mountains across the valley. A race to St. Auban, a famous soaring site 200 miles away and well into the French Alps, was selected by the committee as a fitting ending to a world contest. Seven pilots made the arduous passage. Wills reached the foothills and ridge soared into cloud on an into wind heading and then dove into the valley beyond, breaking clear after crossing the ridge. After several such exploits he found wave lift and reached the goal at 10,000 ft. MacCready, although the last of the seven, completed his outstanding contest flying by ridge soaring under terribly turbulent conditions before finding the wave that

took him into St. Auban. Brame found the Geier too difficult to control in the Rhône wind and landed nearly on course at Valence. The author reached Montelimar airport about 36 miles further, but well west of the course. The positions for the day were 16th and 29th respectively.

The contest ended with Paul MacCready of the United States named World Gliding Champion. Competing in his fifth world contest, he demonstrated beyond doubt that he possessed the ability, meteorological knowledge, all round experience and singleness of purpose necessary to win decisively an international gliding contest.

The weather was exceptionally good for the purpose of selecting a world gliding champion, as it presented the complete array of soaring phenomena. The Canadians were sufficiently skilled and experienced to be competitive and occasionally beat a recognized expert on Ontario-like days. They were not expert enough to cope consistently with the full range of weather and the tasks chosen, but are now well aware of the deficiencies and know the form their pleasure soaring and competitions must take to improve the chances of a Canadian team in future world contests. They must attempt cross country flights as frequently as possible and not wait for the big days. They should set triangular and other specific tasks for themselves and find untried ridges on which to develop soaring skills in high winds. Wave conditions, already known to exist in several parts of Canada, must be explored and understood and the strong up-currents of the cu-nims must be experienced and used successfully.

The pilots, Frank Brame and the writer, are very grateful to their crews for their hard work and willing acceptance of the chores necessary on the ground, and wish to express on behalf of the Soaring Association of Canada a very sincere thanks to the many persons and corporations that made it possible for them to represent Canada at these World Gliding Championships.

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Memories
of the
World
Gliding
Championships,
Leszno,
Poland
1958

by Gordon Oates

Here are some of my most memorable impressions from competing in the Open Class in 1958. I flew a German Geier II and team mate Charlie Yeates had a French Breguet 901. Our team captain was Wolf Mix and we had a ground crew of Polish volunteers, two per sailplane.

One of the most vivid impressions was the effort expended on my behalf by people who were not competing. This started with a magnificent effort by the Geier manufacturing personnel and was continued by the Polish crews and the supporting repair people at Leszno. I felt that I was never able to thank them adequately enough.

The Geier sailplane was owned by the builder whose company was located in Inzell near Traunstein, Bavaria. We arranged to collect the glider a few days prior to leaving for Poland, so that we could get in a couple of days of familiarization flying to check out the equipment. It's fortunate that we did because the cockpit turned out to be designed for a relatively small person and as I am 6'1" it was impossible for me to sit in it properly even without the canopy. Hasty modifications had to be made by the builder to permit me to sit in the cockpit at all with the required parachute, and then to



Chas Yeates

Wolf Mix

Gord Oates

increase the room available to allow the canopy to be closed.

Only one significant flight was possible before leaving for Poland and that was about three and one half hours soaring in the Bavarian Alps; a very pleasant experience amongst beautiful mountain scenery.

The Geier was an all wood sailplane with a nicely finished wing which contributed to quite good high speed performance and a maximum L/D of about 32. However, its low speed characteristics were not as forgiving as they might have been and, unfortunately, they led to a fatal accident a few months after we returned from Poland. The stalling speed, straight and level, was about 65-70 km/h, but as I recall the aircraft tended to run out of aileron control near the stall with a tendency to spin out of a thermal. Such characteristics made me rather nervous when soaring in a crowded thermal with other sailplanes (sometimes as many as 30) close by because any inattention to flying could have resulted in disastrous consequences. This meant that all circling had to be carried out at a minimum of 85 and preferably 90 km/h to retain adequate control in turbulence. As this was generally 10 to 20 km/h faster than most of the other sailplanes it became something of a handicap in small, weak thermals, and at low altitudes. In one case it helped to make the difference between staying airborne and having to land.

I was circling very low near a turning point in just about zero sink when I was joined by Philip Wills (1952 World Champion) in a Standard Class Skylark II. By flying slower he was able to turn inside me and eventually climbed away while I was still only maintaining height. Eventually the thermal petered out and we both left together. He had gained enough height to reach another thermal; I hadn't and had to land. No doubt lack of experience contributed to my downfall because I should have avoided getting that low in the first place. At the time I attributed most of my failure to poor flying and felt that I should have done better. In retrospect I think the high circling speed of the Geier was at

least a contributing factor because some time later I had an opportunity, when flying my own Skylark III in the U.S. Nationals to compete against Philip Wills in his Skylark III. I found that I was able to keep up with him when thermalling and ended the contest within 200 points of him with a total in excess of 6000. I attributed that success to first class equipment.

At Leszno I recall learning a lot of the finer points of high speed flying during the practice week and realising that there was still a lot to learn. I also learned that decisions sometimes have to be taken very quickly. For example, on the first contest day we started off in good conditions on and out and return race with widely scattered cumulus (which permitted high speeds initially), however, these gradually disappeared along the course leaving a clear blue sky about the midpoint of the first leg. Further on lift suddenly became poor with thermals very far apart and it was important to recognise early that a distinct change had occurred and to slow up before too much height was lost. Many people didn't and they never got across the poor area which we learned later was well known to local pilots. I managed to get to the turning point and about three quarters of the way back to Leszno. I don't remember my position for the day.

During the competition there were a number of demonstrations of the small differences in performance that had a profound effect on contest position. These were often the result of decisions that could be made only on the basis of wide experience and often I felt that I just did not have the necessary experience to always make the right decision.

In one task luck played a decisive part. A short race was set and, in the right conditions, it was possible to complete it using only four or five thermals. In retrospect I think the task was much too short and this was one of a number of occasions when the contest committee erred in their judgement of the weather. Conditions at Leszno were pretty well as forecast with reasonably good thermals but a rather low cloud base; so most people left im-

mediately after their first climb and were leaving therefore, pretty much in take-off order. Take-off order was decided by a draw of contest numbers. Along the course conditions were not as forecast, the clouds overbuilt rapidly and cut off convection almost completely. After a while the cloud dissipated and convection started again to repeat the process. If you entered the area at the right time in this cycle you had no trouble, but if not, then you encountered a total clamp and had to land. About half the competitors were successful and it was interesting later to compare take-off times for those who completed the race with those who didn't. One of the top Polish pilots failed to complete the race and I believe the Open Class Leader also got caught. I was one of the unfortunates that day but Charlie Yeates hit it right and finished well up in the field.

Only one other flight stands out in my memory, mainly because of the landing and subsequent events rather than the flight itself. On the next to last contest day, free distance was declared and this meant flying into eastern Poland where the fields are small and the country relatively rough. The best flight of the day finished practically at the Russian border, a little over 500 km from Leszno.

I ran into poor conditions about 200 km out and spent what seemed like a long time scouting around at low altitudes. Eventually the previous cruising altitudes were attained but that delay was costly. The thermals came to an end about 480 km from Leszno and I believe I finished the day in 15th position. The best field available was rather small and undulating, but it appeared to be adequate. The sun was low and there were shadows which made it difficult to check on detail. The touchdown had to be uphill on a knoll with a run over the top. At the bottom of the dip on the other side of the knoll there was a ridge partly in shadow. It was at an angle to my landing run and I didn't see it or know it was there until the glider hit it while still travelling quite fast. Because of the angle at which we hit, the glider was forced into a turn which caused one wing to drop. Full aileron



would not pick it up and it snagged the ground. The resulting ground loop caused the rear fuselage to come down hard and it broke just ahead of the fin.

That evening a front with very severe thunderstorms went through between us and Leszno and put the telephone out of action. I was unable to inform Leszno of the landing and the crew had no means of determining my whereabouts until late the following day when we were finally able to get a message through. That delay was to cost me the last contest day.

We arrived back at Leszno at 8:00 the next morning to find that no tasks had been set and the Polish repair crews, who had been working on a number of other damaged gliders took over. They worked all day and through the following night but were unable to complete the repairs before the start line was closed on the final contest day. Loss of that day meant dropping places to finish 29th.

Team funds, as always, were limited and just covered the rental and insurance on the sailplanes, trailers and towing vehicles. All other expenses had to be borne by the individual team members. I think that the equipment that we had was the best that could be obtained in the circumstances and was competitive with many of the other sailplanes. If we were deficient in anything it was instrumentation. Radio was completely absent and could have helped on at least one occasion when an early retrieve may have permitted a second try.

It became quite clear to me that you cannot enter a world class competition with anything but the best equipment and hope to do well. This is one of the reasons for improvements over the years in sailplanes and instruments. Competitions provide the incentive to make improvements and there is no substitute for practical experience in hard competition flying to show up weaknesses in any new design.

The question has been asked, "What are the qualifications necessary for a World Contest competitor?" Apart from the obvious answer, win National contests; I

... "Progressively ... we became accustomed .. to the launching in 40 minutes or less, of sixty two sailplanes ...

... "Originally happy, Gordon and I were quickly deflated, as results of the leaders' speeds for the day were posted." ...



think they must include a certain sensitivity to the environment and the aircraft while flying, accurate flying, competition experience, knowledge of weather, self discipline and dedication with a certain amount of money. The latter is required because a competitive sailplane with good instrumentation is necessary if the required experience is to be gained and that does not come cheaply.

Was it worth all the effort and expense? I think so. Although my highest placing was 12th I learned a great deal including the fact that there wasn't as big a difference as I had expected between our performance and the performance of the top ten pilots. I realized that more ex-

perience in competitions of that calibre was required if we were to improve our standings and that we should enter as many competitions as possible. The U.S. Nationals referred to earlier, subsequently helped to provide some of that experience.

I was asked to be a member of the 1960 team, but could not afford the expense involved and unfortunately had to turn down the offer. The opportunity to utilize the experience gained in those competitions never presented itself again, but I think that some of what I learned was passed on to others; at least I hope it was, and I hope that I may have been able to contribute in some small way to improving the sport in Canada.



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Free Flight interviews

Willi Dele

FREE FLIGHT: What was your flying experience that led to your selection as a member of the 1970 Canadian World Contest team?

WILLI: Well, I had been in the Nationals of the previous years and had been Canadian champion twice; 1960 was the first time I made it and again in 1965 for the second time and in between I was usually about the fifth, sixth or seventh.

FREE FLIGHT: You were always up in the top ten?

WILLI: Always in the first ten, yeah.

FREE FLIGHT: Where were those contests held in 1960 and 1965?

WILLI: In 1960 it was at Brantford and in 1965 at Pendleton.

FREE FLIGHT: And who were you flying against in those contests?

WILLI: People like Dave Webb, John Firth, Charlie Yeates, Wolf Mix and all the top pilots in Canada.

FREE FLIGHT: What kind of aircraft did you fly in those contests?

WILLI: In 1965 I flew a Standard Austria; I modified the plane. This was the first one to come into Canada and it was a pretty fast ship but it didn't soar too well and so I made a modification in the wings and then it was pretty good. I made a lot of flights in it; I flew it more than 450 hours and I made the best five flights of the year in that ship two years in a row. In 1968 in that ship I was second. In 1969 I had a Libelle, I was second in Alberta.

FREE FLIGHT: So when you went to Marfa you had a pretty good background in contest flying?

WILLI: Well, I could say so ... I flew all of the contests from 1960 on; no 1959 was the first one. I flew in the Bergfalke ... I made fourth there, I was in Brantford also.

FREE FLIGHT: When you went to Marfa did you take your own Libelle?

WILLI: No I couldn't. I had a 301 and what happened was that I was actually the standby pilot. Charlie Yeates was the one actually who was selected for the team but Charlie was just changing jobs and it wasn't until the last minute that I knew that I had to replace him.

FREE FLIGHT: Charlie Yeates had flown in international competition before, hadn't

he?

WILLI: Oh yeah, he had flown in Poland and England.

FREE FLIGHT: He was in Argentina too, I think.

WILLI: Argentina, yes that's right. He was one of the tougher pilots I would say.

FREE FLIGHT: So when you went to Texas, you weren't really expecting to fly?

WILLI: I was the standby and Charlie had some difficulties getting there and I had to make arrangements to get a ship in the U.S. It was arranged for us to borrow a Standard Libelle and I had to pick it up two days before the contest started on the way there; so we had no time to do any flying in that ship. This is a bad setup in one respect.

FREE FLIGHT: I think that this must be one of the problems that our teams always have. They go to Europe or wherever and they don't have sufficient time to practise and to get used to the aircraft and to get to know the country that they will be flying over.

WILLI: That's one part and the other part is that the ship you get rented is never equipped like the one that you are used to or your own ship. The instrumentation is all different, that is one of the biggest problems.

FREE FLIGHT: Did you have a Canadian crew?

WILLI: Yes, Elemer Balint was my crew chief and I had one of my mechanics with me and that was my crew. On the way there we had to pick up that ship and we had an arrangement to make one flight there at the airport where we picked it up and then we loaded and drove right straight through to Marfa. And we only had one practice flight then the contest started.

FREE FLIGHT: You were flying in the Standard Class.

WILLI: A Standard Libelle, yeah. And Wolf Mix was also flying standard in a Cirrus.

FREE FLIGHT: Was that the first international contest he was in?

WILLI: Oh, no, he was in Poland and Argentina too. In Argentina he flew a Ka-6, I remember that.

FREE FLIGHT: He really did well at Marfa.

WILLI: He came fourth.

FREE FLIGHT: That's the best standing a Canadian has ever had in international competition.

WILLI: That's right.

FREE FLIGHT: What was the reason he did so well, do you know?

WILLI: Well he ... I would say that the key factor was that first day's flight in Marfa when we had lots of outlandings; I was among them too! He succeeded to cross the Apache Mountains in order to get in the better part of the country and to come back; that was the key.

FREE FLIGHT: The first day he was fifteenth.

WILLI: Yes, but he made it!

FREE FLIGHT: He was second on the second day which put him into eighth place.

WILLI: What actually we did later on; we made more communication by radio; he was a very aggressive pilot and a consistent pilot. I had flown quite often against him and his persistence more or less was what made him always the winner.

FREE FLIGHT: The contest started on June 21st and the first day's task was 'Distance within a Prescribed Area'; and that day everyone started out toward Van Horne?

WILLI: That's right.

FREE FLIGHT: Some in the Standard Class did quite well, the first man did 305 miles.

WILLI: That was Wroblewski of Poland in a Kobra 15. The worst part that day was actually around Marfa; they had had four consecutive days of rain and it was hard getting away.

FREE FLIGHT: You were trying to get over the mountains north of Van Horne. How high were they?

WILLI: I would say about 1600 feet over the ground at least. On that first day we never had a cloud 2000 feet above the ground in the mountains there and near Van Horne after all that rain ... very unusual there. We were just past Van Horne, it comes into the Apache Mountains in that area; I was in the lead but I was about two hundred feet below Wolf and he dashed to the mountains to get over and he stopped and then just skimmed over and disappeared over the other side.

FREE FLIGHT: You said you were a couple

urant



Left to Right: Dave Webb, John Firth, Wolf Mix, Willi Deleurant (front)

of hundred feet below Wolf Mix; were you flying with him intentionally?

WILLI: What we were trying was team flying; we have radio contact and report the weather conditions that are good so the other one can follow. That was a common practice in world competition flying. Each one has to help the other. So anyway, Wolf was above me by about two hundred feet just at the cloud base and he took off and I was trying to get that extra because I could see the top of the ridge ... it was just too high for me. So he took off for the ridge there and there was a little dent and he took off through that dent and I said, 'Will he make it?' He stopped, turned around and then took a dive right into the ... He later told me he had seen that there was a steep slope going down towards the road on the other side; so he followed the slope to pick up speed. I couldn't see it from my point but I followed him so far and as I say I was two hundred feet lower so I couldn't make the ridge; so I had to stay on that side of the mountains.

FREE FLIGHT: Couldn't you find any lift?

WILLI: There was nothing. I mean I kept up for about a half hour and then had to land.

FREE FLIGHT: What sort of country is it?

WILLI: It is desert with mountains and plateaus and all that you see is just iron-wood and the cactus.

FREE FLIGHT: So it is pretty rough?

WILLI: Very rough, yeah. If you make an outside landing it is recommended that you land on the highways, that's the best way you could land there you know. I found a farm field there.

FREE FLIGHT: Where were you when you landed out?

WILLI: I landed about 28 miles from Van Horne and I walked through the night on the way back.

FREE FLIGHT: What did you see after you were down?

WILLI: About two miles from me I saw a hut; so I walked to it and there was a ... now there but he had a broken leg and was no help whatsoever. He lived there looking after a herd. His leg was in a cast and was all swollen. He had a tractor there but it had a flat tire and that was it.

FREE FLIGHT: He was a cowboy, was he?

WILLI: Something like that. A truck came every four days to bring him supplies and that was all.

FREE FLIGHT: Then what happened?

WILLI: He was actually afraid to come out of the hut, and I asked him later why. In that area they were afraid of the Mexicans who came over the border to work as farm helpers and he was afraid of any strangers. Anyway, later he came out and I talked to him and saw his swollen leg. He showed me the road and I pointed out where the glider was but he wasn't very interested. So I went back to the ship and secured everything and took out my camera. I tried again on the radio to get contact but without success. Then I waited for a while for it to cool off.

FREE FLIGHT: What time of day was this?

WILLI: I landed about two o'clock and periodically I called but didn't get any answer. By this time it was about four. I waited a little longer for the sun to get down a bit and about seven I took off to the road. I walked for about two or three hours before it got dark.

FREE FLIGHT: And you never met anyone or saw anything?

WILLI: Not a thing! I had asked him how far it was to the road over the mountain; I knew there was a road there. He said, 'Don't go there, it's all rattlesnakes. Don't go there, stay on the road here. That's where the supply truck comes from and in about fifteen miles you will find another road. And then it's just about another eight miles to Van Horne.'

FREE FLIGHT: So this wasn't a nice paved road?

WILLI: No, it was a dirt road; and as I was walking it got dark and I kept walking and suddenly I was up to my chest in water. I crawled back and said, 'I don't need that road!' I couldn't see anything and there was water all over the place.

FREE FLIGHT: You had walked into a hole?

WILLI: Yeah, I walked into a hole right from the road. That scared me off that road, believe me. So I went up to the high ground ... high country has no water. So I went along the hills toward Van Horne. Periodically I rested and when I was sitting down these tarantulas, you know these big

spiders, they were crawling all over the place; so I picked up a stick to defend myself.

FREE FLIGHT: You must have wondered if the contest was really worth all that!

WILLI: No I was determined to get home to get that ship out for the next contest day.

FREE FLIGHT: I noticed on the results it says on the second day DNC for Willi Deleurant.

WILLI: Yeah, I didn't fly the next day. It was early the next morning, about seven or eight o'clock before I called in. I talked first to the contest committee office and then they contacted my crew.

FREE FLIGHT: They were relieved to hear from you I guess.

WILLI: They asked 'where is your ship' and I told them about 28 miles from here. They said, 'You walked that far?' and I said, 'Of course, what could I do?' They said I should have stayed as they were sending out a search plane.

FREE FLIGHT: They knew roughly where you were, did they?

WILLI: Oh, yes. Everybody was on that same course. And as I mentioned I wasn't the only one who landed out. Even Grosse of Germany landed out and the former World Champion from Austria, he landed out; Woedl, he landed out too. He didn't make it the next day either. You see we had to come around from the other side of the mountains with a four wheel drive jeep.

FREE FLIGHT: Your crew weren't on the road at all until they heard from you?

WILLI: See, it was this way; there is a valley, the Apache Mountains and over the mountains there are the highways from Van Horne towards the next turning point, what was it? Pecos. Wolf Mix knew that if he made the road on the other side he would have the updraft from there and this was the lucky part; he was able to continue but I was as I say, two hundred feet below him and I wouldn't dare go, no way!

FREE FLIGHT: And was your crew following you at this point?

WILLI: They were on the highway on the other side of the mountain, so they didn't know and they went back to see if there

was any phone call. Then they went back to Marfa.

FREE FLIGHT: Your radio was useless from there?

WILLI: If you're in the valley your radio is completely useless; that radio wasn't too good anyway.

FREE FLIGHT: When you did get in touch with your crew, they came to pick you up and drove back the 28 miles you had walked?

WILLI: No, there was no way we could go there with that car, that was my Pontiac we had for retrieve. So we had to get a four wheel drive jeep.

FREE FLIGHT: Where did that come from?

WILLI: Well, there was a fellow at the service station that I phoned from in Van Horne. I explained the situation to him and well, they were really friendly people there and he offered me his friend's four wheel jeep to retrieve the glider. So we came up with the trailer to Van Horne, hooked up the trailer to his jeep, drove all the way around to the other side of the mountain and then down into the valley to get that thing. And by the time we were home it was dark.

FREE FLIGHT: How were your feet after walking all that way?

WILLI: Well I tell you one thing; I had Absorbine Jr. with me. I used it most of the time as a bite protection from insects and when you rub your muscles it really helps. Actually my legs and knees were sore but I didn't have any blisters; I can

walk for quite a while, I'm in pretty good shape.

FREE FLIGHT: What is your opinion on whether World Contests are really worth all the time and money?

WILLI: Oh yes, the experience you gain at a world contest is really quite a bit. For instance, I learned the dolphin style flying. I never had an opportunity to do it here in Canada. And water ballast or a properly ballasted plane which you have to know. For instance with Reichmann, his team ballast every day according to the weather forecast and they have their own meteorologist and their own team doctor.

FREE FLIGHT: Do you feel that at the club level there is less competition these days?

WILLI: Yes, there's not as much spirit of competition; I found it out in our club too. In previous years when we were going from club to club, we just tried to compete with each other. We just took off in any weather condition; that's the only way you can learn. You cannot wait until the weather is good and then go.

FREE FLIGHT: You have to fly each day like in the contests?

WILLI: You have to fly on any day and in any condition and make the best of it; that's the only way to learn and that's what I did in order to get the five best flights of those years. You have to fly every weekend across country and you are sometimes amazed how far you go.

FREE FLIGHT: So once you have sufficient

experience to fly cross-country competitively there's no reason why you can't continue? There's no age limit?

WILLI: No, I wouldn't say so.

FREE FLIGHT: How about the pressure of competition?

WILLI: Well, there is one thing ... pressure. If you get yourself under real pressure, then I don't think you make a good flight. It's a matter of how you look at it. If you are always a nervous type, you never can make a flight. When you first go in competition you have excitement but after a while even that will go.

FREE FLIGHT: Do you find the competition flying tiring?

WILLI: It depends very much on the crew you have. The crew can take the pressure off you so you don't have to look after everything. If the crew takes the responsibility for all the preparations and the machine, then you have no problem.

FREE FLIGHT: Then you relax and think only of the flying?

WILLI: That's right.

FREE FLIGHT: So you have to have a combination of competitive equipment, a good crew and the confidence that they are doing their job so you can do yours.

WILLI: That's right.

FREE FLIGHT: What else does a competitive pilot need these days, besides a lot of money to travel around to the contests?

WILLI: Experience ... you can't buy experience.

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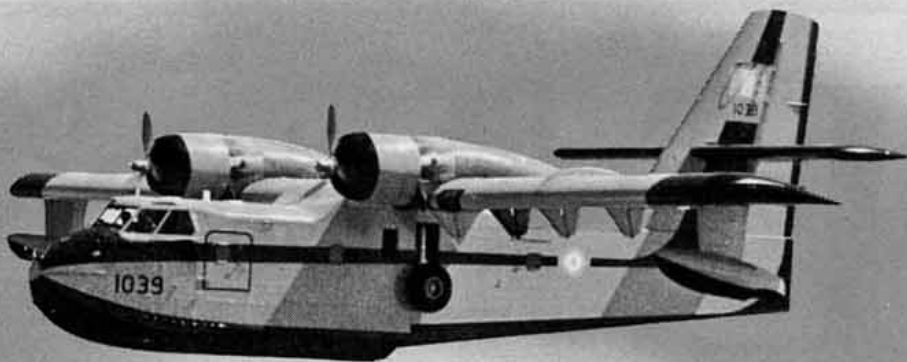
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Escapades

Story and Illustrations
by Christine Firth

There I was in the long soft grass just dozing off, relaxed and warm in the sunshine, enjoying the summery murmur of bees and the indistinct chatterings of foreign pilots; secure in the knowledge that the even tone of communication indicated that they were 'fat and happy' and high, and able to stay that way. This was the practice week of the 13th World Gliding Championships in Yugoslavia. The pilots were practising flying in new and rented ships, and trying to make them 'go', and I was practising crewing and glad they were gone - at least for the afternoon. Pains-taking reconnaissance by Tony Burton, Doug Wade and myself had already revealed that the plum location for radio reception was 600ft. up the only local mountain, which overlooked the entire Vršac plain and was topped by a medieval ruin much favored by Tony and Doug as a vantage point. The road up was rather tortuous and necessitated unhitching the trailer and parking it half way but we did not consider this a disadvantage and felt rather smugly that 600ft. of height would give us air-to-air communication even on the largest triangle, while the fact that we might also be able to have air-to-ground communication with our pilot once he had landed back at Vršac airfield, meant that we wouldn't have to tire ourselves rushing to the field to find out if the landing was safe. As my mind became as hazy as the sky overhead, a familiar voice cut my complaisance to shreds and leaping up, I left my soft bed and grabbed the car microphone.

"Ninety Nine" I'm landing 'Ninety Nine' did you get that? I'm landing; 800 ft and flying a circuit'. The voice was very clear.

'Roger 'Ninety Nine', we'll be down shortly' I enunciated clearly. 'I was just getting comfortable.' I added; idle chatter wasn't such a sin on practice days. I called to Tony and Doug who were photographing local pilots as they did spectacular beat-ups past the ruined tower for the benefit of camera buffs. 'John's landing, we'll have to go back.' They waved in acknowledgement and started clambering down.

"Ninety Nine". The voice was very weak and I adjusted the squelch and the volume. '400 ft going in.'

'Roger 'Ninety Nine', we're just leaving.' I said.

'No 'Ninety Nine' said the voice faintly but clearly and with considerable urgency. 'Stay where you are.'

'Roger' I said. Two other loaded crew cars edged past and set off down the mountain. Tony and Doug cleared the maps and pillows away and got into the car.

'They must have had good times' said Tony, 'that was quite a long task.'

'I don't think he made it back to the field.' I inclined my ear towards the radio. 'He said to stay here.' Doug settled himself more comfortably on the back seat and Tony reached for the note pad. We sat in a state of suspended animation while several other crew cars jolted off down the mountain side. It seemed ages before the little voice said: 'O.K. 'Ninety Nine' I've landed in a nice field about 9 kilometers from you. There was a pregnant pause as we waited for instructions and then: '...in Romania'. We all sat up and exchanged glances. 'Well' said Tony, 'that lets me out I don't have Canadian Forces clearance to go behind the 'Iron Curtain'. The small voice came on again and confidently suggested that we bring appropriate documents which the Yugoslav organisers would provide and added that if we continued east past our mountain we would shortly arrive at the border crossing, and after passing through a village, would find him beside the same road, in a large field; the map, he told us, showed it quite clearly.

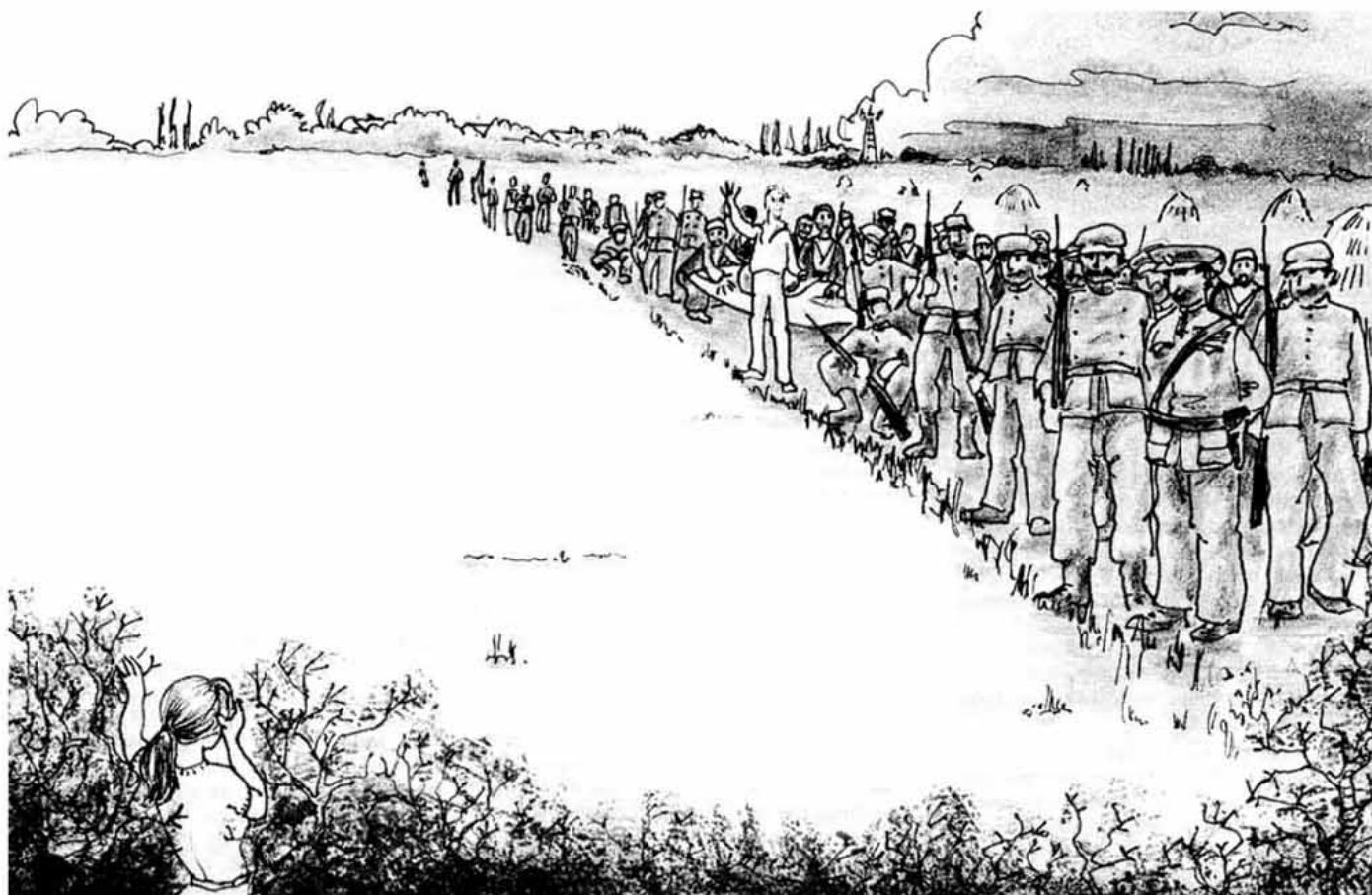
Back at the airfield we picked up the team manager and hurried to the control tower to find the person in authority who would give us papers. Other Canadians rallied round and Yugoslavian-born Branco Glavas offered to replace Tony. It was more than an hour later before we returned to the mountain road to pick up the trailer and start on our journey. My earlier feeling that John was overconfident in his assumption that the contest organizers would provide us with papers at a moment's notice, had been replaced by misgivings about the whole operation; it had already taken longer than we had thought the completed retrieve would take, and Vršac was still in view. 'No papers needed.' 'We have agreement.' 'You just go and get your pilot,' and the organisers had laughed us away. Persistence on our part was not popular and when we finally left without papers it was with a feeling of defeat.

Turning off the mountain road at a small village, we continued east towards the Romanian border and since we were only an estimated 5 km from our destination I started calling on the radio: 'Ninety Nine' ... 'Ninety Nine' 'Ninety Nine'... We lurched along with the empty trailer complaining loudly on the back. Nobody, not even the ebullient Branco could think of anything to say. The dry but somewhat exotic vineyards around Vršac had been replaced by desolate scrub and the single-lane paved highway, had now deteriorated, between the ever present muddy ditches, into something which could hardly be rated as a cart track. I was fairly sure that we hadn't missed a turning and the compass was reading east, but when we suddenly noticed a roof, almost hidden in a clump of trees, the move was unanimous to pull into the gateway and ask for directions. The disused track and neglected land should have warned us that the farm would be deserted, but the sight of fallen outbuildings and gaping windows was definitely creepy. I picked up the microphone and wailed: 'Ninety Nine.' 'GB', 'Ninety Nine.' 'Your pilot is on the ground.' responded a very British voice. I tried to sound polite: 'Roger thank you George.' Evidently some people were still flying.

Branco moved eastwards out of the weedy gateway and we lurched along for about 50 yards looking for a place to turn around when suddenly there was a ditch in front of us and a footpath leading back towards the farmhouse on our right. Branco turned abruptly onto the footpath to avoid the ditch and eventually came to a halt, deep in long grass and bushes; raising both arms above his head he muttered something incomprehensible and clenched both fists. Doug, who was inexperienced at crewing, rearranged the pillows on the back seat and made himself more comfortable. I tried the microphone once more just for something to do with my hands. "Ninety Nine" I intoned without much feeling, and started to force the car door open against the bushes without much success.

'Ah, there you are 'Ninety Nine' said a bright voice; 'over here, I think I'm on the other side of the hedge.'

'Roger.' I squeezed out of the car, stumbled across the ditch and clod-hopped over some rough pasture towards the hedge. Some



A whole battalion of armed men

'Hedge'; it was an almost impenetrable thorn thicket some 50 ft thick and 10 ft high, with a wide deep ditch in the middle. Carefully crossing the ditch by some artfully arranged pieces of rotten planking I pushed my way towards the sunlight on the far side. Small animals had made the footwork relatively easy but the thorny branches above the waist tore at my clothes and hair and left me scratched and breathless.

The sight that met my eyes when I finally emerged, was unreal; I thought I was dreaming, and stood stock still wondering what on earth to do. Ahead of me, strung across a huge field, which stretched to north and south as far as the eye could see, was what looked like a whole battalion of armed men, behind whom stood a crowd of civilians. I continued to stand still, trying to control my pounding heart and to refocus this extraordinary vision. I had never seen such a large number of soldiers before except in a parade or in pictures, but even so ... there was definitely something odd about this group; for one thing they all seemed to be in different uniforms ... but although their guns were prominently displayed ... yes, that was it, they were all grinning, at ME! I blushed deeply and was thankful to be wearing a skirt and another instinct made me want to run as fast as possible in a westerly direction. Then I saw John waving and looking remarkably tall and fair amongst

such a swarthy crowd and I forced myself to walk forwards. I considered my greeting; the usual hug to welcome my pilot back to earth was obviously inappropriate. The distance between us however, seemed enormous, and it was more of a struggle to cross the 100 ft of grass than it had been to push through the thorn thicket. I remember noticing the roofs of a village in the far distance snuggled in trees, but with what appeared to be a watchtower looking over it; beyond the village was a conim building beautifully. I became aware that I was the only person moving; nobody approached me and John remained standing where I had first seen him, holding the microphone. I could now see the Kestrel fuselage and glimpses of other pieces of glider behind the crowd. Funny that they were standing in such a straight line. Then, I saw the grass. On their side it had been newly cut and there were hay stacks behind them; on my side it was just rough pasture, but in between, there was a narrow row of longer grass which now separated us like a barrier.

The strange dark faces still looked relatively friendly but John's smile was rather stiff and there was a certain tension in the air. I don't know what my own expression looked like, but I remember thinking the onus was on me to make the diplomatic move. Obviously I couldn't say 'Hello' to everyone; there were too many of them and most were out of earshot even

if they could have understood what I was saying. As the cu nim in the background loomed even higher, inspiration came to me and walking up to the most heavily decorated officer, I proffered my hand. He took it in his, shook it hard, and nodded; I did a sort of bob-curtsey, said 'Hi', and let go. In a dream I shook a lot more grubby hands, bobbed some more, and finally stood in front of John. I reached towards him, hoping for reassuring arms to steady me, when a rifle was pushed between us and I was walked back across the grass barrier I had just foot-faulted. Behind the rifle was the ever present grin. Unnecessarily John said, 'You can't come over here, this is the border. Have you brought papers?'

'Papers aren't necessary' I said without conviction. 'I tried but they wouldn't give us any; even to the team manager; they said it was going to be straightforward and there was an agreement about gliders in the contest ...' I nervously smoothed my hair, thinking I must look a fright; 'they said we wouldn't need any.' I repeated lamely.

'Alright,' said John, 'Don't get upset, 'they' were wrong; you'll just have to go back to the airfield and get some, otherwise I won't get the glider out of here. Why not get Branco - he speaks the language; he may be more persuasive?' 'Well,' I said, 'Tony couldn't come; so

Branco is here anyway.'

'Good,' said John.

The soldiers and other spectators had been listening intently to this exchange and watching us in the way one watches animals or very small children. The atmosphere was more relaxed in spite of the guns and I realised that these Romanians had probably been as nonplussed by the situation as myself. As I turned to go back to the trailer they all started laughing and talking together. I looked back at John; 'I won't be long,' I said.

Back through the thicket I found Doug and Branco still lounging in the car; 'Where on earth have you been?'; 'What took you so long?'; 'You've been nearly fifteen minutes,' they said. 'Well,' I thought to myself, 'they were the longest fifteen minutes I have ever spent.' I quickly told them what the situation was as we unhitched the trailer, but my tale lost something in the telling and they were no longer listening to me as they swung the trailer into the ditch in order to clear the path. Promising not to be long and wearing a determined expression, Branco backed the car towards the farm gateway, turned around, and with grass and bushes trailing from all four doors headed at high speed for Vršac. Doug came through the thorns with me this time and I began to feel that things were looking up; my sense of humour returned too and I now saw the funny side of the situation. I introduced Doug to their leader (a Colonel?), 'Crew.' I smiled and demonstrated driving and lifting. Everyone laughed; Doug shook hands all round. Pleasantries over, we both sat down in the grass beside the 'barrier' and started to quiz John about his landing.

'I got cut off by a thunderstorm' he said, 'visibility was only 3 to 4 miles through haze, the wind was 20 knots from the N.W. instead of the forecast 10, and I mistook a fairly obvious right-angled canal, which was not on my map, for one 20 miles to the west. I thought I was due south of Vršac ...' he shrugged and his audience reacted with sympathetic expressions. 'Well' I said 'It seems that we really need some better maps, but anyway it was a super field to land in; pity you didn't land on this side of it.' 'But I didn't

land here' said John pointing towards the distant watch-tower; 'I landed in a field on the other side of the village where there were a lot of peasants stooking hay.' I looked in the direction he was pointing in disbelief. 'But that's miles away; how on earth did you get the glider here?' 'We carried it,' John made a sweeping gesture to include all the peasants in the background and they edged a little closer, anticipating what he was about to describe.

'It was a good landing, nice and smooth' said John, 'but I was mad at myself because I could see it was recycling, and small cu's were already forming overhead; I sat in the cockpit for a few moments watching the sky. Then I noticed a young maiden coming towards me with a basket'. 'A young maiden' I interjected, 'Good grief, some people have all the luck. Was she beautiful?' Doug snickered. 'Oh of course' teased John 'and she brought me a gift too.' 'A gift?' I queried. 'Yes; of tomatoes,' he smiled appreciatively, reached into the cockpit and tossed some over to Doug and me. Everyone laughed and John continued: 'However, we weren't alone for very long; first came the haymakers ...' 'And the maiden's father,' I butted in. John glared. '... and right behind them, the militia; the border patrol; and the local police.' 'Ah' I said to Doug, 'that explains all the different uniforms.' 'Actually' said John 'they were very friendly in spite of the guns and seemed genuinely interested in my situation. I showed them the Yugoslavian 'PILOT REQUESTS THE USE OF YOUR TELEPHONE'-card which seemed to impress them because it looked official, but which none of them understood; and I tried a bit of French and German. Luckily I had radio contact with you so it didn't matter.' 'It was a good job we were up the mountain then,' I said, 'but get on with your story. How did you get the glider all that way?' John looked serious and his audience exchanged glances. 'Well' he said 'actually I was extremely worried when they drove a really ancient lorry up and indicated I should put the Kestrel onto it as soon as possible. They were polite but firm, and gestured with their guns, so that I was in no doubt as to what they wanted. At first I pretended I didn't understand, but it was obvious to all of us that I did. Anyway, I tried to make them under-

stand how fragile the glider was and how their crude, rough lorry would damage it.' 'Like a father trying to protect his fairest daughter from a barbarian?' I cut in. 'If you like' said John, 'Anyway, they were adamant that it couldn't remain in the field, so to cut a long story short, we derigged it and carried it all the way here.' 'Good heavens,' I said. 'It's hard enough to get other pilots to derig and move pieces a few feet without a lot of arguments and dings; how on earth did you manage without a word spoken?'. 'Very well indeed; in fact, much better than usual!' said John smugly. 'You know, they were remarkably gentle and as strong as anything. They had six men - the peasants, not the soldiers - on each wing; four on the fuselage; one holding the tailplane, and two small boys under the canopy as if it were a helmet and they just kept moving, and at a good pace too. They had one rest, about half way here, when they put everything down very carefully on one of the few patches of grass. I was somewhat reassured by the intelligence with which they had followed directions earlier but I still expected them to put the wings down on a rock or something. You know, the road must have been made by the Romans, it looked really ancient; narrow and made of cobblestones; with deep water-filled ditches on either side, and when we got to the village, it was just like walking into the fourteenth century. There were wallowing pigs, cows and geese all over the place; peasant women standing by their courtyard doors and old men sitting on benches in the shade of mud walls and bougainvillea, and if you can imagine this strange procession headed by the two boys carrying the canopy of a space-age sailplane, moving down the middle as if it were the most natural thing in the world ...' he paused for lack of adequate words; 'well, it was incredible.' 'Fantastic' said Doug, 'Far out.' We sat quietly, trying to take in the vision for a few minutes - very quietly. As I glanced around I noticed that the crowd was considerably smaller and that it had become rather dark. Looking up I saw why. 'Look behind you John,' I pointed. As he turned, the first quarter-sized drops of rain fell on us. He hastily got up and put the canopy on the fuselage and two soldiers helped to lay it on its side,

relieving some peasants who had been holding it upright since its arrival. Most of them had already disappeared and one by one the soldiers and police also moved away towards the village. As hot and dirty as I had felt before I didn't relish being wet and cold either, so I followed Doug, who was already beating a hasty retreat to the trailer.

An hour later the storm had petered out and the top of the dying cumulus was glowing softly in the light of the setting sun. Doug was fast asleep on the trailer floor but I hadn't been able to get comfortable and felt hungry, cold, dirty and tired; contraband tomatoes were not satisfying for very long. Branco it seemed was not getting papers very fast, or maybe he had never arrived at the airport, and

without papers, however nice the guards were on the other side, we were at an impasse. The silence after the last rain-drop woke Doug up. 'I'm hungry,' he said. 'Yes' I agreed, 'me too. I suppose we'd better see what's happening.' The grass was soaking wet of course, as we set off towards the thicket, and slippery; the muddy ditch was now a muddy stream, lapping the rotten planks and threatening to wash them away. We arrived on the other side just as some bedraggled looking soldiers were moving back from the village. John was standing beside the 'Colonel'; the atmosphere was as bleak as the scene - this was beginning to be a bore.

'Where on earth is Branco?' muttered John with admirable restraint. He looked

dry, and was wearing a sweater. I had expected to find him wet through and had rationalised that it served him right for landing in Romania and putting his crew to so much trouble. I thought with envy of the rest of the Canadian team whooping it up at Vrșac. 'He probably went to the party,' I ventured. 'How did you manage to stay dry anyway?' 'Oh' said John, smiling at the officer beside him, 'The Colonel and I were the only ones left and since he was obviously constrained to stay with me at all costs, we quickly solved the problem by sitting in a haystack together - it was quite cosy!' The officer did not look the 'cosy' type to me; his expression was, to say the least, inscrutable. 'Well since you're so warm and cosy' I said petulantly, 'you might lend me your sweater; mine went



This strange procession headed by the two boys carrying the canopy.

away with Branco.' Gallantly John handed me the sweater, a soldier edging forward as we were momentarily linked. The situation was ridiculous. We stood around uncomfortably in the wet grass on either side of the dripping border as the light went out in the Western sky. No one spoke and after a while Doug ambled back towards the road to see if he could see Branco. Incredible silence, and then as Doug returned some more soldiers arrived from the village where the watch-tower in competition with the rising moon was illuminating the roofs and tree tops. A muttered conference was held with the 'Colonel', but though the voices were low, the gesticulations showed that an argument was in progress. John refused to catch my eye; this was getting serious. Finally the 'Colonel' walked straight towards Doug and holding out an aggressive hand, demanded: 'Dokumenti, Passerpor, Dokumenti.' The moonlight made him look sinister and I would have felt threatened if I hadn't felt snubbed - obviously a woman was of no consequence at a time like this. Doug however, with great cool, produced a pocket-book and arranged the contents like a hand of cards for the 'Colonel' and his men. The Romanians peered at the 'Dokumenti' and after much discussion and consideration the 'Colonel' looking impatiently at his watch, returned all but one small card to Doug. He moved as close

to Doug as the barrier would allow and pointing to the large embossed letters on the centre of the little card solemnly intoned: 'Dough ah glarsch veel sohn varda?' 'Yeah' said Doug and smiled nonchalantly. 'What on earth did he say?' I asked Doug, looking at him with renewed respect; I hadn't realised that he spoke the language. He shrugged his shoulders and said: 'Ssh.' The 'Colonel' nodded to his men, produced a scruffy piece of paper and a stub of pencil and appeared to be copying the writing on the card while one of his subordinates held it for him. Turning once again to Doug he said with great deliberation: 'Dough ah glarsch veel sohn varda.' before handing back the card. 'Douglas Wilson Wade' said Doug emphasising each word. The 'Colonel' looking straight into his eyes repeated the incantation with more success. I looked over Doug's shoulder to see what he was holding and recognised a Canadian Red Cross blood-donor card replete with name, numbers and maple leaf. 'Dokumenti OH K' said the 'Colonel' as he swung around to issue orders to his men and as if by magic the pieces of Kestrel and John were on the Yugoslavian side of the border. As I peered closely at a wing in the darkness, stroking it carefully to make sure it was alright, we saw the beams of headlights and heard a car screech to a halt in the direction of the trailer. Holding the tail-plane in John's sweater to protect it from the thorns I threaded my way through the thicket and found Branco in the pasture by the road; he was not alone.

'I'm sorry, I'm sorry, I'm sorry' he said breathlessly 'the mud was unbelievable; when the rain came the road disappeared and I got stuck. But I have papers, and the Yugoslav army. I found them at the airfield and they helped push the car here; some of them are still a long way back up the road - you see I couldn't stop for them, I had to keep moving.' He raised both hands in a pleading gesture, then smiling broadly he slapped the shoulders of two of the most bedraggled looking creatures I had ever seen, both covered in wet mud from boots to drooping heads: 'These two pushed me for the last two miles.' I believed him. John and Doug emerged from the thicket carrying a wing

at this point and we were all brought back to reality by a peremptory yell: 'Come and help for heaven's sake, this thing's breaking my back.' We all rushed over to help even the Yugoslav army - but somehow managed to get in the way. 'Oh go back and get the canopy at least.' said John, exasperated and tired after the tension and anti-climax. I left Branco chattering away to a John who just wanted to get the glider trailered, and went back through the thicket. By now there was a wider path and I was used to the rickety planks and feeling glad that we now had crew, car, trailer and glider close together again, I ran towards the field.

It was very dark after being near the car lights and the whole field seemed strangely deserted, the crowd had dematerialised and I could only just see the white objects against the pasture. As I was peering around, looking for the canopy, the 'Colonel' suddenly appeared in front of me, grabbed me round the waist and proceeded to dance. We stumbled around in the rough pasture for a couple of circles, falling over each other's feet and laughing nervously, when, as if to seal the pact of our illegal rendezvous he suddenly stood still, clasped me very tightly and with his interesting eyes fixed on mine, said, very carefully 'Dog lash vilson varda.' Then with a loud 'OH K' he tiptoed across the border and disappeared into the night.



Sitting in a haystack together.



Grabbed me round the waist and proceeded to dance.

Best Wishes to the Canadian Team at the 1978 World Championships at Chateauroux France

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T. R. (Terry) Beasley first joined SAC when posted to Winnipeg in 1952 for Navigator training in the Royal Air Force. In 1954 he attended the World Championships in Camphill, England on the organization's staff. Terry returned to Canada in 1957 and rejoined SAC and in 1959 was elected Director and has served as a Director in the Association ever since that time with the exception of one year. During that period he has served several terms as President. In 1968 Terry Beasley organized Canada's participation in the World Gliding Championships in Poland and acted as the Team Manager for each succeeding Championships; 1970 in U.S.A., 1972 in Yugoslavia, 1974 in Australia and 1976 in Finland where he was elected chairman for Team Manager's meetings. This year at Chateauroux Terry has been invited to act as one of the Championships Stewards.

An Historical Note on World Gliding Championships

by T. R. Beasley

The first international gliding championships is usually considered to be the contest held in Hitler's Germany in 1937. My records do not indicate whether this was a contest organized by an international organization or simply a contest to which foreigners were invited. By modern standards it is perhaps only a courtesy title to call it a World Championships as only seven nations participated. However, the service to the sport of soaring must be considered as immense as it showed the foreign pilots how great a lead Germany had gained in the design of sailplanes, and in their utilisation. The immediate effect on the world sport cannot be judged as only two years later Europe plunged into the holocaust of the Second World War.

The next World Championships was held in Switzerland in 1948; again it was not organized by an international body but it was from this contest that the structure

and rules of future championships surely developed.

Thirteen more contests have since been held and the number of participating nations is increasing steadily. Championships have been held in the Western Hemisphere and in the Southern Hemisphere as well as in Europe. The sport has surely grown. The sailplanes have certainly changed too, and so have the types of tasks demanded of the pilots. We have seen the class structure change; for three championships only there was a separate two seater class. This class was dropped with the introduction of the Standard Class which was originally intended to encourage designers to develop simpler gliders suited to club use, with a wing span not to exceed 15 m and to include certain other mandatory design features which need not concern us here. The Open Class has no restrictions and it is here that designers are able to produce their exotic birds - at high cost. In an attempt to introduce a limit on the cost of entering a good

Open Class machine the 19 m cup was introduced. A special cup was donated for award to the pilot placing highest in the Open Class flying a ship no greater than 19 m span. This class within a class never became popular and has now been discontinued.

A new class structure will be employed in 1978 for the first time; Open Class, 15 m Class (span being the only restriction) and 15 m Restricted Class (basically the old Standard Class). Only time will tell whether this new structure will remain with us for several years.

The Standard Class was, surely, a great success; the World Championships Standard Class glider is suitable for club use and has proved very popular for private ownership. It is also worth noting that in favourable weather conditions the Standard Class gliders have proved to be the equals of the large Open Class ships. In the 1965 World Championships the winning ships in the Open Class were Polish Standard Class gliders - the beautiful Foka.

The type of task set in a World Championships has changed over the years. Today the accent is on speed tasks. These are set in varied forms, around a triangle, out and return or, now more rarely, speed to a goal. These speed tasks are of great interest; pilots do not all start together but have their start times noted as they cross a start line. Thus a pilot who finds himself flying with another competitor many miles from home does not necessarily know who started first; so he has to assume the other glider is making better time; what a spur this is to trying to improve one's own performance.

It is undoubtedly true that such demanding competitive speed flying in World Championships has been a tremendous influence in raising the standards of National Championships all over the world. This fact has had a major influence on the types of glider the top pilots must fly if they are to maintain the high standards required. The importation, or construction, of new high performance sailplanes has an overall "improving the breed" effect because having obtained a new sailplane the owner will usually have his previous one available for sale and will not find it hard to find a purchaser. At the bottom of the ladder perhaps an older glider then becomes available at a reasonable price for a beginner or to help a small struggling club. It may be worth while noting that gliders which were considered of World Championships standard in 1948 would be considered as intermediate club hacks today.

An aspect of World Gliding Championships that must be mentioned is the friendly atmosphere and sportsmanship. After a day's flying, and on rest days or bad weather days, one will find many friendly groups, struggling with various languages, discussing sailplanes, cars, the weather, food, beer, etc. World Gliding Championships have been very fortunate in avoiding the tense international rivalry

RESULTS

RESULTS									
No. Year Host	No. of Nations	No. of Giders	Canadian Participation	Placing	Name	Nation	Score	%	
I	7	?	No	1	Dittmar	Germany	1663	100	
1937				2	Hoffmann	Germany	1427	86	
Germany									
II	8	27	No	1	Persson	Sweden	27086	100	
1948				2	Schachenmann	Switzerland	26258	97	
Switzerland				3	Kuhn	Switzerland	25970	96	
III	11	29	No	1	Nilsson	Sweden	866.75	100	
1950				2	MacCready	U.S.A.	842.99	97	
Sweden				3	Borisek	Yugoslavia	778.48	90	
IV	Single Seater Class								
1952	17	39	Yes	1	Wills	G.B.	4333	100	
Spain				2	Pierre	France	048	93.4	
				3	Forbes	G.B.	404	93.3	
				35	Pow	Canada	1800	42	
				37	Boudreault	Canada	1287	30	
	Two Seater Class								
	10	17	Yes	1	Jeuz / ?	Spain	4164	100	
				2	Frowein / ?	F.R.G.	3612	87	
				15	Jeffery / Woodward	Canada	1418	34	
V	Single Seater Class								
1954	19	33	Yes	1	Pierre	France	2956	100	
Gt. Britain				2	Wills	G.B.	2855	97	
				3	Wietüchter	F.R.G.	2817	95	
				23	Pow	Canada	529	18	
	Two Seater Class								
	9	9	No	1	Rain / Komac	Yugoslavia	3056	100	
				2	Mantelli / Braghini	Italy	1558	51	
VI	Single Seater Class								
1956	25	45	Yes	1	MacCready	U.S.A.	4891	100	
France				2	Juez	Spain	3806	78	
				3	Gorzalak	Poland	3576	73	
				28	Brame	Canada	1889	39	
				38	Ames	Canada	1265	26	
	Two Seater Class								
	13	13	No	1	Goodhart / Foster	G.B.	3828	100	
				2	Rain / Stepanovic	Yugoslavia	3187	83	
VII	Open Class								
1958	18	37	Yes	1	Haase	F.R.G.	5651	100	
Poland				2	Goodhart	G.B.	5172	92	
				3	Mestan	Czech.	5124	91	
				18	Yeates	Canada	3863	68	
				29	Oates	Canada	2468	44	
	Standard Class								
	16	24	No	1	Witek	Poland	5232	100	
				2	Persson	Sweden	5086	97	
VIII	Open Class								
1960	15	20	No	1	Hossinger	Argentina	5102.9	100	
F.R.G.				2	Makula	Poland	5079.1	99.5	
				3	Popiel	Poland	5020.7	98.4	
	Standard Class								
	22	35	No	1	Huth	F.R.G.	5619.1	100	
				2	Münch	Brazil	5237.8	93	
IX	Open Class								
1963	18	25	Yes	1	Makula	Poland	6107.1	100	
Argentina				2	Popiel	Poland	5638.4	92	
				3	Schreder	U.S.A.	5370.3	88	
				9	Webb	Canada	4715.2	77	
	Standard Class								
	23	38	Yes	1	Huth	F.R.G.	6221.0	100	
				2	Lacheny	Francy	5356.5	86	
				3	Horma	Finland	5291.1	85	
				9	Yeates	Canada	4721.2	76	
				21	Mix	Canada	4120.1	66	
X	Open Class								
1965	25	41	Yes	1	Wroblewski	Poland	5269	100	
Gt. Britain				2	Spanig	F.R.G.	5164	98	

found in many other so called sporting events. Perhaps I can quote from 'Gliding', Vol. 5, No. 3, reporting on the near rained out 1954 World Championships held in England:

"The first article of the International Regulations for the holding of the World Championships reads as follows:

Championships are intended to stimulate the development of gliding by an international comparison of performance, and strengthen the good fellowship amongst gliding pilots of all nations. The worst summer's weather in living memory saw to it that we could not succeed in the first aim, but this gave us all an unexampled opportunity to fulfil the second. If U.N.O. ever develops into a shade of the homogeneous and happy society we ended up with at Camphill (the site of the Championships), the shadow of another war would disappear forever."

I was there and I agree whole heartedly with what that writer wrote twenty years ago. We have seen this same good fellowship at succeeding Championships and may it always be so, and let us hope that World Gliding Championships never become steeped in ultranationalism and consequent unfriendly rivalry.

The table on the right gives the summary results of all the World Championships, up to and including 1976 with space for you to enter the 1978 results.

RESULTS TABLE

Notes (1) I have made separate entries under the column "No. of Nations" where there are two classes. In some cases nations entered only one class; so in some cases the total "No. of Nations" in the Championships will be more than the highest of the two class numbers.

(2) FRG - Federal Republic of Germany, the correct name for West Germany.

GB - Great Britain.

It is difficult to analyse these results in a meaningful way but the following summary of First, Second and Thirds may be of interest.

Nations	No. of Times			Points
	1st	2nd	3rd	
Poland	4	4	8	28
RFG	5	2	4	23
USA	4	1	1	15
Sweden	2	4	0	14
GB	2	2	2	12
France	2	2	1	11

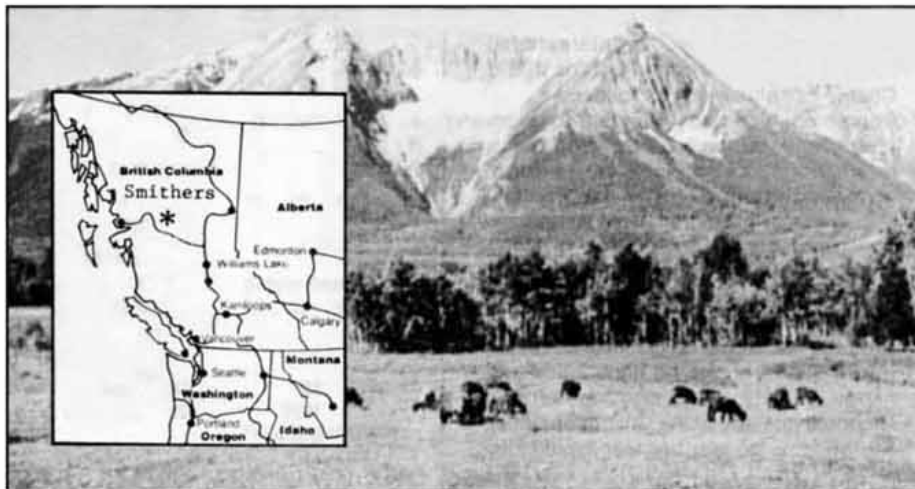
For this table I did not include Championships I and II and did not include the two-seater class. The points column is simply obtained by awarding 3 for a 1st, 2 for a 2nd and 1 for a 3rd. Certainly it appears that Poland has done outstandingly well.

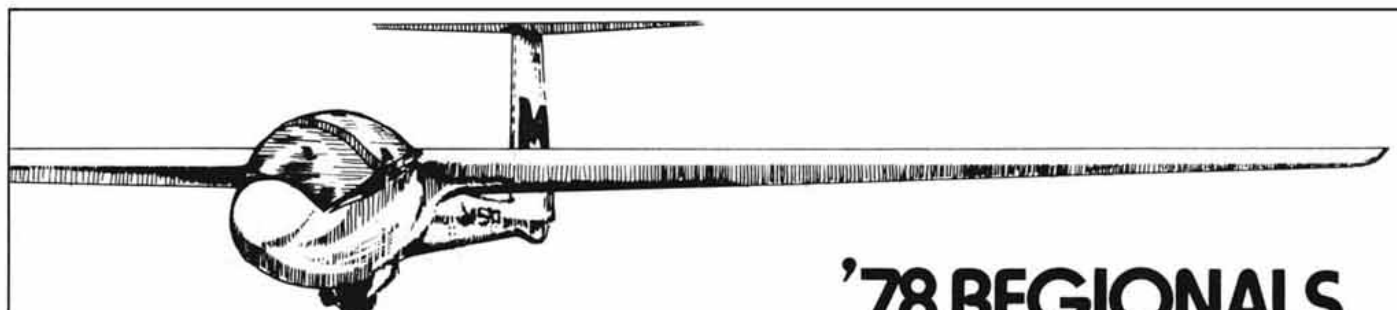
XI 1968 Poland					3	Kuntz	F.R.G.	4990	95			
					9	Yeates	Canada	4321	82			
					28	Webb	Canada	2582	49			
					Standard Class							
					25	45	Yes	1	Henry	France	4945	100
					2	Ritzi	Switzerland	4798	97			
					3	Kepka	Poland	4627	94			
					40	Mortensen	Canada	1800	36			
					Open Class							
					25	48	Yes	1	Wödl	Austria	5730	100
XII 1970 U.S.A.					2	Ax	Sweden	5699	99.5			
					3	Seiler	Switzerland	5673	99.0			
					9	Yeates	Canada	5180	90			
					13	Webb	Canada	4887	85			
					Standard Class							
					30	57	Yes	1	Smith	U.S.A.	5595	100
					2	Persson	Sweden	5459	98			
					3	Lindner	F.R.G.	5444	97			
					41	Mix	Canada	3072	55			
					Open Class							
23	39	Yes	1	Moffat	U.S.A.	8323	100					
XIII 1972 Yugoslavia					2	Grosse	F.R.G.	8036	96			
					3	Mercier	France	7811	94			
					28	Webb	Canada	5725	69			
					30	Firth	Canada	5395	65			
					Standard Class							
					21	40	Yes	1	Reichmann	F.R.G.	8663	100
					2	Wroblewski	Poland	8228	95			
					3	Kepka	Poland	8084	93			
					4	Mix	Canada	7934	92			
					40	Deleurant	Canada	3869	45			
XIV 1974 Australia					Open Class							
					21	38	Yes	1	Ax	Sweden	5816	100
					2	Wiitanen	Finland	5779	99.4			
					3	Kluk	Poland	5760	99.0			
					25	Firth	Canada	4094	70			
					26	Mamini	Canada	3977	68			
					Standard Class							
					27	51	Yes	1	Wroblewski	Poland	5529	100
					2	Rudensky	U.S.S.R.	5219	94			
					3	Kepka	Poland	5107	92			
XV 1976 Finland					10	Webb	Canada	4478	81			
					39	Mix	Canada	3387	61			
					Open Class							
					16	28	Yes	1	Moffat	U.S.A.	10635	100
					2	Zegels	Belgium	10227	96			
					3	Grosse	F.R.G.	10059	95			
					21	Carpenter	Canada	6726	63			
					23	Mamini	Canada	6493	61			
					Standard Class							
					21	39	Yes	1	Reichmann	F.R.G.	9325	100
XVI 1978 France					2	Renner	Australia	9296	99.7			
					3	Kepka	Poland	9266	99.4			
					18	Webb	Canada	7960	85			
					38	Firth	Canada	4176	45			
					Open Class							
					22	39	Yes	1	Lee	G.B.	4594	100
					2	Ziobro	Poland	4535	99			
					3	Muszczyński	Poland	4488	98			
					28	Carpenter	Canada	3540	77			
					31	Webb	Canada	3246	71			
					Standard Class							
					24	46	Yes	1	Renner	Australia	4056	100
					2	Karlsson	Sweden	4048	99.8			
					3	Burton	G.B.	3924	97			
					31	Firth	Canada	2754	68			
					40	Werneberg	Canada	2345	58			
					Open Class							
					No							
					15 Metre Class							
					Yes							
15 Metre Restricted Class												
Yes												

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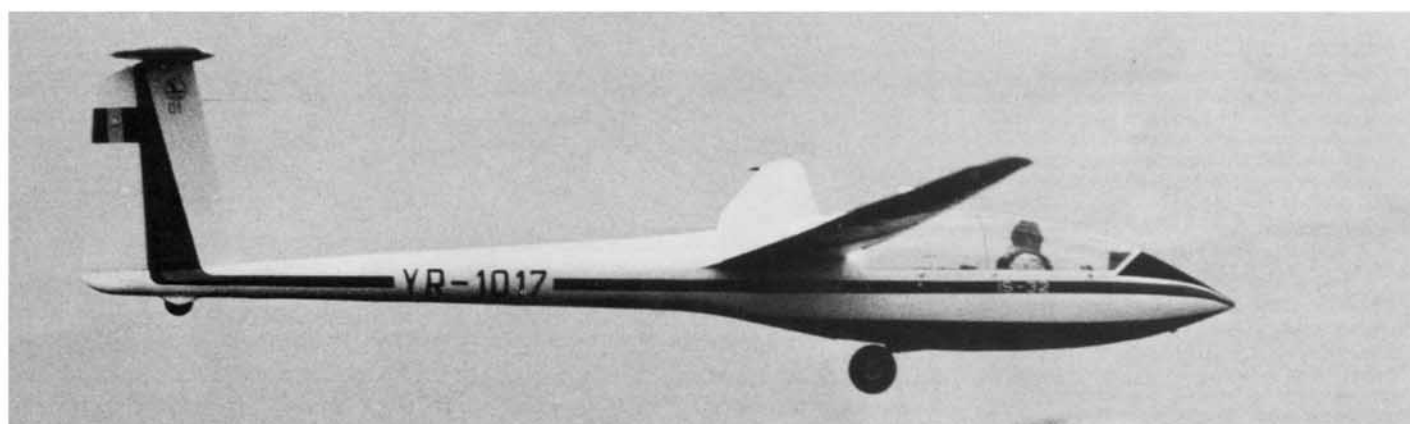
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